Clinical Management of the Homeless Patient

Social, Psychiatric, and Medical Issues

Elspeth Cameron Ritchie
Maria D. Llorente
Editors

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Preface

The journey toward the publication of this book has been unique, and at times quite unexpected, but is occurring at a most needed time. While the writing of this book began prior to the COVID-19 pandemic, several policy makers and prognosticators have predicted a housing "apocalypse" as people lose their incomes, the stimulus checks are spent, unemployment runs out, and the "stay eviction" orders expire. Homelessness takes a psychological and physical toll on the person who experiences it. At this time of a pandemic, homelessness also increases the potential exposure risk to becoming infected, lacking health insurance to seek medical care, and experiencing adverse outcomes.

Unbelievably, perhaps, this is also happening at a time when the USA is arguably the wealthiest nation on the planet. According to the International Monetary Fund (https://www.investopedia.com/insights/worlds-top-economies/), the US Gross Domestic Product in 2019 was $21.44 trillion, which represented the largest single proportion (23.6%) of the total global economy [1]. The USA has retained this position since 1871, and has advanced infrastructure, technology, and a wealth of natural resources. And yet, at the same time, the USA still has more than half a million people who are homeless on any given night, with nearly a quarter in either New York City or Los Angeles (https://www.forbes.com/sites/niallmccarthy/2020/01/14/the-american-cities-with-the-highest-homeless-populations-in-2019-infographic/#5772131a14a9) [2]. These two cities also have some of the highest rates of COVID-19 positive tests.

We undertook to write this book based on our clinical work with veteran and non-veteran homeless in a large urban metropolitan area, namely, Washington DC. As you will see from some of the clinical cases in the book, we've encountered highly challenging clinical situations. In discussing these with colleagues, it became readily apparent that others were experiencing similar and other types of challenges. Sharing clinical knowledge and experience when dealing with homeless persons seemed a helpful avenue to pursue.

At the same time, we also were able to see, firsthand, the very positive impact of the concerted federal, state, and local government efforts to end homelessness, particularly in partnership with community and private agencies. That effort led to a

50% reduction among our nation's veterans since 2010 (https://www.va.gov/HOMELESS/pit_count.asp) [3]. National homeless has decreased by 12% since 2007, with a reduction of 29% among families (https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-2020/) [4]. Unfortunately, the impact of COVID-19 has the potential to eradicate these gains.

We wanted to achieve several goals through the writing of this book. First, we wanted to offer an overview of the historical context of homelessness in the USA. This includes taking into consideration the justice system, our economic structure and priorities, and multiple psychosocial determinants that can contribute to homelessness. Second, we wanted to address the common medical and psychiatric illnesses that we have encountered in our clinical work, and reach out to our colleagues with specialty expertise in the management of these illnesses, particularly among the homeless. Third, we wanted to better understand how did we get here? How do we come to have so many homeless persons in the wealthiest country on the planet? Last, we wanted to describe for you, the reader, the best practices and models of care that have shown promise and/or effectiveness, not only in housing people, but also in helping them to sustain a housed status permanently.

It is our earnest hope that you will find this book of value in your current work with homeless persons, and may even spark your interest to work with the homeless in the future, if you are not currently doing so. We also hope that this book will enable you to better understand that there are many reasons an individual finds themselves in a homeless situation, and that will perhaps reduce the initial impulse to judge. In reading this book, we ask that you consider the words of Dame Sheila McKechnie, "People who are homeless are not social inadequates. They are people without homes" [5]. As a society, we can help each other so that ultimately everyone has a home.

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Part I
The Big Picture—Social and Medical Issues

Chapter 1
Framing the Issue: An Introduction

Elspeth Cameron Ritchie and Maria D. Llorente

Introduction

Case Example

A young man was brought in by the police after being found psychotic and barefoot in the snow. He was brought into our freestanding psychiatric emergency room. There his feet were examined and he was found to have frostbite. The findings were noted in his medical records.

He was sent to the psychiatric ward of the local general hospital. There, apparently no one looked at his feet.

Ten days later, he was transferred to the freestanding state hospital. Fortunately, they immediately had the general medical officer do a physical. Unfortunately, by then, gangrene had set in, and all his toes needed amputation. So, he got sent back to the general hospital for the amputation. He was lost to follow-up.

Background

Homelessness, particularly in a country as wealthy as the United States, is more than an embarrassment. It is shameful. It is also indicative of a societal failure to care for the most vulnerable. In the chapter on respite services, the authors quote

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Hubert Humphrey: “The moral test of a government is how that government treats those who are in the dawn of life, the children; those who are in the twilight of life, the elderly; and those who are in the shadows of life, the sick, the needy, and the handicapped.”

This volume summarizes and expands the extant literature on three intersecting areas to care for and empower homeless person: the social/political/economic concerns, the commonly associated psychiatric and substance use disorders, and the frequent acute and chronic medical problems.

The brief case above illustrates the need to address physical, mental health, and psychosocial factors in the assessment and treatment of a homeless person. It also unfortunately illustrates the higher morbidity and poorer healthcare outcomes associated with homelessness. There are many sad stories of persons living, and too often dying, on the streets.

This book is written mainly to be of help to primary care and mental health providers, clinicians in the emergency department, acute medical and psychiatric hospital units, social service agencies, and to a lesser extent, policy makers.

Often homeless persons with no known major medical problems are admitted to a psychiatric unit, where psychiatrists may not think to check their feet for cellulitis and/or gangrene. Similarly, if admitted to acute medicine, hospitalists may not be familiar with treatment for psychosis, mania, or substance use disorders. They are likely to be even less familiar with available housing and respite resources for homeless, thus prolonging lengths of stay on acute medical services.

Many primary care practitioners work in clinics that serve the homeless; while they are familiar with the acute medical and psychiatric problems, the importance of addressing housing needs, and how to go about doing so, may be less known. Additionally, the need to screen for diseases with higher prevalence among homeless may be less known as well.

There may be numerous resources available for homeless individuals, but the medical system may not be aware of them. Similarly, while there may be numerous homeless outreach teams, as there are in our city of Washington, D.C., these services are often fragmented and difficult to coordinate.

State laws may facilitate or hinder the treatment of the medically and psychiatrically ill, homeless or not. In many cases, they may be “rotting with their rights on.”

There are many definitions of “homeless,” which are covered in more detail in other chapters. There is “couchsurfing” (staying with friends and families), living in shelters, and living on the streets or camping in the woods.

There are many different categories of homeless persons. There are young strong men, mothers with small children, middle-aged persons, working families, the frail elderly, and many others.

The paths to homelessness are also varied and multifactorial and covered in detail in other chapters. There may be bidirectional relationships (risk factor leads to homelessness vs. homelessness leads to risk factor). Among the common themes are poverty, unemployment, traumatic brain injuries, lack of affordable housing, justice system involvement, mental illness, and substance use disorders. There is also no question that veteran status is a significant risk factor.

Among the commonly found psychiatric disorders encountered among homeless are schizophrenia, bipolar disorder, or the combination of both, schizoaffective illness. Nonadherence to appointments and treatment recommendations are a problem all too often encountered. These are frequently compounded by opiate, cocaine, K2, PCP, and alcohol abuse and dependence. Exposure to trauma, and post-traumatic stress disorder, is also a highly prevalent in this population and a co-occurring condition.

Further, when an individual is trying to address his/her basic needs, such as shelter, food, hygiene, bodily functions, and sleep, it becomes very difficult to engage in treatment of medical and psychiatric conditions. These highly complicated and interwoven factors leave the impression that this is a problem that is just too difficult to solve. And yet, successful models and government initiatives have been undertaken. For example, recent housing models that are showing promise include Permanent Supportive Housing and Housing First. In that regard, the Department of Veterans Affairs has demonstrated that when a government agency establishes ending homelessness as a priority, and offers appropriate resources, partners with other government agencies, and provides training, outreach, and wraparound services, homelessness can be reduced, even among the most challenging and chronically homeless persons.

There are many formerly homeless persons who can become rehoused on their own, and others benefit from assistance. In either case, resilience, optimism, and effective coping and social skills are part of the solution. When a homeless person has the skills, they may simply need a reminder and brief intervention. When the skills are lacking, then education, therapy, and more intensive interventions may be needed.

Some examples of formerly homeless persons include Halle Berry, Kelsey Grammer, Sylvester Stallone, Charlie Chaplin, Ella Fitzgerald, and Harry Houdini. There are countless others who are less well-known, but no less successful in becoming housed, overcoming medical/mental health and substance abuse problems, and becoming productive members of society.

We hope that this volume provides clinical guidance to enable more currently homeless persons find their way to needed permanent housing and access to services they need. This will improve their overall health and well-being and ultimately serve to reduce societal costs and burdens to social service agencies, emergency services, and the justice system.

All the subjects touched on above are covered in more details in subsequent chapters. Especially robust are the chapters that cover the Department of Veterans Affairs attempts to end homelessness. They demonstrate what can be done when federal, state, and local agencies work together to provide housing, medical care, and often financial stability through employment or disability. Of course, that success highlights the fragmented and underfunded efforts in many parts of the country.

There are topics we wished we could have found more information on. Statistics are plentiful on the number of homeless. However, they are rarer on the incidence of suicide among individuals who lacked housing.

We could not find an author to write about homeless children. However, the chapter on LGBT and homeless highlight how many children are thrown out of their homes due to their sexual orientation.

It is also hard to cleanly separate out risk factors such as substance abuse, mental illness, emotional trauma, and brain injury. So, while chapters have those discrete titles inevitably, they overlap.

The chapters on pain and podiatric conditions, in those that stand on their feet in ill-fitting shoes while pushing shopping carts with all their belongings, are an especially unique and useful lens to help us diagnose and treat these patients.

It is doubtless hubris to try to cover multiple aspects of this highly complex societal and medical issue in a single volume. Our rationale is to try to highlight the most salient points for clinicians who are working this population and bridge the recognized gaps in assessment and treatment options, with a focus on those conditions that are commonly and more likely to be experienced by those living in shelters or on the streets.

Chapter 2
Frontline Work Taking Care of Homeless Veterans

John P. Sutter

Starting in March 2013 and for 4.5 years, I worked as a family physician at the Washington, DC, Veteran Affairs (VA) Homeless Patient Aligned Care Team (HPACT). At this time, myself and others at the VA were charged by then President Barack Obama to end homelessness among veterans. When I initially started at the VA, there were very few homeless veterans who came to the HPACT. It was new and undiscovered. As I sat there one day with no patients, I thought "let's turn this around and instead of expecting patients to come to the clinic, let's take the clinic to the patients." The following are stories and reflections about my efforts and more importantly the efforts of many others and the community to find, house, and care for homeless veterans.

I chose this line of work for both personal and hopefully altruistic reasons. Personally, I found working with this population of homeless veterans within the system of the VA rewarding. So much of family medicine has unfortunately been pigeonholed into the minutia of chasing LDLs and A1cs, all the while justifying one's actions to the intentionally confusing and greedy response of the insurance industrial complex. Working for the VA homeless services was an opportunity to work with a system that had a noble and charitable mission. In addition, these homeless veteran patients had a hierarchy of immediate problems which needed solving, homelessness usually being at the top of the list. Working at the VA afforded me the opportunity and more importantly the resources to provide medical care and assistance and solve what I considered an immediate and critical tangible problem, homelessness.

Finally, I liked the patients. They were tough, resilient, and appreciative. There are certain populations that draw one's attention and care, and for me, caring for this population was natural.

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Mr. P

It was a little after 11 pm when I got the call. I saw the number on my cell phone, and normally I don't answer numbers that I don't recognize due to all the spam calls these days, but I somehow thought I recognized this number. "Hello?"

> "Is this Dr. Sutter?"
> "Yes."
> "This is Dr. V from Washington Hospital Center…" (I had recognized that number from calling WHC in the past for patients, to get records, etc.); "is Mr. P your patient?"
> …pause…
> "Yes, he is my patient."
> "He's here in the ICU at Washington Hospital Center. He's had a stroke. It's pretty bad, do you know if he has a spouse or any relatives we could talk with?"

I met Mr. P about 3 months ago. I was visiting the circuit of shelters and camps in and around Union Station in Washington, DC, when myself and a just terrific Veterans Affairs (VA) outreach social worker went into Central Union Mission. I had gotten to know the shelter system pretty well both from my days working at Unity Healthcare and from doing outreach with the VA. The Central Union shelter was a good one, and I used to counsel my patients that if they needed a shelter to try, they should try Central Union first. It was clean, organized, and well run, and there were basic rules that were enforced and which kept Central Union relatively safe. Central Union is located in what I think is an old school, a just beautiful piece of old architecture of red brick masonry – they don't make them like they used to type of structure.

The social worker and I walked up the long set of front steps and went inside, met with an administrator in the office, and asked our usual questions? "Is X still here? Have you seen Z in a while, we haven't seen him lately? We sent someone over here from the CRRC 3 days ago, did they make it? Are there any veterans here today?" There was one: Mr. P.

We walked into the main lecture/class/waiting area, where there are about 12 rows of 10 chairs arranged facing forward. There were about ten homeless men in this room today, and in the middle was a man who appeared to be in his mid-60s, disheveled and unkept, but in a suit, tie, wingtip shoes, a briefcase, and beside him a medium-sized black suitcase. Again, and I cannot emphasize this enough, the social workers at the VA were just tremendous, so I followed their lead. The social worker approached Mr. P and started talking with him. "Hi, we are from the VA. Reverend Cook tells us that you are a veteran and that you served in the military." Mr. P acknowledged that he was in fact a veteran. We talked with him more, and as the conversation progressed, it became more and more challenging. Mr. P was pleasantly (as opposed to violent/agitated) demented, and he smiled and seemed to appreciate the interaction, but he didn't remember anything and could tell us very little about who he was. And, like a lot of our patients, he had no identification. We realized at this point, right now, being at Central Union was probably the best we could do for him. Over the next month, we went back a few more times to

Central Union after that, and after about the third visit, Mr. P wasn't there. Staff at Central Union told us he was spending time at the Father McKenna Center.

The Father McKenna Center is housed in the basement of Gonzaga High School. They provide a variety of services and support for the most destitute in the DC area including counseling, financial assistance, clothing, meals, and a place to be during the day, which for a lot of homeless is a very challenging part of daily life. We met the director, and he said Mr. P had been coming to the Father McKenna Center for about 2 weeks, and yes he too was concerned for Mr. P as he seemed like "he wasn't all there." The director brought us to an office in the back and then went and got Mr. P. recognized me; he recognized me as "The Doctor." He was wearing the same suit, shoes, socks, etc. He was a bit more lucid today, and we had a more productive conversation. In addition, I was able to do a physical exam, findings notable for sky-high blood pressure, and a right upper sternal cardiac murmur, and some edema in his lower extremities. He had flaking dandruff and his hair was matted down. I talked with him about coming to the clinic for a more thorough evaluation, but he refused. I asked him if he'd be willing to do labs or take some medications. He refused the labs, but did not flat out refuse medications. I told him I would be back the next week to talk with him again.

The next week, I went back to the Father McKenna Center and met with Mr. P again. This time, he had a list of items he wanted to talk about, mostly current events, politics, foreign policy, and his thoughts on the goings-on in the world. He struggled to articulate these thoughts though, but was able to continually reference his list, and that seemed to give him comfort in our conversation. I had a list too, and it involved getting him worked up for hypertension and aortic stenosis. He, however, refused. This scenario continued for a few months, until one day, he agreed to at least start some medicines to at least lower his blood pressure. Given his presentation, the history I was able to ascertain, and his vitals and exam, I was pretty sure he most likely had vascular dementia.

The director of the Father McKenna Center was able to get more details about Mr. P during this time. With many of our homeless patient, it oftentimes takes continuous and frequent engagement to eventually get enough pieces of information and to build trust that eventually and hopefully effect change. Mr. P was career Washington, DC. He went to the George Washington University Law School and was a lawyer at the State Department. During the last few years of his employment, he became less lucid, gradually more demented, and as such lost his job in some capacity (fired, retired, let go?). He had a brother in Ohio but no other known relatives. Homelessness most likely came as a result of job loss and his dementia. Looking at him, in his suit and tie and wingtip shoes, and his notebook with his line items of topics he wanted to discuss, I thought "Shit, this guy literally walked to work 1 day, in this suit, and didn't have a job, and just kept walking around DC until he ended up at Central Union Mission."

During all this time, the VA outreach social workers were working tirelessly to obtain Mr. P's documents. There are certain items one needs in order to prove they exist; until that happens, they exist in the shelters only. For veterans, the two golden rods of identification are a DD214 (military service record) and a birth certificate.

However, we would ask for and try to get anything as one document can help get the others. An old pay stub, a driver's license, a bank statement, a library card – anything. Unfortunately, the norm is that most of the patients we worked with start with nothing. It takes a tremendous amount of effort, man-hours, and tenacity to obtain a birth certificate for a demented mid-60-year-old homeless man who can barely tell you who he is.

In the end, we ran out of time.

> "Does he have any relatives?" Dr. V on the other line asked.
>
> "Yes, he has a brother." I honestly can't remember who found the brother; I know it started with the director at the Father McKenna Center, but it may have been one of our VA social workers or a hospital social worker. Nonetheless, the phone rang again a few hours later. "Hi, this is Gary, I am Mr. P's brother. They tell me you're his doctor." I told Gary the story of my interaction with Mr. P, that he was homeless and now at Washington Hospital Center ICU after suffering a stroke.
>
> "Is he going to make it? Should I go see him?" The sense I got was that he asked this hoping I would say Mr. P would be OK and he wouldn't have to go see him.
>
> "You need to see him, and soon." I said. Going to see your brother in the hospital is always the right thing to do.

I got a call from Gary about 3 days later. He was at Washington Hospital Center, visiting with his brother Mr. P. We had another long conversation about Mr. P, his life and history, and Gary seemed to be reassured he made the right decision to come to DC.

Mr. P ended up dying. Myself, the director of the Father McKenna Center, and the VA social workers took it pretty hard. Were we not quick enough in getting him the care he needed? Should we have been more forceful in demanding action for him? In the end, however, Mr. P didn't die alone. Maybe that's something.

Mr. D

There were other deaths. One cold Thursday morning, I met the Colonel at McDonald's at 6:00 am for coffee. We both were early risers and hated traffic and also knew that you would maximize your chances of encountering homeless veterans in the woods if you started early because many would leave the campsites later in the morning to go to work, panhandle, and go to the library and other places.

I met the Colonel early in my tenure at the VA and count myself lucky to have met him and to now call him a close friend. Social workers talked about this Colonel who, all on his own accord, was helping get homeless veterans in Prince William County linked with services. His story is simple, but powerful. He's retired and lives in Woodbridge. One day years ago, he was at a strip mall, and there was a panhandler there. He struck up a conversation with this panhandler, and it was revealed that this panhandler was homeless, living in the woods behind a strip mall, and a veteran. This was unsettling to the Colonel for all the right reasons "why was someone who served in our military and put their life on the line for others, homeless?" The Colonel started going to the camps bringing homeless veterans tents, food, and heating sources. He visited and developed relationships with all the homeless service agencies in Prince William County such as the Homeless Drop-In Center, Trillium Counseling Center, Serve Shelter, Street Light Ministries, and Free Clinic. In addition, he became a master of navigating VA services, which could be a book in and of itself. He visited the campsites and single-handedly brought nearly 100 homeless veterans out of the woods and linked them with VA housing. A tremendous feat that required hours upon hours of effort and work. Getting DD214s, driving to medical appointments, driving to social security offices, driving to the VA. Prince William County is the southernmost capture area for the DC VA. The Colonel spent countless hours in his minivan with veterans driving back and forth to the VA. For example, one night, a homeless veteran in the woods felt ill. Sick to his stomach, fever, bloody stool. This veteran, fearing he would get a bill if he went to the local ER, called the Colonel. The Colonel drove to the campsite, picked him up, drove him to the Washington, DC, VA hospital, and saved his life. He had diverticulitis and a perforated colon and required surgery and IV antibiotics.

Over the years, the Colonel and I worked closely together engaging with homeless veterans in the woods and at the various aforementioned service sites. We set up some monthly meetings at Street Light Ministries where we would talk with homeless veterans and link them with healthcare and services and just talk with them.

The Colonel always introduced me as “This is Dr. Sutter. He is a doctor from the VA and he came down here to talk with you.” I have always underestimated, and maybe underappreciated, the fact that I am a physician. However, the Colonel made it a point to emphasize this fact, and I think he did this for a few reasons. First, it showed that the VA cared. Many homeless veterans, for a variety of reasons, have a distrust for military systems, the government, and particularly the VA. I think we were able to effectively bridge that gap by showing the VA cared enough to send a physician to the woods in Woodbridge and VA to check on a veteran’s well-being. Second, it brought a level of validation to the homeless veteran. Here is a physician who came to see you and is concerned about you, not in spite of the fact you are homeless but because you are homeless. Third, there is something about the medical history and exam that for a lot of people is comforting and routine. Since children, we’ve gone to the doctor’s office, had our vitals checked, and had the doctor place a stethoscope on our hearts and lungs. The director of the Father McKenna Center told me that Mr. P opened up with me and looked forward to our weekly meetings and that Mr. P liked the fact that he could sit with and talk with a physician.

That morning, the Colonel and I had our coffee and conversation at McDonald’s and then set out to a homeless camp behind a strip mall near the Drop-In Center. It was cold, probably in the 20s. We stopped by the first tent and talked with the veteran whom the Colonel had taken to the hospital with diverticulitis. He was about 6 months out from this and was doing fine. We went on to the next tent, where there was a veteran whom I ordered meds for about 6 weeks earlier.

“Did you get the medicines?”
“Yes Doc, I got them thank you.”
“It’s cold, you have enough propane?”
“Yeah, I’m good.”
“How are the others here, anyone sick? Anyone need help that you know of?”

Just then I heard the Colonel calling, about 50 yards away in the woods; he was at another tent. “Dr. Sutter! Dr. Sutter!!” I ran over there.

“Can you check on Mr. D, I just looked in there I think he’s dead.”

I opened the tent. Now, I have unfortunately had the opportunity to smell a rotting corpse. So I covered my mouth with my shirt and mouth breathed just in case. I opened the tent, and there was Mr. D lying in his sleeping bag. He was cold, had no pulse, and had a small amount of blood at the corner of his mouth. He didn’t smell. I estimated he died that night. I tried not to touch much, as this was a death in the woods and would need to be investigated. We called the Prince William County police. They arrived quickly, and we told them who we were, why we were there, and what we had discovered. Hats off to the Prince William County police, they were caring, professional, non-judgmental, and all around as helpful as you could ask for. Mr. D was a veteran, who was offered services by the Colonel, myself, the VA, and others but who refused. He was a nice guy and fiercely independent, and he just wanted to live in the woods. He had struggled previously with alcoholism but was sober for a long time. In the tent, however, was an empty liquor bottle. Maybe it was the booze that got him, not sure. The police took the body, and over the next month, the Colonel and I spent time talking with them about signing death certificates and storing the body, and the Colonel arranged for a full honors military burial.

Mr. R

I started my job at the Washington, DC, VA in March of 2013 in a small clinic at their homeless services site called the Community Resource and Referral Center (CRRC). The CRRC was not an overnight shelter but provided showers and laundry services and housed the VA’s homeless services personnel including nurses, social workers, and peer supports. The peer support program employs veterans who can relate with and engage with other veterans on a more communal and personal level, provide counseling services, and help them navigate systems particularly VA systems and, in most cases, can get things done.

One winter day, I was in the clinic at my desk, when a particularly personable and effective peer support came by my office. “We got a call about a homeless veteran living in a tent in Fort Washington.” This peer support and I had a good working relationship. He was a real go-getter, an operator. We had gone to several transitional housing programs and shelters together to meet homeless veterans and get them linked with services such as housing and healthcare. He was effective and an important part of our developing team at the CRRC. It was the late afternoon, and I looked at him and asked, “Are you free now?” We found a social worker willing to go with us, and the three of us set out to Fort Washington. However, the three of us took metro regularly and had no car at work, and all the government cars were being used. About an hour later, a big white RV/bus pulled up to the CRRC. In it were the peer support and the driver. Apparently, the Washington, DC, VA has a big bus that is supposed to be used as a mobile medical unit. It looked brand new. "Let's go" he said. So, off we went.

Our plan was to meet this veteran at the Shell gas station/restaurant near his campsite. We rolled up to the Shell station and talked with the cashier, who directed us to the back office. In the office was the gas station owner, who reported he let this homeless veteran hang out at the station/restaurant area when it was cold and gave him food periodically. He seemed enthusiastic that we were there to help this veteran. He took us to the woods behind the station and showed us where this homeless veteran's tent was, and we found the veteran, Mr. R, there. We walked back to the Shell station and sat at a table and talked. At this point, all of us, the peer support, social worker, and myself, were new at this homeless outreach stuff. The only one with experience was the driver of the VA's urban assault vehicle. I took the lead and sat with Mr. R and interviewed him. Mr. R was 55, a veteran Army Ranger, who was homeless living in this tent behind the Shell station for several years. He was not linked with any services. He had no identification. He didn't report any health problems. Didn't drink. Didn't smoke. As the peer support said, "He's just a good guy." It was starting to get cold this season, and when I asked Mr. R if he was willing to pursue housing options with us, he responded with an affirmative yes and seemed to exhibit sings of relief that he would not have to spend more time in his tent. Now came a point in my decision-making that I will regret for the rest of my life. At this point, we had no way of verifying his identity; we would need to go back to the office, get on a computer, contact eligibility, and start this process. It was late, after hours, and the one person whom we relied upon to work his magic in determining eligibility was not available. The choice was to take him to a shelter like Central Union Mission or let him stay in the tent one more night. I talked with him more and went back to his tent. He had been living there for about 3 years. He had a good tent, a good sleeping bag, and a heat source. I asked him if he would be OK staying here one more night, and he said yes he would stay in his tent one more night.

The next morning, the peer support came into my office and said "He's dead." That night it snowed and the temperature dropped dramatically, and Mr. R froze to death. We failed him in the worst way. We all took it hard, but the peer support took it particularly hard. This veteran peer support felt as if he left a brother out to die. I failed this veteran as a physician. This will never be OK with us, and we'll have to deal with the personal repercussions on our conscience I guess for the rest of our lives. "He was a good guy."

Mr. M and Mr. O

One morning I set out, again early, to pursue a lead regarding two homeless veterans living in a wooded area between Interstate 495 and 395 in Alexandria, Virginia. It was a good lead, as I had met one of these veterans already, Mr. M, and he had a working cell phone. Another cold morning, and getting colder, and I was still reeling from the previous death of Mr. R and didn't want to lose another. I decided to take metro to this campsite based on my Google Map search of the area. Didn't seem to be any parking unless I pulled off to the shoulder on 395, left my hazards on, and walked into the woods from there. I got off at Eisenhower Metro and walked to the intersection of two roads that Mr. M told me to meet him at. I called him, "Mr. M, its Doc Sutter, I'm here."

"OK on my way."

About 10 minutes later, Mr. M emerged from a tree line across the street. I walked over and met him, and there I saw the slightly worn path that would lead us to his campsite. Mr. M and his brother, Mr. O, both veterans, had lived at this campsite for several years. They were both in their late 40s. Prior to being homeless, they lived with their mother. When their mother passed away, they lost the house and ended up homeless. Mr. M was motivated to pursue VA housing. He had a regular physician at the VA and was linked with services. He had a cell phone and identification and was on his way to securing housing. He was concerned, however, about his brother, Mr. O, who was less motivated. We walked along this path for a long way, probably half a mile, before we came to a central grassy/dirt clearing in the woods about 30 yards in diameter. There were three wooden clapboard structures equidistant apart on the edges of this clearing. We walked up to one structure and knocked on the door, and Mr. M called for his brother to wake up. "Hey, the doctor is here, he's from the VA." Mr. O opened the door and said, "Ok I'll be out in a bit." I was amazed at the structural integrity of his dwelling. It had a roof, a wooden floor, and a wooden door, approximately 8x16 feet in size. He had a small bed, a chair, and other items neatly arranged inside. One could tell he had been there a long time and this was his home. Outside, however, was a different story. All along the clearing edge were beer cans and beer bottles, heavy malt liquor, and high alcohol content stuff, hundreds of them. This was not an unusual sight for a homeless campsite though, and I knew already Mr. M was a heavy drinker.

Mr. O emerged, and we sat on these plastic chairs among the beer cans and talked. Also at this time, another person emerged from the other wooden dwelling at the other end of the clearing, a giant of a man. I was alone here, and Mr. M at this point knew me and trusted me, but I repositioned myself to keep a view out of the corner of my eye of this other giant man I didn't know. Turns out that Mr. O is HIV positive and linked with medical care with the Juniper Program. I reviewed his health history, took his vitals, did a brief exam, and reviewed his meds. The Juniper Program is one which provides free healthcare and medicines for HIV-positive persons in Virginia. Mr. O was established with them and didn't want to come to the VA for healthcare. He was on the fence about housing, stating that if his brother got housing, then he would see what that was like and then possibly pursue housing too. Mr. O had a big vertical scar on his mid-abdomen. About 6 months ago, he got into a fight at the campsite with another man, the Giant Man, and verbal assaults led to physical assaults which led to stabbings. Both men were taken out of the woods and transported to Fairfax Hospital, each clinging to life, each facing attempted murder charges. As were talked about this, I could see the Giant Man out of the corner of my eye, muttering to himself and pacing, no shirt, no shoes, in 30-degree weather. His muttering and pacing intensified as my conversation with Mr. O progressed. Turned out that no charges were filed against Mr. O or the Giant Man as neither was willing to implicate the other. Furthermore, Mr. O and his brother Mr. M revealed that Mr. O and the Giant Man were in a relationship. One reason Mr. O didn't want to pursue housing is that he didn't want to leave his companion behind in the woods. I asked him to please consider housing and that, even though the Giant Man was not a veteran, we could link him with services in the community, and it may be possible for them to get housing together. At this point, I could see the Giant Man pacing faster, stepping harder, and muttering louder, with increasing glances and stern stares, at me. I said to Mr. O and Mr. M "this guy is getting agitated, and it seems to be directed toward me."

"Yes, I don't think he likes you talking to Mr. O."

At this point, I decided it was time to go. I had been chased out of campsites before, one time when I introduced myself as someone from the VA to a veteran who had a tremendous amount of animosity and anger toward the US Government and especially the Veterans Affairs. But here I was now, a half mile away from the road, all noise blocked by the whir of cars and trucks on 395, with a giant half naked angry mentally ill man with a history of violence focusing aggression toward me. This guy could maul me like a grizzly. I packed up my notebook and stethoscope, and Mr. M and I walked out of the compound. I suppose one takes on a level of risk with this type of work. While this instance gave me pause, I also thought about the risk that the female social workers take doing outreach and home visits, most oftentimes alone. I cannot emphasize enough how brave these social workers are.

Mr. M and I stayed in touch over the next year. He got housed. His brother stayed behind but kept close contact with his housed brother, and it seemed like he was heading toward finding housing for himself.

The Shelters

There are other dangers that come with this line of work. Smaller dangers.

One evening, I went with two VA outreach social workers to the New York Avenue Shelter. This is one of the largest men's shelters in Washington, DC. It's in an industrial area east on NY Avenue on the way out of town. We arrived in the evening just before they start letting the homeless men in the shelter. The line, however, starts hours before that, homeless men jockeying for a meal and spot in the shelter. The line starts at a door near the rear of the facility. We entered through the front door, met with manager, and told him we were with the VA and were looking for homeless veterans. He showed us a small conference room with worn furniture, a tube TV, some plastic chairs, some fabric chairs, and a large conference table. We were about to open our notebooks and computers and set up when he said, "Wait, you guys can work in here but let's go over here first." He took us through the cafeteria area, down a hall where there was a metal detector and three very large men with "SECURITY" polo shirts and tactical pants/boots/gloves/belts. These guys looked like they meant business. Past the metal detector was a door. "Come with me" he directed and opened the door. Past that door was a deck area and a long steep tiered staircase that led to what can only be described as a holding area, something like a prison yard, filled shoulder to shoulder with homeless men. Hundreds of homeless men, standing and waiting to come into the shelter. We stood above them on this decking platform at a railing, and he looked at me and said, "Tell them who you are and why you are here." So there, all eyes on me, like Mussolini, I yelled, "Hello! I am Dr. Sutter, these are Social Workers Ms. I and Ms. C. We are here from the Veterans Affairs! We are looking for veterans to help them with housing and healthcare and other services! We will be here tonight to meet with any veterans!"

We went back to the conference room. I sat on a fabric chair, and others sat on plastic chairs. We encountered about five veterans that night and began the process of linking them with services. Getting IDs, DD214s, and history/physical exam, writing for medicines, getting contact information. It was a long night.

About 2 days later, I started itching. My lower back, then my buttocks, then the webs of my fingers and forearms. Like a fool, I sat on the fabric chair at the NY Ave Shelter.

"Damnit! Scabies!" I called my wife and told her I was calling in Elimite to the pharmacy and could she please go pick it up. That night, I came home and started what would become the routine decontamination process for us. We stayed in a small one-bedroom basement apartment at the time. That night I opened the door to the apartment, stripped down and put all clothing into a thick dark black industrial-style trash bag, and went straight to the shower. Dried off, and put the towel in the bag too, and applied the Elimite lotion. My wife had to be treated as well, and we had to decontaminate and wash everything in our apartment. Thank goodness it was a small place. I wish I could tell you that this scenario played out less than once during my time working in homeless services, but I have to use two hands to count the number of times. Lesson learned, always sit on the plastic chair.

Mrs. S

The worst case of scabies I ever saw was a little 8-year-old girl with Down's syndrome in rural Africa who was infested beyond belief. I was working at a remote mission hospital, and when she presented with her mother, I thought maybe it was some inflammatory congenital skin condition, but it was scabies. I remember the almost saintly care this little girl received from the nurses at the hospital, applying lotions daily, washing her, washing her clothes, taking utmost care of this little vulnerable child.

The second worst case I ever had was Mrs. S. Mrs. S was a late 50s homeless veteran with questionable mental capacity. Like Mr. P, she most likely had early-onset dementia. She spent time at the women's shelter at the DC General Hospital campus but also a significant time on the streets, but in regular locations. The VA outreach social work team brought her to the clinic at the CRRC one day, after discovering her on their outreach at the women's shelter. Our medical team struggled with chronic staffing issues, but at this particular time, we fortunately had a stellar team with two phenomenal nurses an RN and LPN. They saw Mrs. S and immediately started to care for her. Mrs. S was disheveled, unkempt, dirty, and covered in scabies wounds. The RN and LPN found clothing we had in storage at the CRRC and escorted Mrs. S to the shower. They helped her bathe and then applied the Elimite cream to her. They took her infested clothes and put them in a biohazard bag to be laundered and helped dress her with clean clothes. When I say they did this, I mean that Mrs. S was so demented that she struggled somewhat with such tasks as bathing, applying Elimite, and doing laundry. She was almost catatonic. She spoke very little and was just stuck in her space in life. She was stuck in her mind and as such stayed in places and formulated routines that included the women's' shelter and the street. We talked with the social workers, and they were again tenacious in their efforts to work Mrs. S up for housing. However, Mrs. S was distrustful and stuck. She wanted to go back to the shelter. Aside from the scabies, she was relatively safe at the shelter. However, I could only imagine the horrors a vulnerable woman like her experienced being homeless on the streets of DC. I questioned if part of her mental state was a product of repeated traumas. By knowing her routine, the shelter, and where she's located on the street, we all tried to engage with Mrs. S. Myself, the nurses, the social workers. One peer support was particularly helpful. He would check on her almost daily and several times brought her to the main VA hospital to get enrolled and processed and link her with services there.

One day this peer support and I were talking and I asked "How's Mrs. S?" He looked at me with disappointment. "We haven't seen her in a while." This peer support took a particular responsibility for Mrs. S and went above and beyond trying to care for her. When he said this, I knew that losing her affected him profoundly. However, 1 day a few weeks later, the two nurses and I were walking through the main corridor of the VA hospital, when they said, "There she is!" Mrs. S. was wandering through the VA lobby. "Let's get her!" The nurses went up to her and gently and caringly guided her to our office which happened to have moved to the main VA hospital at that time. She was covered with scabies wounds again and as unkept as ever. I like to think she remembered us, but I honestly don't know. Sometimes talking with Mrs. S, she appeared as if it was always the first time she met us. We kept her in the clinic for a while, and I contacted the emergency department.

The VA has a lot of issues, many of which have been reported on in the news. However, there are some things the VA does very well. Our plan was to take her to the ER and have her admitted. Once admitted, she would be safe, we would know where she was, and we could work on getting her housing. We could also do a mental capacity assessment. I walked down to the ER and talked to the attending physician. The nurses talked with the charge nurse. They all agreed with the plan. Understand, scabies scares a lot of people, and sometimes they overreact. We wanted to make sure there would be no overreaction and that everyone would remain calm and go forward with the admission. It worked. Please understand that it would be difficult to do this in the private sector. We would be stymied with questions such as: “Does she meet admission criteria?” “What is her payer?” “Does she have insurance?”

However, she met VA admission criteria as it was what was in the best interest of the veteran. What a terrific mission. I worked closely with a wonderful psychiatrist at the VA. I told her Mrs. S was being admitted and that I was worried about her decision-making abilities. This psychiatrist provided invaluable assessment and guidance for the care of this patient. Inevitably, it was determined Mrs. S was not safe to live on her own, and she was placed in a reputable long -term facility. I can’t help but think that all of this was possible due to the efforts of the peer support. By tenaciously engaging with and making contact with Mrs. S, he built trust, so much so that she developed familiarity with the VA and removed herself from being stuck on the streets to being stuck in the lobby of the VA hospital.

There were more successes: the veteran we encountered and worked up at his tent site behind the Kentucky Fried Chicken in Alexandria, the veteran we found at St. Jerome’s free lunch program in Prince George’s County, and the concerned citizen who called us about a veteran panhandling on Rockville Pike who spent time at and lived behind the Harris Teeter grocery store. All of them got housed and also linked with healthcare. As we became more successful in finding homeless veterans and getting them worked up and linked with housing and healthcare services, I realized how lucky I was to work for the Veterans Affairs. The VA had something to offer, a lot actually, most notably housing. It gave me pause to think about all the other homeless persons we encountered at tent sights and shelters. Where is the Giant Man going to live? What about all the others at the NY Ave Shelter?

Mr. L

Once veterans obtained permanent housing, usually their own apartment, they were assigned a caseworker, usually a social worker or a nurse, to assist them with staying housed. Keeping them housed was just as much work if not more than getting them housed. Most of these veterans required assistance with everything that comes with living by oneself in an apartment – getting a bank account, paying rent, paying utilities, obtaining food and furniture, organizing medicines, and transportation to appointments. The caseworkers would regularly go visit these housed veterans to check on them, and I would sometimes go with them to check on their health needs. “Knock knock knock.”

> “Knock knock knock.”
> “Ring the doorbell…”
> “Does he know were coming? Let’s try calling him too.”

"His cell isn't working anymore. We're working on getting him a new one."
"Knock knock knock."
"I'm coming! Stop knocking!!"
"Hi Mr. L. Thank you for meeting us here at your apartment today. I brought the doctor with me today. I was concerned about your fall and your head."

We enter the apartment and immediately are overcome with the smell of cigarette smoke. "Mr. L, are you still smoking?" Remember, this senior facility is nonsmoking. If you want to smoke you need to smoke outside."

"I KNOOOOOW! Yeesch!!"

We sit down at the small dining room Table. I open my notebook to take notes, Mr. L across from me. "Can I turn off the TV, it's pretty loud."

"Can we open the blinds, it's nice out today and the sunshine would help with the light in here."

We open the blinds, and as I walk back from the window, I see the blood stain on the carpet by the TV. Walking back to the table where Mr. L is seated, I see about 40 staples in the back of his head which appear to have been there several weeks.

I sit down with Mr. L and start the standard history and physical exam. As the interview progresses, I realize I am getting more and more annoyed with this patient who has a very grating personality. I have to check myself.

"How much do you smoke?"
"I'm cutting down."
"Do you drink?"
"No."
"What are those 24 ounce cans of icehouse beer in your trashcan?"
"Oh I just drink beer."
"There's nothing in your fridge, are you getting enough to eat?"

The social worker chimes in, "Mr. L, what are all these unopened food packages in the trash?"

"I DON'T LIKE THOSE!!"
"MR L, those are from Meals on Wheels. How long have you been throwing those away?"
"I told you I don't want it!! My friend brings me food."
"Which friend is this? Is it your lady friend?"

Mr. L is silent; he knows what the next question is: "Is it the lady who the police are investigating for stealing from the residents here? She stole from you too. Did you get your new bank card? I talked to the bank and there's a hold on it now."

The interview continues, and it turns out Mr. L had a bit too much to drink one night, maybe most nights, but one particular night, he drank, tripped, and hit his head on the edge of the TV table, went to the ER, and got patched up with about 40 scalp staples. Aside from the drinking, his gait was stable. Aside from his personality disorder, he was neurologically intact. Just needed the staples out.

"Mr. L, would you be willing to come to the clinic for services? I could remove the staples, and we could address your other health concerns and issue."
"I DON'T want to go there! And I don't want to see you there either!"
"Can I come back here and remove them for you here in your apartment, they really need to come out."

I retrieved a staple remover and returned to Mr. L's apartment in 2 days. Knocked on the door, many times. Rang the bell.

"Who is it?!!"

I entered the apartment, same scene – dark, TV blaring, blinds closed, beer cans about, blood stain on the carpet, stench of cigarette smoke. Mr. L sat in the chair in the living room, and I removed the staples.

"Ok Mr. L, all done. Wound actually looks good. There's probably a case study here about the longevity of scalp staples. Thanks for letting me come back and take those out, I should go now."

Then something changed in Mr. L. "Can you stay for a bit?" he asked. We ended up talking for about 2 hours. His personality was still very annoying. Again, I had to check myself regarding this. Mr. L was trying and doing the best he could, but he was very difficult to engage with. This was a man with an absolutely grating personality, and I couldn't help but think this contributed measurably to his homelessness. He must have pissed off most people throughout his life, and perhaps this inability to engage positively with others resulted in him living in a tent in the woods. Similar versions of this scenario played out in other home visits with other veterans – dark room, shades drawn, TV on, isolated, alcohol cans in the trash, cigarettes in the ash trays, a "friend" in the other room, another difficult and grating conversation. I found that I needed something positive to recover after a day of home visits. I longed to be outside, see the sun, and exercise. I had to "shake it off" prior to coming home to the decon room and seeing my wife and kids.

I saw Mr. L periodically but regularly after those initial visits. Each time, it seemed the same.

"Are you drinking, there are a lot of empties in the trash."
"I'm cutting down."
"Is that lady who stole your money still around?
Silence.
"Are you taking the meds I prescribed? I see they're still in the packaging."

Going on these home visits I couldn't help but think of the classic Beatles song Eleanor Rigby. "All the lonely people." Many of the homeless veterans enter housing and go on with their lives and seem happy and well-adjusted and turn a corner once housed. The veteran we worked up behind the Kentucky Fried Chicken gave up drinking once housed. "I just don't need it anymore," he said. However, there seemed to be a significant number whom I thought were lonely. I questioned, "were they better off in the tent communities, the NY Ave shelter community surrounded by others, or here alone in their apartments smoking and drinking watching TV with the shades drawn?"

A few weeks after I left the Veterans Affairs homeless program, Mr. L's social worker called me. "Mr. L asked where you were today when I went to see him. I told him you had moved on to another job. He cried." I kind of got choked up, too, as I wrote this. In the end, Mr. L was, as peer support would say, "he was a good guy."

Mr. V

There were similarities with the medical care provided in the woods and the streets and in the apartments. These similarities stemmed from the fact that many of these homeless veterans, and housed veterans, refused to go to healthcare institutions. They distrusted them, they didn't have enough money or resources or didn't want to allot such for transportation, and some didn't want to leave their immediate surroundings. Sometimes they were just too sick and weak. I was able to provide some patchwork of medical care for these veterans, performing a basic history and physical exam with a blood pressure cuff, stethoscope, and portable pulse ox and reviewing health conditions and medical records both from the VA and non-VA systems such as recent ER or hospitalization records, and I could prescribe medicines which would in turned be mailed to them. The medicines would be delivered to them if housed or if not housed a PO Box or a shelter or the drop-in center address – wherever they were able to set up an address to receive mail. Sometimes the social workers or nurses would bring the medicines directly to the patients, delivering to the woods or the streets. Some veterans had a distrust for the VA, or it was too far away, so we would link them with community healthcare resources such as Unity Healthcare, Neighborhood Health, the Prince William Free Clinic, and others.

One veteran, Mr. V, had a particularly unique story. He was housed in a senior living apartment in the suburbs. He smoked and had severe COPD and PTSD. I would see Mr. V in his apartment about every 6 weeks to make sure he was getting all his inhalers and his oxygen was supplied, encourage him not to smoke, review his PTSD symptoms and medicines, and make sure he was as healthy as he could be given his lot in life. After a few visits, I asked him, "Mr. V, you never have any food in your fridge. Are you getting enough to eat?" There was a grocery store across the street from his apartment complex. Then Mr. V told me about his journeys to this grocery store. Mr. V would walk down his apartment hallway, take the elevator downstairs, and slowly walk with pauses to catch his breath to the intersection with the traffic light. He would press the walk button. The light would change, the traffic would stop, and the walk light countdown sign would illuminate "30, 29, 28, 27, 26…." Mr. V had 30 seconds to cross four lanes to the other side. Somedays he wouldn't make it, and drivers would honk their horns or just drive by him in the middle of the intersection. This caused him a tremendous amount of anxiety. The social workers and I got together, and we set up with Meals on Wheels, as well as did the grocery shopping for him. However, Mr. V was fiercely independent and didn't want to rely on anyone or anything. I broached this subject 1 day, "Mr. V, why don't we get you a power wheelchair."

> "I don't want that. I want to walk."
> "Mr. V, I have tremendous amount of respect for that, walking is key. However, what if you just used the wheelchair for certain long outings, such as crossing that street to the grocery store?"

He agreed, and while we both were not fans of electric wheelchairs, it did provide him a degree of security and independence to be able to get his groceries on his own.

Unhoused

There were other homeless veterans whom I would see in the woods regularly because they were not eligible for housing. They lived on their own or in small tent communities in wooded areas behind strip malls and fast-food restaurants and highway median strips and other such places. Those with certain criminal records and those with dishonorable military discharges were not eligible for VA housing. Most of these were sex offenders. I learned to ask questions about criminal history and military discharge status, as this would determine what services they were eligible for. In the end, it became a routine – "How long have you been homeless? Do you know the winter hours and location of the drop in center if it gets too cold?" Is there anything that would preclude you from obtaining housing services, such as a being a convicted sex offender?" One takeaway from this is something I learned in 2006. At that time, I was fresh out of residency and took a job with Unity Healthcare. Unity Healthcare is a long established network of community health centers that provide healthcare to those in Washington, DC, that might not be able to afford it or access healthcare otherwise. In 2006, Unity took over healthcare operations at the DC jail and offered us doctors a little bit of extra money if we would work 2 days a week at the jail. I took the bait (kidding, it was a good experience and DC is lucky to have Unity providing healthcare in the jail; they do good work there). My first few weeks there I provided care for gang members accused and convicted of multiple murders, rapists, Al-Qaeda operatives, MS-13 gang members, and human traffickers – the list goes on and on. I thought to myself, "Wow, some of these people have done horrific things to others. However, I can't judge these people, I just need to go to work and treat patients and go home. As soon as I start judging I'm done." Any judgment would just take a toll on my own psyche and make the job harder and not provide anything productive. Maybe that's part of being a doctor, a professional. But, it doesn't happen without conscious effort and intent.

The Strength of Community

There are references to multiple persons and institutions in this chapter: the NY Ave Shelter, the Drop-In Center, the Colonel, the peer supports, the Father McKenna Center, Unity Healthcare, the Veterans Affairs, Street Light Ministries, St. Jerome's, the police, and many more that create a patchwork of services for homeless in the area I worked. One thing the VA did very well was to reach out to these individuals and organizations. Over time, all of them knew we at the VA were looking for homeless veterans and that we wanted to link these homeless veterans with housing and medical care, and they knew to contact us if they came across any. This was a result of deliberate networking on the part of the Washington, DC, VA homeless services and a spirit of cooperation within the network of community services. One day about 3 years in of my tenure at the VA, myself and two social workers went to the 2nd and D shelter in Washington, DC. We walked into the building, went up to the front desk, and introduced ourselves, “Hi, we’re here from the VA. Checking if you have any veterans here today.”

> “Yes, we know who you are. I think there might be one let me check. Just one though, you got all the others!”

My phone rings again: “is this Dr. Sutter? This is social worker P from Arlington County, how are you doing? Remember Mr. G who would hang out at the Pentagon parking lot, he needs a new wheelchair. Are you able to get him one?”

> “Is he housed yet?”
> “We’re working on it, he is eligible and we have a nice apartment for him if he’s willing, but he is still resistant to getting housed though. Hey, wanna go see him maybe he’d listen to you.”
> “Ok, let’s go next Thursday. I can get him hooked up for a new wheelchair and talk to him about getting housed. I need to look at his feet too, they were pretty bad last time. Hopefully it’ll make a difference.”

Chapter 3
Medical Care for Homeless Persons

Caridad A. Hernandez and Adam G. Golden

Background

Providing high-quality medical care to persons experiencing homelessness is associated with a variety of challenges. Efforts to deliver preventive, diagnostic, and treatment-based medical interventions are difficult for patients who do not have housing, medical insurance, or the monetary resources for physician visits, diagnostic testing, and treatments. As a consequence of lack of housing, the patient's medications and supplies are at high risk for being lost, stolen, or damaged.

Hospitalization rates among homeless persons continue to rise across the United States [1]. Over half of all hospital admissions of homeless persons involve mental health and substance abuse disorders. The high rate of illicit drug abuse among homeless persons may limit hospital discharge options. Given the perambulatory nature of these patient's lives, scheduling post-hospitalization follow-up, especially with medical specialists, can be problematic. Options are also limited for palliative care interventions for the treatment of symptoms for pain, anxiety, and dyspnea that often utilize controlled substances.

Other barriers to the implementation of medical care include untreated mental illness, fear of being stigmatized, lack of family caregivers, and mistrust of institutional health care [2–4]. Effective medical treatment plan must also take into account potentially aggravating variables, such as poor nutrition, abnormal sleep cycles,

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extreme weather exposures, unsanitary conditions, and untreated sensory impairments [5]. For example, in a study of homeless persons in Toronto, approximately one out of eight homeless persons had visual impairment amenable with glasses, and 18% had significant ocular pathology [6].

Establishing benchmarks for the medical care of homeless persons is not always clear. Evidence-based clinical guidelines can provide some insights but are usually derived from an analysis of published clinical research studies. The conclusions from many clinical research studies are not generalizable to the homeless population. Most research studies intentionally exclude the enrollment of patients who are deemed to be "unreliable," "noncompliant," or at high risk for loss to follow-up. The lack of a mailing address and phone number and the presence of existing mental health illness are other reasons that homeless persons fall into this excluded category. Similarly, homeless persons are likely to be excluded from standard community-based clinical programs and clinical protocols due to lack of access to transportation and lack of financial resources.

General Strategies

In the initial visit, health-care professionals should focus on addressing symptomatic issues to alleviate suffering and to develop a perception of trust and caring from the patient. The establishment of a therapeutic relationship between the patient experiencing homelessness and the treating health-care staff is needed in order to develop a shared decision-making model of care. This bond may also improve the patient's likelihood of disclosing important medical information and compliance with future appointments [5].

Treatment plans often need to be simplified [7–9]. For example, avoid medications that require frequent daily dosing, whenever possible. Medications that can be given once daily are always preferred [7]. Low-cost generic medications are more likely to be purchased by patients with very limited financial resources. In some cases, pharmaceutical companies may offer free or discounted medications that are too expensive when purchased through a retail pharmacy.

Similarly, wound dressings that do not need to be changed often are preferable. Supplies and medications samples should be put into a waterproof bag or container before giving it to the patient [10]. Consider incentives that promote the return to clinic for follow-up treatment and evaluation. In other cases, community outreach efforts may be needed to provide on-site evaluation and treatment. Given the possibilities of care fragmentation, ensure that patients have a copy of their medication list and most relevant medical records.

Note that there are intentional and unintentional reasons for nonadherence. Thus, it is important to determine the reason for nonadherence and to avoid negative stereotypes of persons who are homeless [9]. Below, we will highlight several common illnesses encountered among homeless persons and the challenges that health-care providers may face in implementing treatment plans.

Diabetes Mellitus

Mr. Gary P is a 47-year-old Caucasian man with type 2 diabetes who ran out of his medications 2 months ago and presents to the Street Medicine Clinic requesting to have his blood sugar checked. Mr. Gary suffered from a traumatic brain injury many years ago and has been unable to work since that time. Subsequent health issues resulted in estrangement from his family. He has lived at local men's shelters intermittently, during which time he has been able to receive medical care and treatment for his diabetes. His medications included metformin 750 mg twice daily and a second oral medication that he does not recall. When he has not been living in the shelter, he does not take medication or check his blood sugar levels. His diet is erratic and mostly limited to carbohydrate-heavy meals.

Diabetes mellitus is a disorder of glucose metabolism that is diagnosed by a random serum glucose of ≥200 mg/dL, a fasting plasma glucose of ≥126 mg/dL, or a serum hemoglobin A1c level of ≥6.5%. Prolonged untreated diabetes can lead to vision loss, renal failure, neuropathy, and atherosclerotic disease. Acute uncontrolled diabetes can cause increased urination, thirst, altered mental status, and death in severe cases. Elevated blood glucose levels also increase the risk of infections and impaired healing of wounds. Blood glucose levels can vary throughout the day and are affected by the type/amount of food consumed, levels of exercise, and the frequency/dosage of diabetic medications.

Diabetes mellitus is treatable through drug therapy and lifestyle management (i.e., diet and exercise). The treatment options for persons experiencing homelessness, especially pharmacotherapy, present several challenges. The primary challenge is the regularity of meals and access to food. Monitoring blood sugar levels requires a blood glucose meter and disposable test strips. Both the glucose meter and the test strips may get lost, stolen, or damaged when the patient is homeless. It is highly unlikely that homeless persons will be able to monitor blood glucose levels multiple times per day. The storage of insulin is also problematic. While most insulin preparations kept at room temperature will last a month, the maximum recommended temperature while in use should not exceed 30 °C or 86 °F. Cold temperatures below 2 °C (36 °F) should also be avoided. Avoiding temperature extremes, especially high temperatures, is important to maintain the biological potency of insulin [11]. The syringes are at high risk for theft or sale to those with intravenous drug abuse issues. Compliance with multiple injections per day is not likely. Research studies have shown that intensive glycemic control leads to a slower progression of microvascular disease and a lower risk of cerebrovascular disease. However, these studies exclude homeless persons with risk factors for nonadherence. While there is a paucity of studies involving homeless persons, the risk of injury from hypoglycemia is high in a population where access to food is often inconsistent at best. Several studies have shown that medication regimens that keep the HBA1c below 7% may increase the risk of mortality in older patients. Metformin may be a safer alternative than other oral medications for patients without kidney or liver disease as the risk of hypoglycemia is lower. These patients also warrant special attention to foot care. Efforts to establish regular sources of care are essential to avoiding life-threatening complications from their diabetes. Engagement with case management may assist in these efforts.

Hypertension

Mr. Marvin C is a 52-year-old African American man with a long-standing history of hypertension who presented to the Street Medicine Clinic requesting a blood pressure check and refill of his blood pressure medications. He was incarcerated for the past 22 months for drug possession and was released from prison 4 months ago. He has been working day jobs and continues to struggle with addiction to cocaine and alcohol use.

While in prison, he received blood pressure medications, but he ran out of these 3 months ago. He sought care at a local emergency department 5 weeks ago because he was experiencing headaches and chest tightness and became alarmed. He was found to have a blood pressure of 198/100 mmHg and was prescribed a 1-month supply of the following: labetalol 200 mg BID and clonidine 0.1 mg po TID. He was given the contact information of a local clinic and advised to schedule an appointment but had not done so. He ran out of both medications 1 week ago and was concerned about his blood pressure. At the Street Medicine Clinic, his blood pressure reading was 210/110 mmHg and his heart rate was 110 beats/minute. He was not experiencing any visual symptoms, chest pain, headaches, or shortness of breath. He last used cocaine 1 week ago.

Hypertension is common among homeless adults. For example, among homeless Veterans who were provided housing alternatives, the most common medical diagnosis was hypertension affecting 47% [12]. Hypertension is defined as a systolic blood pressure of ≥140 and a systolic blood pressure of ≥90 mmHg.

A recent study by Asgary et al. reported a 40.1% rate of uncontrolled hypertension among the homeless with 15.8% meeting the criteria for stage 2 hypertension [13]. Chronic uncontrolled hypertension is a major risk factor for heart disease, stroke, and kidney failure. Effective guideline-based treatments for high blood pressure currently exist [14]. Guideline-based medication therapy involves the use of one or more medications [14]. The management of hypertension and uncontrolled severe hypertension in persons experiencing homelessness is particularly challenging.

Homeless persons are more likely to be unaware of their hypertension diagnosis [15]. Additionally, a number of issues can exacerbate this condition and lead to underlying hypertension. The high incidence of alcohol use and substance abuse disorders in this population contributes to the burden of hypertension. Mr. Marvin's case illustrates the importance of drug choice in persons who are homeless and have substance abuse disorders. While both labetalol and clonidine are agents recommended for treatment of hypertensive urgency or severe uncontrolled blood pressure, they pose a problem for patients such as Mr. Marvin.

Multiple medication treatment options exist. Some general recommendations to consider include the avoidance of short-acting antihypertensives (e.g., labetalol and nifedipine) and those drugs that result in rebound elevations in blood pressure (e.g., clonidine and possibly hydralazine) when abruptly discontinued. In patients with a history of cocaine use/dependence, it is imperative to avoid beta-blockers (i.e., atenolol, metoprolol, carvedilol, labetalol) as these medications can lead to vasoconstriction through the potential effects of unopposed alpha-1 receptor activation. Reserpine is generally not recommended for patients with depression.

Long-acting, once-a-day dosing of a calcium channel blocker (e.g., amlodipine), angiotensin-converting enzyme, and diuretics are reasonable options for initial therapy. Diuretic agents, such as hydrochlorothiazide, and angiotensin-converting enzyme inhibitors (i.e., enalapril, lisinopril, captopril), can affect levels of electrolytes such as sodium and potassium. Blood levels of electrolytes may be affected by dehydration due to excessive loss of body fluids or to poor access to oral fluids.

Mild and episodic elevations in blood pressure usually do not require urgent treatment. Markedly elevated hypertension (systolic blood pressure ≥180 mmHg or diastolic blood pressure ≥110/mmHg) that is associated with shortness of breath, chest pain, changes in vision, or severe headaches should raise concern for a hypertensive emergency and warrants a transfer to an emergency department for further evaluation.

Cardiovascular Disease (CVD)

Mr. Eddy is a 62-year-old Hispanic man with a history of coronary artery disease and a myocardial infarction 2 years ago who presented to the Street Medicine Clinic for a refill on his medication, including his sublingual (SL) nitroglycerin (NTG). He is on metoprolol 100 mg BID and has been using his SL NTG more frequently for the past 2 weeks because of episodes of chest pressure that have been occurring three to four time per week. Eddy associated these episodes with a recent heat wave that has been affecting the city. He spends his days outdoors and sleeps "rough" most nights. Eddy is also supposed to be taking a statin and daily aspirin and inquires whether the clinic has any samples.

Cardiovascular disease (CVD) is a leading cause of morbidity and mortality among homeless adults [16–18]. Homeless adults between 45 and 64 years of age experience mortality rates due to heart disease that are two to three times greater than the general population [17, 18]. This disparity is likely attributable in part to traditional risk factors for CVD (hypercholesterolemia, hypertension, tobacco use, and diabetes). Patients who are homeless are less likely to receive primary prevention for CVD such as statin therapy and are more likely to have poorly controlled hypertension and diabetes [15, 19]. They also have higher rates of cigarette smoking [20, 21].

Several mental illnesses are associated with increased cardiovascular risk that may be related to antipsychotic medications, alcohol abuse, or cocaine use [22]. Other psychosocial factors include lack of insurance or income, unaffordability of treatment, and perceptions of health-care facilities as unwelcoming. Additionally, the higher likelihood of drug use (i.e. cocaine and amphetamines/methamphetamines) and heavy alcohol consumption [16, 23] contribute to the logistical challenges faced in managing patients who present with CVD emergencies to the hospital and should influence diagnostic and therapeutic decision-making.

Management of patients with CVD who are homeless requires an individualized patient-centered decision-making approach based on clinical practice guidelines [24], empiric evidence (if and when available), and consideration of patient-specific comorbid conditions, as well as other patient-specific factors [18]. Given the heterogeneity of the homeless population, it is important to avoid assumptions about patients and instead assess each patient's circumstances. Clinicians need to use caution in order to avoid the trap of nihilistic thinking and potential implicit bias [1].

In a recent cross-sectional study of 24,890 hospitalizations for acute cardiovascular conditions, Wadhera et al. [1] found that persons identified as being homeless received lower-intensity care for cardiovascular conditions. Homeless persons hospitalized for acute myocardial infarction were less likely to undergo coronary angiography, percutaneous coronary intervention (PCI), and coronary artery bypass grafting. Additionally, homeless persons admitted with a ST-segment elevation myocardial infarction (STEMI) mortality rate were higher than in non-homeless [1].

Clinical practice guidelines, such as those for acute coronary syndrome, have typically not included considerations regarding patient comorbidities, and none have included homeless persons. Furthermore, current CVD prediction rules do not include factors associated with increased risk of CVD in homeless persons. Therefore, providing effective quality care to persons experiencing homelessness requires individualized decision-making that integrates clinical guidelines and best practices with practical considerations based on the patient's circumstances [1, 18]. This is best achieved using a multidisciplinary collaborative approach. Clinicians would also benefit from familiarizing themselves with community-based resources for the homeless and the availability of medical shelters (i.e., those that may assist with medications and transport to follow-up visits) and respite programs [1, 18, 25].

Homelessness should not be considered a contraindication to diagnostic imaging or interventions such as PCI. Rather, these patients require individualized decision-making that takes into consideration patient-specific factors. Anticipating downstream issues of medication access and follow-up will require care coordination and case management.

Potential treatment interventions for homeless person could include:

1. Education on modifiable CVD risk factors tailored to the patient's circumstances.
2. Information and referrals for free screenings (lipid) and sources for routine and/or free care.
3. Smoking cessation information and resources [26, 27].
   - Information on quitting programs and resources including medication and nicotine-replacement options.
   - Providing information on the location of smoke-free shelters.
4. Low-dose aspirin (i.e., 81 mg/day) for secondary and tertiary prevention in patients with risk factors.
5. Use of a HMG-CoA reductase inhibitor ("statin") to lower cholesterol levels (caution is needed in patients with underlying liver disease).
6. Use of a beta-blocker medication (avoid in patients who use cocaine) [28, 29].

Risks of bleeding from antiplatelet therapy (aspirin and clopidogrel) and/or oral anticoagulation therapy (warfarin, apixaban, dabigatran, and rivaroxaban) may be markedly elevated in homeless person who are at high risk for injury/trauma. This may be mitigated through patient education and arranging for respite care or other placement following acute hospitalization.

Smoking Cessation

Cigarette smoking is a modifiable risk factor that is highly prevalent among persons who are homeless and contributes to the excess CVD mortality experienced by homeless adults [23, 26, 27, 30]. Smoking is also associated with an elevated risk of lung cancer, head and neck cancer, chronic obstructive pulmonary disease (COPD), and respiratory infections. The increased mortality associated with tobacco use is most notable in homeless adults over 50 years of age and is compounded by a low rate of successfully quitting [21].

Clinicians should not assume that persons who are homeless are not interested in quitting [20, 31]. Consistent messaging on smoking cessation, resources to assist with quitting, and medication-assisted interventions should be considered. Smoking cessation interventions can also be integrated with other health and behavioral services [30].

HIV and Sexually Transmitted Illnesses

Jimmy is a 27-year-old man who has been homeless for almost 3 years. He uses IV drugs daily and occasionally smokes crack. In order to pay for drug use, he frequently has sex with other men. He does not ask his "clients" to use condoms. He has received no medical care in over 5 years and does not use pre-exposure prophylaxis (PrEP) antiviral therapy for HIV transmission prevention.

The high rate of intravenous drug use among homeless persons continues to represent a major risk factor for the transmission of the human immunodeficiency virus (HIV) [32]. Another major risk factor for homeless persons is the exchange of sex for money and drugs.

Ideally, patients with these high-risk behaviors should be tested regularly [33]. For those who are HIV negative, prevention information and behavioral counseling, as well as referral to community-based organizations, is important to help reduce the risk of becoming infected. Key interventions for these patients include offering prevention options such as pre-exposure prophylaxis (PrEP) and encouraging the regular use of condoms [34].

The diagnosis of HIV testing involves an initial combination serum assay of the p24 antigen and the antibody for HIV-1 and HIV-2. This test becomes positive in 2–4 weeks after exposure to the virus. Positive results from this fourth-generation screening procedure undergo an antibody differentiation assay for confirmation of infection.

The treatment of HIV involves daily combination therapy and a number of different regimen options are available. A list of FDA-approved HIV medications and combination medication therapies can be found at https://aidsinfo.nih.gov/contentfiles/upload/HIV_Pill_Brochure.pdf [35]. The specific regimen will likely depend on the resources available to acquire discounted medication. Patients receiving HIV therapy need to be enrolled in a medical clinic with specialty expertise in the care of HIV to monitor HIV suppression and monitor for short-term and long-term side effects. Strategies such as providing patients with storage lockers can help secure medications and assist with medication adherence [36]. Compliance with daily medication therapy is essential to ensure continual viral suppression and to prevent the emergence of antiviral medication resistance. Successful viral suppression can prevent the development of the sequelae of immunosuppression, including tuberculosis, cervical cancer, anal cancer, Pneumocystis pneumonia, cytomegalovirus disease, non-Hodgkin's lymphoma, Kaposi's sarcoma, and fungal diseases.

The same risk factors for HIV also place Jimmy at risk for other sexually transmitted diseases. Many homeless persons engage in "survival sex," fail to use condoms, and have multiple sexual partners [37]. Homeless young persons and females are at especially high risk for sexually transmitted infections (STIs). Two common

STIs are caused by *Chlamydia trachomatis* and *Neisseria gonorrhoeae*. The diagnosis involves nucleic acid amplification testing of urine. Both illnesses can be treated with a one-dose antibiotic regimen. Syphilis is another STI to consider that can have a long latent phase after the initial infection.

Hepatitis B and C

The hepatitis B virus can be spread through blood or sexual contact. Risk factors include intravenous drug use, men who have sex with men, and prisoners. Not surprisingly, hepatitis B is also common among persons who are HIV or hepatitis C positive. Most adults will not develop a chronic infection following the acute phase of the illness. For those patients that do continue with a chronic infection, treatment with antiviral agents may be considered depending on the severity of symptoms and laboratory testing.

Injection drug use, prison, and the presence of unhygienic tattoos are risk factors for infection with the hepatitis C virus. As with hepatitis B, most patients will not know that they have been infected with the virus. In contrast to hepatitis B, patients with hepatitis C are more likely to harbor a chronic infection without symptoms. Hepatitis C often has a very long asymptomatic phase that can last years to several decades before liver failure and/or hepatocellular cancer emerges. The diagnosis is made with a blood test for the anti-HCV antibody. Positive tests require a follow-up serum measurement of the hepatitis C viral load.

Effective treatments are now available that can cure hepatitis C. These treatments are exceedingly expensive, require strict compliance, and can exacerbate underlying depression. Potential opportunities to lower the risk of hepatitis C transmission involve needle syringe programs as well as opioid substitution therapy [38]. The latter option has fallen out of favor due to the heightened awareness of the risks of opioid abuse.

Vaccines

The prevention of infectious diseases with vaccine interventions represents a potentially important opportunity to improve the health care for homeless persons. The major vaccines to consider in homeless persons are the following:

- Influenza – Yearly vaccination should be offered to homeless persons.
- Pneumonia – Vaccination for pneumonia due to *Streptococcus pneumoniae* with pneumococcal conjugate vaccine (PCV-13) and pneumococcal polysaccharide vaccine (PPSV23) is recommended for all adults 65 years of age and older. Vaccination is also recommended for adults younger than 65 years of age who have specific underlying medical conditions or are immunocompromised.

- Hepatitis B – All homeless adults and staff at homeless shelters should receive the hepatitis B vaccination series.
- Tetanus – All adults who were vaccinated as teenagers should have a tetanus and diphtheria toxoids (Td) booster every 10 years.
- Zoster – All adults over 50 years of age should receive the varicella vaccine to prevent herpes zoster and lower the risk of postherpetic neuralgia in those patients that do develop zoster.
- Measles, mumps, and rubella (MMR) – COVID-19 – Immunization should be offered in accordance with CDC and state/local health deparment guidelines. This vaccine should be provided to all patients who do not have documentation of immunization. The Centers for Disease Control and Prevention (CDC) website provides guidance regarding the scheduling of vaccine doses in adult patients.

Tuberculosis

Ms. P is a 51-year-old woman who came to the homeless shelter 3 days ago. She was told by a staff member that her “TB skin test came back positive.” She reports no prior history receiving a TB screen. However, she did have a close friend who was diagnosed with TB 6 months ago. Ms. P currently has no cough, fevers, night sweats, or weight loss and says she feels “fine.”

Tuberculosis (TB) is a pulmonary infection with the bacteria *Mycobacterium tuberculosis*. TB can present as active pulmonary disease. In rare cases, TB can present due to the infection of other tissues besides the lungs.

Residents of homeless shelters and prisons are at higher risk for exposure to TB.

Homeless persons are also at risk if they are in settings with crowding or poor ventilation. Clinical signs and symptoms of active disease include a productive cough for greater than 2 weeks, weight loss, shortness of breath, fevers, and night sweats. Homeless persons with any of these signs and symptoms should have a chest x-ray to evaluate for active TB. Similarly, people who have been in close contact with persons with active TB need to be clinically evaluated for TB. A positive screening test without evidence of active pulmonary disease supports the diagnosis of latent (dormant) TB.

The tuberculin skin test (known as the “PPD”) requires a follow-up measurement of the result within 48–72 hours. An induration of 5 or more millimeters is positive in persons with HIV-infection, fibrotic changes on chest radiograph consistent with prior TB, and a recent contact with someone with TB disease [39]. Otherwise, an induration of 10 or more millimeters is likely positive in homeless persons. The interferon-gamma release assay (IGRA) is often the preferred test as it does not require follow-up review. Staff that work in homeless shelters should be screened annually for TB.

Multiple treatment options exist for both latent and active TB. All require a treatment duration of at least several months. Compliance with medication treatment is often a challenge. Careful follow-up is needed for patients under treatment for TB (especially active disease) as incomplete antibiotic therapy can select for the emergence of drug resistance. In some cases, observed therapy by a health-care professional is necessary to ensure that the patient is taking the medication. The use of monetary incentives may improve the return rate of homeless persons to return to clinic for tuberculin skin testing results or to initiate treatment. The benefits of monetary incentives in the outpatient treatment of active TB and latent TB have not been demonstrated [40].

Skin Diseases

Skin diseases are common among homeless persons. Factors that predispose homeless persons to the development and persistence of skin diseases include sleeping outside, sharing clothing and bedding, poor sanitation, prolonged standing, and sleeping on hard surfaces [10]. Common skin diseases include infections, venous stasis ulcers, wounds, skin cancers, and frostbite. Although the diagnosis is often straightforward based on a clinical examination, the treatment and management can be difficult in homeless persons.

Infestations: Scabies and lice are two infestations that need to be on the radar screen of any health-care professional who serves homeless patients. Both infestations may present with pruritus (itching). Body lice are often visible along hair shafts. Scabies has characteristic lesions in between the fingers, groin, and axilla, as well as the extensor surfaces of the knees and elbows. The diagnosis of scabies requires a scraping of the suspected lesion with a potassium hydroxide solution. Clothing may need to be laundered or discarded. Identifying and treating personal contacts is difficult. As a result, reinfestations are common.

Wounds: Homeless persons are at high risk for developing wounds due to injuries and exposure to environmental insults. Wounds are more likely to become infected due to poor sanitation. As a loculated infection, abscesses should be surgically removed. Following the procedure, antibiotics may not needed. However, meticulous wound care is usually needed. Keeping the site clean and carrying wound supplies are difficult tasks for patients who are homeless.

Skin cancer: Exposures to prolonged sunlight lead to marked photoaging as well as precancerous and cancerous lesions. Squamous cell and basal cell cancers are the most common types of skin cancers, and they usually occur on sun-exposed areas of the body (i.e., head, neck, and arms). Most of the time, these cancers do not spread to other parts of the body and treatment involves excising the lesion. However, if left untreated, they can grow both large and deep causing disfigurement.

Most worrisome are melanomas. These skin cancers can spread throughout the body and can be fatal. “ABCDE” is a useful pneumonic to assist health-care professionals identify lesions that may be suspicious for melanoma:

- “A” = asymmetry of the lesion
- “B” = border is poorly defined, jagged, and/or irregular
- “C” = color varies across the lesion
- “D” = diameter greater than 6 mm
- “E” = evolution in size, color, or shape over time.

Dark pigmented lesions may be difficult to identify in dark-skinned patients.

Cold Weather Injury

During the winter, cold weather can cause injury to homeless persons. Alcohol abuse and mental illness may lead to delays by patients to recognize their potential danger. Hypothermia, a lower core body temperature, is a major risk of morbidity and mortality, depending on the severity of the body temperature decline. Hypothermia can manifest with many clinical findings including changes in mentation, neurologic changes, and cardiac arrhythmias.

Frostbite is a localized injury that involves the freezing of tissue that may be exposed to the cold weather (i.e., fingers, toes, nose, chin, and ear).

In contrast, trench foot is a nonfreezing injury that occurs due to the combination of cold weather and wetness of the feet. Immediate interventions (while awaiting transfer to an acute medical center) involve [41]:

(a) Removal of wet/iced clothing.
(b) The use of warm (not hot) water or body heat to the area of concern.
(c) Avoiding rubbing the injured area or placing the patient near a fire or stove as both actions may worsen the injury.

Osteoarthritis

Mr. Johns is a 68-year-old man with a history of alcohol abuse and liver cirrhosis who has been homeless at various times over the past 28 years. Mr. Johns says that he has always had “arthritis” of his left knee and says that he has not been able to squat, run, or walk up a flight of stairs for “many years.” The pain in the knee is worse in the morning and when it is cold outside. On exam, he is an elderly appearing obese man with an enlarged and irregular left knee joint. There is no tenderness, swelling, warmth, or redness of the left knee.

Osteoarthritis is the leading cause of arthritis and affects approximately half of all older adults. Common joints involve the knee, hip, and spine. Major risk factors are age, female sex, obesity, and repetitive non-ergonomic movements. Osteoarthritis often results in an impairment in joint function or a disability in more severe cases. Joint pain is the other major consequence of osteoarthritis.

Pharmacological Treatment Considerations

There are currently no medications that will slow down the development of osteoarthritis or reverse existing damage. Over-the-counter products, such as fish oils, shark cartilage, and glucosamine/chondroitin sulfate have not been proven to be effective treatments.

Medication interventions mostly focus on the treatment of pain. Nonsteroidal anti-inflammatory drugs (NSAIDs) can provide effective analgesia for patients with osteoarthritis without the potential risk of addiction that is seen with narcotics. However, NSAIDs have the potential to increase the risk of gastrointestinal bleeding in patients who are elderly, have a history of peptic ulcer disease, or are using aspirin, clopidogrel, or oral anticoagulants (i.e., warfarin, dabigatran, rivaroxaban, apixaban) [42]. The potential risk of gastrointestinal bleeding increases with higher doses and a prolonged duration of NSAID.

Older patients with underlying kidney disease or those who have low intravascular volumes (due to lack of access to water, excess fluid losses, or "third spacing") are at higher risk for acute kidney injury from NSAIDs [43]. For homeless persons who are outside all day during the summer, the risk of intravascular volume depletion from excess sweating needs to be considered. In this setting, treatment with common blood pressure medications, such as diuretics or renin-angiotensin system inhibitors (ACE-I), may place the homeless person at even higher risk for renal injury.

Acetaminophen should not be used in doses greater than 3 or 4 grams per day. Higher doses can cause liver damage. Acetaminophen should be used with caution in patient with underlying liver disease which may be common among homeless persons with a history of chronic viral hepatitis or prolonged alcohol abuse.

Use of Assistive Devices

A standard cane may help with proprioception but will do little to offload the weight from an arthritic joint. Instead, an "offset cane" can offload weight from an arthritic hip, knee, or ankle. The cane should be held by the hand opposite the arthritic joint at the level of the greater trochanter with the elbow bent at a 30-degree angle.

In cases where the person is unable to bear weight on a lower extremity joint or does not have the stamina or balance to ambulate with a walker, the use of a wheelchair may be indicated. Among homeless persons, a standard wheelchair may serve a similar function as a four-wheel walker and may provide space for the person to store items. The more specialized (expensive) the device, the higher the risk that the device may be stolen or sold.

Conclusion

Persons who are homeless are a heterogeneous group but share a number of challenges to their mental and physical health. For many illnesses, published clinical guidelines do not take into account the unique psychosocial issues effecting homeless persons. Understanding a patient's specific circumstances is essential for providing effective medical care that is aligned with clinical practice guidelines. Marshaling resources such as case management and community-based entities is often needed to help meet patients' medical needs. Opportunities to provide preventative health care should be utilized to lower the impact of future disease burden.

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Chapter 4
Chronic Pain Management in the Homeless Population

Sanjog S. Pangarkar and Lynn E. Chang

Introduction

The International Association for the Study of Pain defines pain as “an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.” When pain persists longer than 3 months after an acute or subacute injury, it is considered chronic in nature. This definition assumes that damaged tissue has healed and that pain is no longer providing purposeful information [1]. Chronic pain affects a large portion of the US population and contributes an estimated $635 billion in direct medical costs, lost productivity, and disability programs each year [2]. The US National Health Interview Survey estimated 19–43% of adults suffer from a chronic pain condition, with one third experiencing high impact and disabling pain [3]. Similarly, the Pain Alliance Europe Survey estimated 20% of European adults experience chronic pain and 34% rated their pain as severe affecting their quality of life [4].

Worldwide estimates show that one in five adults suffers from pain and another one in ten adults are diagnosed with chronic pain every year. Pain is indiscriminate, affecting people regardless of age, gender, income level, race, ethnicity, or sexual

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orientation; however, it is not distributed equally on a global level. While experiencing pain is a shared experience by most of the population, how individuals experience that pain and the impact it has on their lives vary significantly. In fact, pain can be experienced acutely, chronically, intermittently, or a combination of all three specific to an individual. Because pain can originate from multiple sources such as cancer, arthritis, surgery, or trauma, an additional layer of complexity to diagnosis and treatment is present. In addition, psychosocial factors including depression, anxiety, and challenged social relationships may add to the complexity of a patient's experience of pain [5].

This problem extends to homeless populations across the globe and is likely underrepresented in the current literature. Fisher et al. [6] reported the prevalence of chronic pain in the homeless population to be 59.3%, while Vogel et al. [7] found that 43% of their study population had moderate to severe pain that interfered with their general daily activities (80%), sleep (78%), and social interactions (61%). There are many factors that contribute to pain in the homeless, including a lack of medical access, limited economic means, mental health issues, inadequate social support, exposure to the elements, and violence on the street. These conditions not only exacerbate the suffering caused by pain but also create barriers for effective pain management. In the Hwang et al. [8] study, fewer than half of the study participants (41.4%) were being treated for their pain issues.

Review of the present literature, including social sciences, emergency room data, and public health literature, suggests that the most common chronic pain complaints are mixed disorders, with Hwang et al. reporting the three most common locations of pain were the back (52%), knee (28.9%), and shoulders (21.1%). In contrast, Fischer et al. [6] published that the lower limbs were the most common site of pain (51.4%), followed by the pelvis or back (36.9%); chest, arms, and shoulders (25.2%); and head or neck (15.3%). 27.9% of participants in that study reported more than one affected area. Of note, the prevalence of neuropathic pain was documented at 16.9%, which is higher than the probable neuropathic pain prevalence of 10% found by Di Bonaventura et al. [9].

The Pathophysiology of Pain

The pathophysiology of pain as a disease is well described in the scientific literature and should be reviewed for a deeper appreciation of the topic. The mechanism(s) by which acute pain becomes chronic is not fully understood and likely comprises multiple processes occurring concurrently. Generally, acute pain is a protective biologic function that helps the organism avoid consequences of tissue injury or prevent further damage; however, when pain persists for longer than 3 months or in the absence of tissue injury, it is deemed to be chronic.

Nociceptors serve as the point of entry into the pain signaling pathway and are located throughout somatic and visceral tissue. These free nerve endings transmit pain signals for processing at the level of the spinal cord and brain. Three major classes of nociceptors have been identified, including A-delta mechanosensitive nociceptors, A-delta mechanothermal nociceptors, and polymodal nociceptors, which are associated with C-fibers. As suggested, these pain receptors transmit mechanical, thermal, and chemical signals (see Table 4.1).

The processing of pain signals follows a sequence of events and includes transduction, transmission, modulation, and perception (see Fig. 4.1). Once an action potential is generated at the primary afferent neuron, the signal is transmitted to the cell body located at the dorsal root ganglion (DRG). Interestingly, this is also one of

Table 4.1 Classification of fibers in peripheral nerves

Fiber group	Innervation	Mean diameter (µm)	Mean conduction velocity (m/sec)
A-alpha	Primary muscle spindle motor to skeletal muscle	15	100
A-beta	Cutaneous touch and pressure afferent fibers	8	50
A-gamma	Motor to muscle spindle	6	20
A-delta	Nociceptors, mechanoreceptors, thermoreceptors	<3	15
B	Sympathetic preganglionic	3	7
C	Nociceptors, mechanoreceptors, thermoreceptors, sympathetic postganglionic	1	1

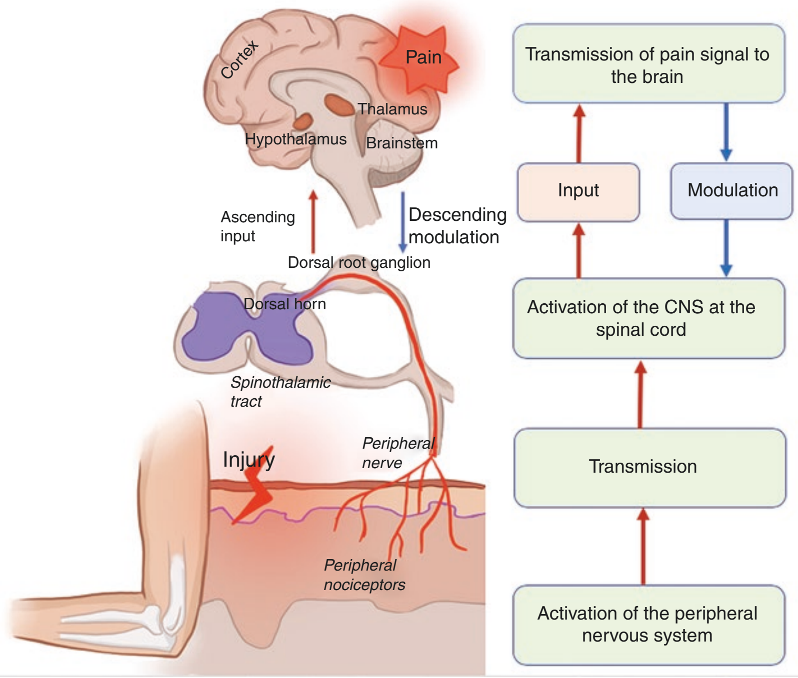


Fig. 4.1 The processing of pain signals

the areas where modulation of the pain signal occurs. The second part of transmission process occurs at the level of spinal neurons, where projections are sent to the brainstem, diencephalon, and thalamus. The third part of the system includes projections to multiple cortical sites, where processing occurs. The last stage of the process is perception, where somatosensory transmission results in the sensation of pain. Sensitization at the periphery and CNS may be one of the mechanisms contributing to the chronification of pain.

Special Populations

There are certain subgroups of the homeless population that deserve special consideration when managing their chronic pain, including those with comorbid mental health conditions, substance use disorders, and US veterans. It is important for providers to recognize these specific populations so that the appropriate screening instruments can be administered. For those with a positive screen for mental illness or substance use disorder (SUD), a treatment plan should be established that coordinates treatment between primary and specialty care. If social or public health services are available, those too should be employed as part of their care.

Chronic Pain and Mental Health

The recognition and treatment of comorbid mental health conditions has been shown to lead to better clinical outcomes and should be addressed when managing chronic pain. Studies have shown that early psychological intervention can affect not only a patient’s pain level and function, but their ability to cope with pain and adhere to treatment [10]. Alternatively, if the discussion is not handled thoughtfully, a clinician may unintentionally increase a patient’s frustration with the medical system or reinforce their feelings of anxiety, stress, and helplessness surrounding their condition [11].

The World Health Organization (WHO) describes mental health as a “state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to her or his community” [12]. As defined, sound mental health combines an individual’s psychological, emotional, and social well-being and can lead to a positive mood, improved social skills, and coping skills [13]. In 2017, the National Survey on Drug Use and Health (NSDUH) by the Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that 6% of US adults were severely mentally ill, compared to 20–25% of the homeless population. At the time, there were 46.6 million adults (18.9%) in the United States living with any mental health issue [14].

Those with mental illness have higher rates of chronic medical illness when compared to those without [15], as well as increased disability, rates of incarceration, unemployment, poverty, and homelessness. Similarly, exposure to poverty, violence, and chronic illness increases the likelihood of mental illness [16]. This only underscores the importance of treating both mental illness and chronic pain in the homeless population.

There have been many studies that documented the strong association between chronic pain and psychopathology with research showing that chronic pain is most often associated with depression, anxiety, somatoform, personality, and substance use disorders. Data from the WHO shows that in the primary care setting, over 75% of patients who suffer from pain also complain of pain-related symptoms (such as neck and back pain or diffuse unspecified pain) [17]. In fact, 22% of all primary care patients experience persistent pain and are four times more likely to have depression or anxiety than those without pain. Furthermore, the higher the reported intensity of pain, the worse the severity of depressive symptoms and quality of life [18–21].

Anxiety is the most common response to acute pain and increases a patient's perception of pain, often persisting when pain becomes chronic. Post-traumatic stress disorder (PTSD) is also important to recognize because it is a condition that often coexists with substance use disorders, depression, and personality disorder. In fact, Phifer et al. analyzed how a trauma-related disorder, such as PTSD, affected chronic pain and pain medication use. They found a significantly positive correlation between PTSD symptoms and level of pain and functional impairment due to pain. In addition, those who suffered from PTSD were more likely to manage their pain with opioid analgesics compared to those without a diagnosis of PTSD [22].

Chronic Pain and Substance Use Disorder

The prevalence of substance use disorders (SUDs) in the homeless population that involves alcohol and illicit drugs has been assessed to be 50% [23]. This is in comparison to 8.4% for the general US population per the 2014 CBHSQ SAMSHA report [24]. Chronic pain is common among patients who have co-occurring substance use disorders [25]. A 2011 literature review found that in the primary care setting, up to 48% of chronic pain patients also have a current SUD [26].

Initially, people use substances for different reasons, including the euphoric effects, as a stress reliever, to cope with depression and/or anxiety, or to manage pain. However, with continued exposure, substance use may become uncontrollable as alterations to the brain occur that are facilitated by genetic and environmental factors. These alterations result in an overvaluation of the substance and devaluation of other things, leading to impaired control of substance-related behavior [27] and altered pain perception. This dysregulation is seen in the nucleus-accumbens-medial prefrontal cortex reward pathway that occurs in addiction and chronic pain [28].

Continued substance use and intoxication has been shown to lead to a higher rate of trauma and subsequent injuries [29] as well certain painful conditions, such as chronic pancreatitis or liver cirrhosis (from alcohol). If the substance is abruptly discontinued, then withdrawal symptoms may ensue, leading to additional pain and an increased likelihood of subsequent use. Patients then perceive that their pain is alleviated by their substance use, which can perpetuate the cycle. Given the high prevalence of chronic pain and SUD, it should be common practice for clinicians to screen and evaluate for SUD in patients with chronic pain.

Chronic Pain in the Veteran Population

Veterans make up a distinct subgroup that deserves special consideration as they have increased risk factors for homelessness and chronic pain, as well as mental illness and substance use disorder. In their 10-year epidemiological study of over five million veterans, Goulet et al. found that US military service members and veterans were at an increased risk for chronic pain with 55% of veterans having the diagnosis of a musculoskeletal pain condition [30] and 53% of homeless veterans having a diagnosis of a chronic health condition [31]. As previously mentioned, homelessness is associated with chronic health conditions, either resulting in or leading to such conditions, being the consequence of such conditions, or complicating the care and treatment of such conditions. Therefore, understanding the risk factors of homelessness in the veteran population can help reduce and more effectively treat this population [32, 33].

The US Department of Housing and Urban Development (HUD) estimated in 2018 that about 40,000 veterans are homeless on any given night, which equates to about 11% of the total US homeless population [34]. This is an alarmingly high number when considering veterans only make up 5.5% (18.8 million) of the general population per the National Center for Veterans Analysis and Statistics [35]. At the same time, there are roughly 1.4 million veterans at risk for homelessness due to poverty, lack of support networks, and substandard housing.

According to the 2013 National Survey on Drug Use and Health, approximately 6.6% of veterans age 17 or older had a substance use disorder in the past year [14]. This is roughly 1 in 15 veterans. Midboe et al. found that veterans have twice the risk of the general population for a fatal drug overdose with the combination of opioids and benzodiazepines as the main perpetrators. They also showed that one third of veterans with an opioid use disorder had been prescribed opioids within the last year, 4% were prescribed high-dose opioids, and 3% were being co-prescribed benzodiazepine at the same time [36]. According to the MISSION-Vet HUD-VASH Implementation Study, 80% of homeless veterans have a mental illness and/or SUD [37]. This again highlights the need to screen veterans for SUD and mental health disorders to ensure that all aspects of their care are being addressed.

General Approach to the Diagnosis of Chronic Pain

The diagnosis and treatment of chronic pain is often challenging and requires a comprehensive history and physical examination. The focus of a structured pain evaluation is to identify treatable sources of pain, ensure appropriate work-up, and establish a treatment plan. Clinicians may become concerned when a patient's pain level is not congruent with their functional limitations, physical exam findings, or expectations. It is important to keep in mind that it may be difficult for patients to differentiate between chronic pain from psychological distress, suffering, and pain behaviors. It is therefore critical to ask the right questions and elicit appropriate information to assess if the symptoms represent somatic, visceral, neuropathic, or mixed pain.

There are also multiple barriers to chronic pain care that prevent the homeless population from seeking medical care. These issues may be as fundamental as transportation to medical appointments, costs of work-up and medications, and the ability to attend therapy sessions. Hwang et al. indicated that 51.9% of the homeless participants screened in his study met the criteria for chronic pain with only 55.9% reporting that they were being seen regularly by a medical doctor. Of those that had regular appointments with a physician, only 70% reported they were actually being treated for their chronic pain [38]. Interestingly, 26.5% of the participants in the study had unsuccessfully sought care for their pain in the preceding 3 months.

Pain is viewed as complex and has multiple dimensions that can be influenced by numerous biopsychosocial factors. Presently, there are no objective diagnostic tests that can verify an individual's self-report of chronic pain. As such, a general medical history is an important aspect of the pain history as it can reveal comorbidities that contribute to the multifactorial nature of the pain condition. A specific pain history (see Table 4.2) and physical examination may help the clinician uncover the pathophysiological and etiological sources. The multidimensional qualitative tools demonstrate the impact of pain on a patient's physical, emotional, and social function. Lastly, other important factors must be incorporated into the assessment, such as a patient's cultural background, personality traits, psychological status, and if secondary gain may be present (i.e., the possibility of drug-seeking behavior).

Pain Assessment

The questions listed are a practical starting place for pain discussion (Table 4.2):

Pain Location The characteristics of pain such as location and distribution can help the health-care provider understand the potential anatomy involved and underlying pathophysiology. Some assessment tools have body diagrams that can demonstrate the patient's topographical perception of pain. These diagrams help define the areas involved and whether the pain may be localized or referred into an extremity. Other information that may be distinguished is if the pain is visceral or superficial.

Table 4.2 Specific pain history questions

Where is the pain located?
Was there an inciting event trauma, accident, or injury?
Is the pain continuous or intermittent?
If intermittent, are there any identified triggers (i.e., movement, posture, lifting, action)?
Does the pain intensity or quality change depending on the time of day?
What is the pain intensity on a 0–10 scale presently?
What is the average pain intensity during the day?
Description of the pain (e.g., burning, aching, etc.)
What alleviates the pain?
What aggravates the pain?
How does your pain affect: (a) Your sleep? (b) Your mood? (c) Your physical functions? (d) Your ability to work? (e) Your family life? (f) Your social life? (g) Your sex life?
What treatments have you received? Effects of treatments? Any adverse effects?
Are you concerned about the outcome of your pain condition and your health?
Are you involved in a litigation, disability, or compensation process?
In spine pain, whether the pain is axial or appendicular can be useful.

Superficial pain may confer a somatic or nociceptive etiology and can be easily localized and limited to an affected body part. On the other hand, visceral pain is the result of vagal and spinal afferent neurons without any specific centers in the central nervous system which may explain why it is typically diffuse and poorly localized. However, it can also be felt in locations remote from the source of the stimulation, which is termed referred pain.

Pain Etiology After gathering information about the patient's pain history, the clinician can focus the rest of their history and physical exam. This should help identify the pain generator and guide the correct treatment. In general, pain has a number of categories and descriptions that can be categorized as follows [39]:

- Nociceptive – activation of nociceptors found in non-neural tissue that can be acute or chronic.
- Neuropathic – nerve injury or a disease process that involves nerves and can involve central or peripheral nerves, or both.
- Sympathetically mediated – allodynia, hyperalgesia, or hyperpathia combined with vasomotor and sudomotor dysfunction, as seen in complex regional pain syndrome.
- Deafferentation – loss of afferent input to the CNS resulting in chronic pain, such as avulsion injury of the spinal nerve roots.

- Neuralgia – nerve damage or irritation in the distribution of a nerve or nerves that is commonly described as lancinating in quality, such as trigeminal neuralgia.
- Radicular – nociceptive afferent fibers in spinal nerves, their roots or ganglia, or by other neuropathic mechanisms.
- Central – a lesion in the central nervous system; pain is usually described as constant, burning, and resistant. Central pain disorders do not exclude other peripheral sources of pain.
- Referred – originates in the visceral organ and can be felt at distant sites from the area of injury and can be associated with deep hyperalgesia, autonomic dysfunction, tenderness, and muscular contractions.
- Psychogenic – pain complaints that are inconsistent with symptoms or with no apparent organic pathology despite extensive evaluation.

As previously mentioned, pain is a subjective experience and cannot be objectively measured with diagnostic tests; however, questions regarding the quality, intensity, frequency, and location of pain help define potential etiologies. In addition, there are several tests and scales available to help clinicians quantify a patient's level of distress and incorporate other interrelated factors.

One-dimensional self-report scales are the most common assessment tools used to rate pain intensity. These tests have been validated as reliable in research and clinical settings and are simple to use [40].

- Verbal Numeric Rating Scales – are simple, reproducible, easily comprehensible, frequently used scales that ask a patient to rate their pain intensity most commonly on a scale of 0 to 10 (or 0 to 100), with 0 representing "no pain" and 10 "the worst pain imaginable."
- Visual Analog Scales – are similar to the verbal numeric rating scales, except the patient rates their pain intensity on a measured line with the left side representing "no pain" and the other side "worst pain imaginable." They require motor control and are generally used less in the clinical setting because they require more time to administer.
- Verbal Descriptor Scales – asks patients to choose from a list of adjectives of varying intensity to describe their pain. The five-word scale consists of mild, discomforting, distressing, horrible, and excruciating or no pain, mild, moderate, severe, or worst pain imaginable. Limitations of this scale are the limited adjectives and the fact that patients are less likely to select extreme descriptors.
- Wong-Baker Faces Pain Rating Scale – is useful for evaluating pain in children (an average intelligence child as young as 3 can reliably use this scale), elderly, or adults with low literacy [41]. There are six sketches ranging from 0 to 5 depicting a happy, smiling face to sad/teary face. This scale can be extrapolated to the VAS by multiplying by a factor of 2 (see Fig. 4.2).
- Pain in Advanced Dementia (PainAD) Scale – is a clinically relevant and easy to use scale for patients with advanced dementia that has been proven valid and reliable in this population [42]. The tool covers five behavioral categories: breathing, negative vocalization, facial expression, body language, and consolability. Each item is scored on a 3-point scale (0–2) for severity, resulting in a scoring range of 0–10.

Fig. 4.2 Wong-Baker Faces Pain Rating Scale. (Wong-Baker FACES Foundation [41])

Multiple Dimension Instruments – provide more comprehensive pain assessment, such as the McGill Pain Questionnaire, with some incorporating the impact chronic pain has on daily functions such as the Brief Pain Inventory and the Pain Disability Index looking at reduced mobility and ability to perform well in social situations as well as sleep disturbance and sexual dysfunction. They are generally time consuming and therefore done in the outpatient setting. These tests may pose some difficulty for the cognitively impaired or poorly educated.

Pain Catastrophizing Scale – helps quantify a person's pain experience regarding what they think and how they feel when they are in pain. Uniquely, patients do not have to be in pain to complete it. This test is validated as reliable [43, 44]. A total score of 30 or more indicates a clinically relevant level of catastrophizing.

Pain Diaries – are a simple and useful tool in evaluating the relationship between pain and activities and may be a more accurate assessment of a patient's pain than a retrospective description that could under- or overestimate pain. Medication and substance use as well as emotional responses of the patient can be documented.

Physical Exam

The physical examination is an essential component to evaluating a patient with chronic pain and should consist of a head to toe inspection. Nevertheless, a full examination of an unclothed homeless adult may not be possible on initial visit and will depend on the patient's comfort level. The full examination may need to be deferred to a second or subsequent visit once trust has been established between the patient and provider. Health-care providers should be cognizant that a high percentage of homeless people have experienced physical, sexual, and/or emotional abuse [45] and attention should be paid to nonverbal cues that assess comfort level and what areas can be safely examined. The initial visit can therefore be an opportunity to educate the patient about what to expect during a more comprehensive physical exam and to assuage any fears they may have. Therefore, the initial examination focus should be on the painful area to address the patient's need while trying to create a therapeutic patient-provider experience.

During this encounter, special attention should be given to a patient's vital signs (i.e., hypertension and tachycardia in sympathetically mediated pain or severe pain) as well as a patient's appearance and affect. Evaluation of gait, pain behaviors, and responses to physical maneuvers that might aggravate or alleviate pain is also relevant and helps in the assessment of likely pain generators. Observation is critical for the clinician to observe the nuances of a patient's pain behaviors, and important information can be gathered in the nonformal physical exam such as when a patient removes his or her clothing or transfers on and off the examination table. Monitoring these actions may reveal whether or not the patient may be favoring an extremity or protecting a certain body part.

The specific pain evaluation will involve a thorough inspection and palpation to help locate the painful area and characterize the pain type. As previously mentioned, the appropriateness of a patient's verbal and nonverbal response should be noted in relation to a provoking stimulus. Special attention should be given to the neurological and musculoskeletal examination.

The neurological examination should encompass a general cognitive screen, cranial nerve exam, and evaluation of sensation to light touch and pinprick. In addition, proprioception testing, deep tendon reflexes, and muscle strength testing in key myotomes are also useful. Finally, testing for upper motor neuron dysfunction through exam of plantar response, clonus, or Hoffmann's sign may indicate a more serious etiology of symptoms. The hope is to make an appropriate diagnosis and find potentially treatable, neurological diseases. Of note, psychogenic pain will likely present with a neurological exam that is not congruent with typical organic pathology such as abnormal pain patterns (exact hemianesthesia).

Appropriate musculoskeletal testing for a specific joint or muscle injury can be helpful but is beyond the scope of this chapter.

Mental Health Assessment

Psychosocial assessment is an integral part of the pain evaluation. The psychological burden of living with chronic pain disorder can adversely impact a person's behavior and emotional well-being. Many times, this is a difficult topic to broach because a patient may be unaware or unwilling to share their psychological issues. As such, clinicians may become aware of a patient's emotional response to pain by the descriptive words they use, such as "punishing" or "unbearable" that do not necessarily aid in the characterization of pain. Therefore, screening for mental health disorders using validated screening tools as well as for alcohol and substance use disorder is imperative (see Table 4.3).

Table 4.3 Mental health screening tools

Mental health condition	Screening tool
Depression	PHQ-9
Anxiety	GAD-7
PTSD	PC-PTSD
Bipolar	MDQ
Alcohol or substance use	CAGE-AID

Treatment of Chronic Pain

There are many more factors that a clinician has to consider when treating the homeless population (such as limited resources, lack of social support, residential instability, and comorbid substance use and mental illness) that make a plan more difficult not only for a physician to craft but also for the patient to follow. The most successful treatments have been shown to be multimodal and interdisciplinary, combining medication with rehabilitative therapies and integrative treatments, incorporating coping strategies, and addressing underlying mental health issues [46]. Each treatment plan should be tailored to the individual patient and may require several attempts to achieve adequate pain control. It is therefore important to manage patients' expectations on goals of treatment and the possible trial and error needed to achieve success. Often, providers and patients can become frustrated with the process. Providers may feel they do not have adequate time, resources, or training [47] to handle the complexities of pain care. In contrast, patients may feel they are being a burden, not being heard, or feel the provider doesn't understand their pain experience [48, 49]. Therefore, employing a plan that is agreed upon by the provider and patient and flexible to changing circumstances may improve the chances of success. In addition, focusing on function and quality of life versus numerical pain score may also be beneficial [50, 51]. Figure 4.3 demonstrates the broad range of treatments that can be employed when treating chronic pain patients. Each treatment plan can be individualized using a multimodal approach.

Pharmacological Approach

It is essential to first assess the type of chronic noncancer pain (CNCP) that is being treated (as explained earlier in this chapter) and then direct pharmacologic treatment toward the underlying pathophysiology. An understanding of the medication side effect profile is imperative when treating this patient population as they often have multiple comorbidities that can be worsened with pain-relieving medication (see Fig. 4.4).

Typically, analgesics such as acetaminophen or nonsteroidal anti-inflammatory drugs (NSAIDs) are effective first-line treatments for nociceptive pain. Acetaminophen should be used with caution in patients with hepatic impairment, whereas NSAIDS should be used with caution in patients known to have bleeding

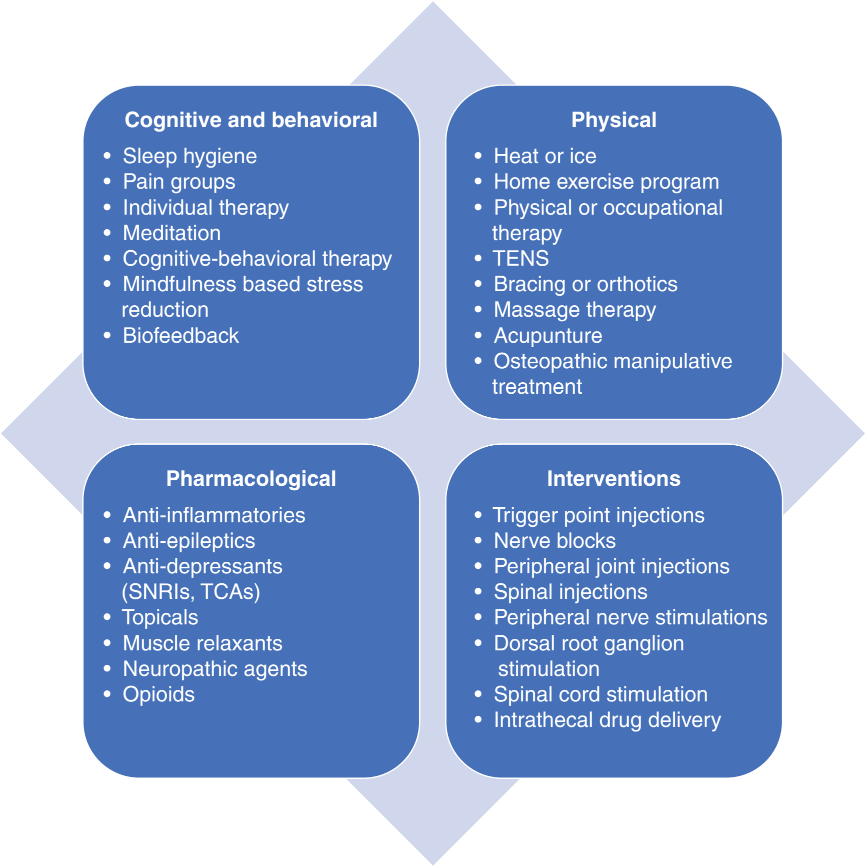


Fig. 4.3 Multimodal approach to treatment of chronic pain

diathesis, renal or hepatic impairment, cardiovascular disease, history of peptic ulcer disease, and asthma or if bone or wound healing is a concern.

Muscle relaxants (i.e., baclofen, cyclobenzaprine, tizanidine) are adjuvant medications used primarily in the treatment of musculoskeletal pain, especially for their antispasmodic effects. Baclofen is a gamma-aminobutyric acid (GABA) agonist used as a skeletal muscle relaxant for the relief of painful and uncomfortable muscle spasms caused by a variety of conditions. It is known to be particularly useful in treating muscle spasticity associated with spinal cord injury [52]. This medication can be used chronically with appropriate monitoring. Cyclobenzaprine is a centrally acting medication that antagonizes the 5HT2 receptor and relieves muscle spasm through effects on the brainstem. It is generally used for up to 2 weeks and not recommended for chronic use. Tizanidine is a central alpha-2 adrenergic receptor agonist and presumably reduces spasticity by increasing presynaptic inhibition of motor neurons. The overall effect of these actions is thought to reduce facilitation of spinal motor neurons.

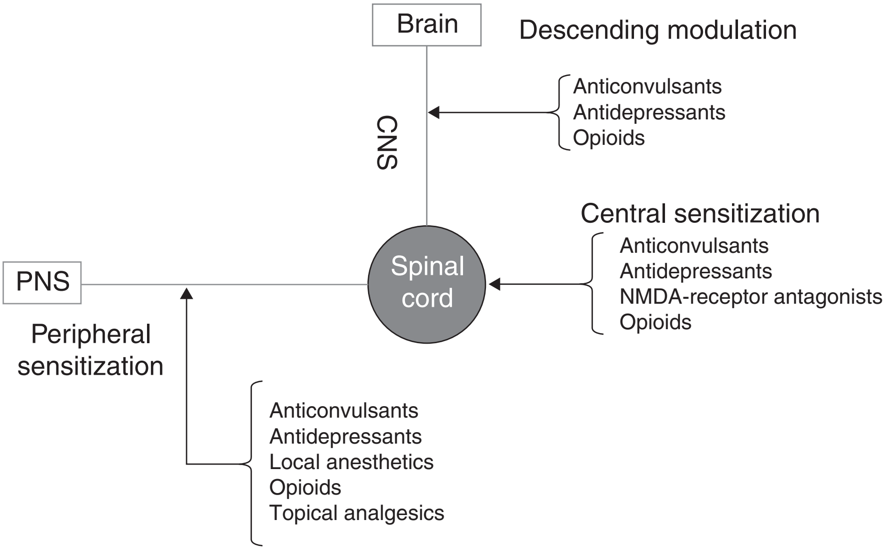


Fig. 4.4 Directed pharmacologic treatment toward underlying pathophysiology

Topical formulations such as EMLA (eutectic mixture of local anesthetics) and methyl salicylate cream (essentially topical aspirin) may help ameliorate myofascial pain or neuropathic pain. Lidocaine (5%) and capsaicin (8%) patches have both shown benefit for patients with postherpetic neuralgia. On the other hand, they are used for off-label indications, such as myofascial syndrome and neuropathic pain, with variable benefit.

As noted earlier, there is a large proportion of the homeless population who suffer from chronic pain and a psychiatric illness necessitating an understanding of psychopharmacology that minimizes side effects.

In general, adjuvant analgesics such as anticonvulsants and antidepressants are reasonably effective treatments for neuropathic pain but typically are US Food and Drug Administration (FDA) approved for non-pain diagnoses, so use of these agents is "off-label." In addition, their effects are noticeable only after days or weeks of therapy, though their side effects can be felt soon after initiation.

The mechanism of action for gabapentin and pregabalin appears to be inhibition of the alpha-2-delta subunit of voltage-gated calcium channels. The inhibition of transmitter release provides pain relief for neuropathic pain, but the number needed to treat varies between 3 and 8. Gabapentinoids are generally well tolerated and lack significant drug-drug interactions. Because of these qualities, gabapentinoids are often used as a first-line treatment for neuropathic pain. If side effects are present, they are usually in the form of fatigue, somnolence, dizziness, or edema. In patients with renal dysfunction, the medication should be renally dosed.

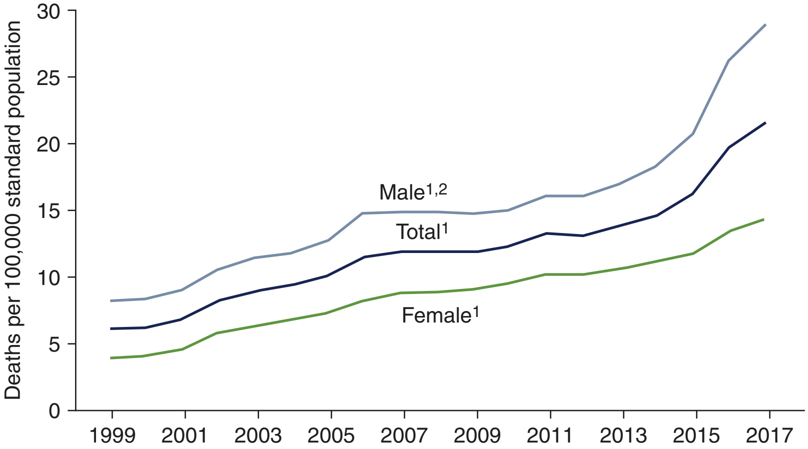
Relieving depression by any method is likely to decrease pain [53], and some medications such as tricyclic antidepressants (TCAs) and serotonin-norepinephrine reuptake inhibitors (SNRIs), such as duloxetine, appear to have independent analgesic properties. Unfortunately, because of the wide side effect profile of TCAs, caution is recommended in patients with hepatic impairment, heart disease, schizophrenia, bipolar disorder, alcohol abuse, and suicide risk and in the elderly (higher risk for these disorders in homeless persons already noted). Duloxetine is FDA approved for anxiety, depression, fibromyalgia, diabetic peripheral neuropathic pain, and chronic musculoskeletal pain.

Opioids

Prior to the formal declaration of an opioid crisis by the US Department of Health and Human Services on October 26, 2017, opioid medications were the most frequently utilized mechanism for managing chronic pain in the United States [54]. While randomized clinical trials have shown evidence that opioids are effective agents in the short term (less than 12 weeks) for nociceptive and neuropathic pain [55], there remains a lack of rigorous studies assessing the long-term effectiveness of opioids for chronic pain [56]. A recent meta-analysis in 2018 of 96 randomized clinical trials, with more than 26,000 patients, demonstrated limited clinical utility for prescription opioids for chronic noncancer pain [57]. In fact, several studies have shown that participants only reported a minimal reduction in their pain levels while taking chronic opioids [58], and some observational studies show that patient's on higher doses of opioid medication experience a lower quality of life and poorer outcomes compared to those on lower doses or no opioid medications [59–63]. It is difficult to establish the number of people who may benefit from long-term opioid therapy for CNCP with the current evidence, and careful consideration of the risks, benefits, and alternatives should be discussed with patients before initiating these medications. It is also important to remember that renal and hepatic functions are important factors to determine the type of opioid used, especially those with active metabolites.

Opioid-Associated Morbidity and Mortality

The serious risks of opioid use disorder and overdose have become increasingly more apparent over time. In fact, from 1999 to 2017, the opioid crisis accounted for nearly 770,000 deaths in the United States (see Fig. 4.5) [64, 65], higher than all wartime US military deaths since the beginning of the twentieth century [66]. The Centers for Disease Control and Prevention (CDC) reported that in 2017 approximately 70,000 drug overdose deaths occurred, of which 47,000 were opioid related with 17,000 deaths from prescription opioids. This equates to an astonishing 148 deaths/day [67] (see Fig. 4.6). Han et al. in 2015 highlighted that 38.7% of civilian noninstitutionalized US adults used prescription opioids [68]. Sadly, a significant number of the deaths were the result of former prescription opioid users purchasing



[1] Significant increasing trend from 1999 through 2017 with different rates of change over time, $p < 0.05$.
[2] Male rates were significantly higher than female rates for all years, $p < 0.05$.
NOTES: deaths are classified using the international Classification of Diseases, 10th Revision. Drug-poisoning (overdose) deaths are identifies using underlying cause-of-deatg cides X40-X44, D60-X64, X85, and Y10-Y14. The number if drug overdose deaths in 2017 was 70,237, Access data table for Figure 1 at: https://www.cdc.gov/nchs/data/databriefs/db329_tables-508.pdf#1.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Fig. 4.5 Age-adjusted drug overdose death rates: United States, 1999–2017. (Reprinted from Hedegaard et al. [64])

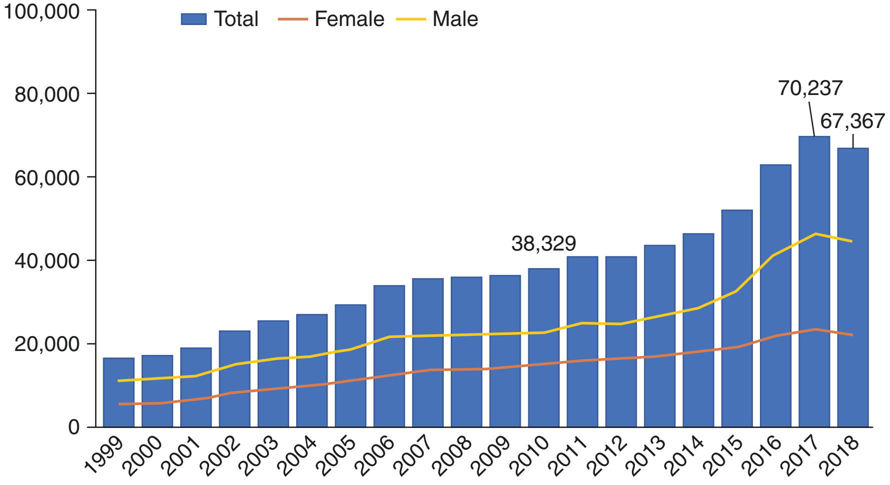


Fig. 4.6 National drug overdose deaths number among all ages, by gender, 1999–2017. (Reprinted from National Institute of Drug Abuse (NIDA) [65])

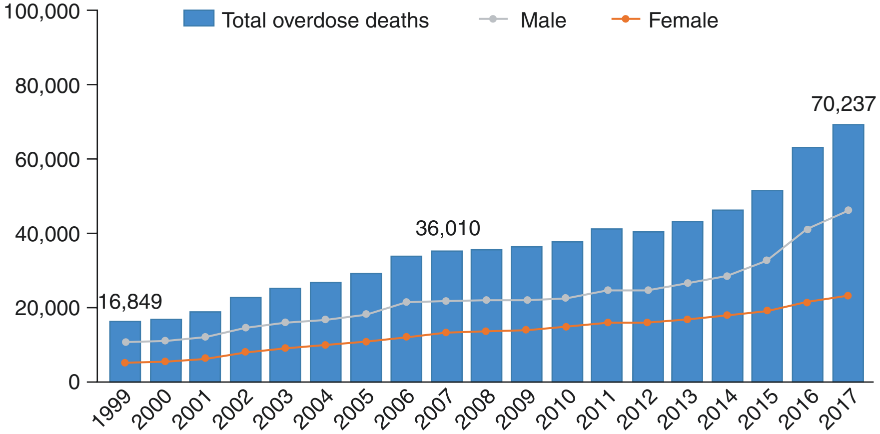


Fig. 4.6 (continued)

cheaper and easier to obtain heroin and synthetic opioids (such as fentanyl). Further, the US life expectancy had increased for the majority of the last 60 years, but since 2014 has been decreasing, which is attributed to the opioid crisis [69–71].

When comparing the opioid use in the United States to other developed nations, such as the European countries, we can see that in the United States, prescription opioids as a treatment of pain are more prevalent. The 2016 National Survey on Drug Use and Health found that five million people misused prescription opioids in the United States out of a 2016 population of approximately 323 million people [14]. On the other hand, the European Monitoring Center for Drugs and Drug Addiction reported 1.3 million high-risk opioid users in the European Union from a 2016 population of approximately 511 million [72].

Since the emergence of this new public health risk, there has been a new focus on safe opioid prescribing, and in 2016, the CDC released an opioid prescribing guideline for primary care physicians who are prescribing opioids for chronic pain. The guideline does not include use of opioids for active cancer treatment, palliative care, or end-of-life care [73]. The guidelines were interpreted and informed by expert opinion, and the goal was to enhance the discourse between clinicians and patients about the associated risks versus benefits of long-term opioid therapy for chronic pain. Other goals included improving safety and success of chronic pain treatment, reducing the risks of long-term opioid therapy, and decreasing OUD, overdose, and death.

In short, there are 12 recommendations with the main emphasis on nonopioid therapy as the recommended treatment of chronic pain unless the benefits outweigh the risks. If opioids are prescribed, urine drug testing should be performed to ensure compliance, concurrent benzodiazepines avoided, and the lowest effective dose of immediate release opioids provided. For acute pain, 3 days or less will be sufficient for most patients. Rarely, 7 or more days will be needed. If more than 50 morphine milligram equivalents per day (MME/day) are needed for analgesia, a risk-benefit analysis should be performed. Dosing greater than 90 MME/day is discouraged due to risk of overdose. Naloxone should be offered for any patient with increased risk factors for overdose (such as prior history of overdose, history of SUD, or greater than 50 morphine milligram equivalents per day usage). Clinicians should assess the risk and benefits of continued opioid use every 3 months and review State prescription drug monitoring data whenever possible to monitor high-risk combinations or doses. Careful observation for OUD should be evaluated and if discovered, medication-assisted treatment with buprenorphine or methadone offered [73].

Opioid Screening

The use of risk assessment tools to help try and identify those at risk for OUD is generally recommended, despite a strong lack of evidence of their benefits. Klimas et al. performed a systematic review to help identify patients at risk for developing OUD when initiating opioids. They examined the risk factors for opioid addiction, the diagnostic accuracy of the currently used screening instruments, and different predictive measures. They found that there were no signs or symptoms or screening tools that have any value in predicting those at lower risk for OUD. The review also found that commonly used screening instruments, such as the Opioid Risk Tool, were from low-quality studies, and no screening tool was able to adequately recognize patients that can be prescribed opioids safely. They concluded that patients with a history of opioid or nonopioid substance use disorder, concomitant prescription of certain psychiatric medications (atypical antipsychotics), prolonged duration of opioid prescriptions (greater than 30 days), higher daily opioid doses (>120MME/day), and a history of certain mental health disorders (somatoform, anxiety, personality, and psychotic disorder) were at an increased likelihood for prescription OUD. As a result, caution was advised when prescribing opioid medications for pain. On the other hand, only the absence of a mood disorder was useful for identifying patients at lower risk [74].

If a trial of opioids is initiated, the clinician should lay out a clear set of guidelines for use. In addition, there is weak evidence that treatment agreements for urine drug testing decrease opioid misuse [75]. Despite this, it is important to set expectations and responsibilities for patients and providers. Patients should be seen on a regular basis and routinely evaluated for pain relief and function – as well as possible side effects. If no benefit is shown with the medication, then the full clinical picture must be assessed before deciding to increase or rotate the opioids versus discontinuing them. Frequent monitoring of the State Prescription Drug Monitoring Program (PDMP) should be performed and documented. If at any time, the clinician suspects aberrant behavior or SUD, the patient should be seen by a pain specialist as a prerequisite for continued opioid prescription. When the discontinuation of long-term opioids is deemed necessary, the clinician can follow the 2019 Health and Human Services Guide for Appropriate Tapering or Discontinuation of Long-Term Opioid Use (see Fig. 4.7) as any abrupt change in long-term opioid therapy may

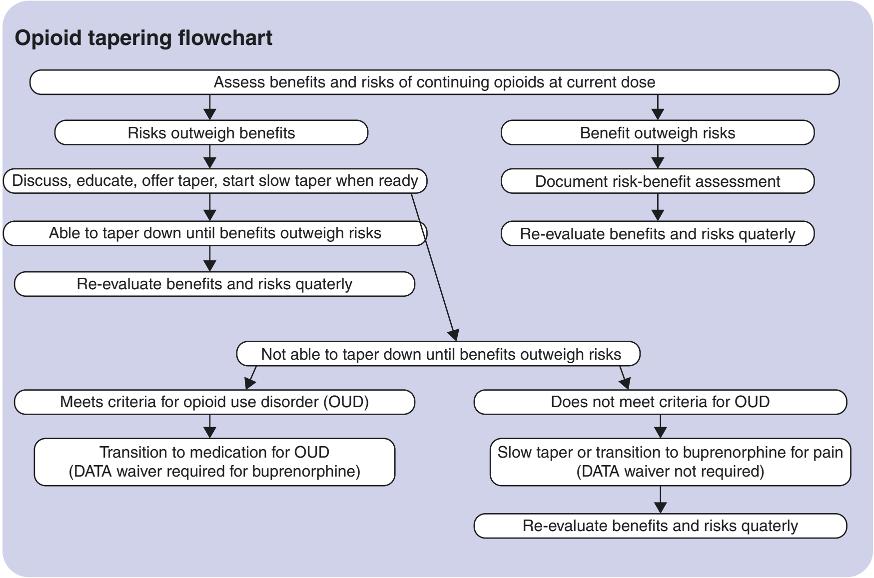


Fig. 4.7 Opioid tapering flowchart. (Reprinted from 2019 Health and Human Services Guide for Appropriate Tapering or Discontinuation of Long-Term Opioid Use [76])

place the patient at risk for harm [76]. A slow taper that minimizes the risk of withdrawal symptoms is advised, and tapering plans should be tailored to the patient's objectives and needs. Tapers usually involve a 5–20% dose reduction every 4 weeks, which can be modified if necessary.

Opioid Side Effects

Central Nervous System

1. Analgesia, Mood, and Consciousness. Opioids can change the feeling of pain as well as the perception of pain. Patients may experience euphoria or dysphoria, which can be seen in patients using opioids for pain and recreational purposes. Drowsiness is a common side effect, and doses of opioids greater than 20 mg of morphine equivalent can lead to loss of consciousness and respiratory depression.
2. Respiratory Depression. Opioids can act directly on the brainstems' respiratory centers and depress respiratory drive. Although this is uncommon at lower doses that are titrated slowly, it has been shown patients taking chronic opioids for pain are at risk for unintentional overdose. This is potentiated by medical illness such as chronic obstructive pulmonary disease and obstructive sleep apnea as well as concurrent sedating medication use (such as benzodiazepines and alcohol). Pain

and noxious stimulation can reverse respiratory depression, while naloxone, a competitive opioid antagonist, can reverse respiratory depression.

3. Nausea and vomiting are caused by the direct stimulation of the chemoreceptor trigger zone (CRTZ). These symptoms can be treated with a trial of antidopaminergics (e.g., droperidol, compazine, metoclopramide), anticholinergics (e.g., scopolamine), or serotonin antagonists (e.g., ondansetron), as well as decreasing opioid dosage.
4. Cough suppression from opioids occurs from direct depression of the cough center in the medulla, and physicians should be aware of this in patients with comorbid respiratory illnesses.

Neuroendocrine Effects

Opioid-induced hypogonadism is a common side effect of long-term opioid therapy. Opioids suppress gonadotropin-releasing hormone secretion at the hypothalamus in both males and females and in doing so suppresses the release of luteinizing hormone (LH), follicle-stimulating hormone (FSH), adrenocorticotropic hormone (ACTH), and endorphin. Cortisol and testosterone levels are thereby reduced. In women, the menstrual cycle may be disrupted, and testosterone levels may be reduced in men. In a study looking at long-term opioid therapy (more than a year) for the treatment of chronic pain, 80% of male patients were found to have decreased testosterone levels and associated sexual dysfunction. Similarly, 87% of females younger than 50 years had decreased estradiol levels and suffered from amenorrhea [77].

Gastrointestinal (GI) System

Opioids affect many aspects of the GI tract.

1. Stomach – Gastric motility is decreased, leading to decreased gastric emptying and associated risk of gastroesophageal reflux.
2. Biliary, pancreatic, and intestinal secretions are reduced in the small intestine resulting in delayed food digestion.
3. Large Intestine – Peristalsis is decreased or stops completely leading to a slowing in the passage of feces. For patients on long-term opioids, constipation is a common problem and postoperatively, ileus can occur. Patients may benefit from the prescription of a laxative and stool softener.
4. Biliary Tract – Opioids may lead to sphincter of Oddi dysfunction, causing increased bile duct pressure. This does not seem to be a common challenge in clinical practice.

Cardiovascular System

Opioids can affect this system in multiple ways. Morphine can cause histamine release and resultant peripheral vasodilation and subsequent hypotension. These peripheral effects may also decrease myocardial oxygen consumption, left ventricular end-diastolic pressure, and cardiac work. Opioids in high doses can reduce sympathetic output, with predominant parasympathetic effects leading to decreased heart rate. Certain opioids may also prolong QT intervals, prompting electrocardiogram evaluation for certain drugs like methadone and oxycodone.

Others

1. Ureter and Bladder. Urinary retention may result from the increase in ureteral tone and an increase in the amplitude of bladder contractions.
2. Skin. Opioids can lead to the release of histamine and resultant pruritus. Naloxone does not stop the histamine effects but may reduce itching. Antihistamines have limited effect and can be sedating [78].
3. Opioid-induced hyperalgesia (OIH) refers to an increased sensitivity to pain as a consequence of opioid exposure and cannot be explained by disease progression. While the exact mechanism remains unclear, it has been postulated that opioid use leads to an imbalance of pronociceptive and antinociceptive pathways, through numerous molecular and cellular mechanisms [79]. Clinically, this can be treated by reduction in opioid dosing or transition to opioids with NMDA antagonism to see if the pain improves [78].

Special Situations When Prescribing Opioids

Evidence for the management of acute and chronic noncancer pain has changed rapidly in recent years. Earlier recommendations to try and address the undertreatment of pain led to the more customary use of opioid analgesics [80]. As a consequence, the 2015 National Survey on Drug Use and Health reported 91.8 million (37.8%) of US adults had used prescription opioids and that prescription opioid use, misuse, and opioid use disorder (OUD) have become common [67]. This has led to a paradigm shift with a change in prescribing practices by primary care physicians. Now, some physicians refuse to prescribe opioids altogether due to concerns for causing addiction and potential litigation. It is important to acknowledge patients' concerns that chronic, painful conditions may be undertreated and stigmatized if they need adjunctive opioid therapy. It is therefore essential to understand the risks and potential benefits of opioids in patients with intractable pain.

Distinguishing Between Medication Tolerance, Physical Dependence, and Opioid Use Disorder (OUD) and Pseudoaddiction

Tolerance A state of adaptation in which exposure to a drug induces changes that result in diminution of one or more of the drug's effects over time and leads to a higher dose requirement to sustain the same level of pain relief. This does not mean the opioid is contraindicated but rather that the opioid be rotated. Alternatively, an increase in opioid dose can indicate there are other underlying problems such as disease progression or potentially opioid-induced hyperalgesia. Tolerance must also be considered when treating acute pain in those who use opiates chronically.

Physical dependence is present when an abstinence syndrome develops if the medication is discontinued. Opioid withdrawal can be very unpleasant and is often described as "flu-like" symptoms such as runny nose, chills, yawning, sweating, aching muscles, abdominal cramps, nausea, and diarrhea. These symptoms are self-limiting and last 3–7 days but can usually be avoided by tapering slowly per 2019 HHS guidelines [75]. Occasionally, adding clonidine, 0.2–0.4 mg per day, may be helpful to ward off particularly bothersome symptoms of withdrawal in select patients.

The broader context of pain care has recently been a topic of conversation as many countries have grappled with opioid-related deaths from overprescription of these analgesics. The National Institute on Drug Abuse estimates that approximately 130 Americans die every day related to overdosing on opioids, including heroin and fentanyl. NIDA indicates that 21–29% of patients prescribed opioids for chronic pain misuse them, between 8% and 12% develop an opioid use disorder, 4–6% who misuse prescription opioids transition to heroin, and 80% of people that use heroin first misused prescription opioids. It is therefore essential that clinicians are able to recognize OUD when present.

Opioid use disorder (OUD) is defined as a problematic pattern of opioid use leading to clinically significant impairment or distress. The latest Diagnostic and Statistical Manual of Mental Disorders, 5th Edition shows that in order to confirm the diagnosis for OUD, at least two of the following diagnostic criteria should be observed within a 12-month period. OUD exists on a continuum of severity and is based upon the number of criteria that have been met (mild, moderate, severe) as this has treatment implications [81, 82]. OUD is comparable to other substance use disorders but has some distinct features. Physical dependence can occur in as little as 4–8 weeks [83, 84]. As previously mentioned, chronic opioid users suffer from withdrawal symptoms if the medication is abruptly stopped which may motivate some patients to continue opioids despite harm. Of note, for patients taking chronic opioid therapy for pain, the criteria of tolerance and withdrawal are not counted toward a diagnosis, as these are expected to occur with treatment.

Cannabinoids and Pain

Cannabinoids have been shown to play a role in the serotonergic and dopaminergic pathways, altering pain perception. Furthermore, they display anti-inflammatory properties as well as being able to increase levels of endogenous opioids. They may affect pain perception by antagonizing the N-methyl-D-aspartate (NMDA) glutamate receptors and inhibiting glutamatergic transmission [85].

Marijuana is a complex plant and contains over 60 separate cannabinoids. Cannabidiol (CBD) and tetrahydrocannabinol (THC) are the most frequently discussed and are used for medical purposes, including seizure disorder and pain management. THC is the psychoactive chemical responsible for its abuse potential. Marinol is a synthetic THC approved in the United States for chemotherapy-induced nausea and AIDS-induced anorexia. In Canada, Sativex ®, a mixture of THC and cannabidiol (oromucosal spray), is approved for neuropathic pain in multiple sclerosis. Nabilone also a synthetic THC was shown in a controlled study to be weaker than codeine with regard to its analgesic affects [86]. Epidiolex ® is a highly purified form of cannabis with the active ingredient nearly 100% CBD. It is approved for two forms of pediatric seizure disorders, Lennox-Gastaut and Dravet syndromes (Greenwich Biosciences, Carlsbad, CA).

Thus far, 33 states and the District of Columbia have passed laws legalizing marijuana in some form. Although it is reasonable to conclude that modulating the human cannabinoid system may be useful for treating pain, there is currently no high-quality evidence in human studies that supports its use.

Conclusion

Chronic pain affects a large portion of the world's population with estimates suggesting one in ten adults is diagnosed with chronic pain every year. Chronic pain is indiscriminate in that it affects all races, income levels, ethnicities, ages, and genders; however, the impact of pain on homeless populations and certain groups like veterans may in fact be higher. Limited finances, lack of access to medical care, untreated mental health conditions, and inadequate social support create barriers to effective pain care for many in this group. In addition, increases in opioid overdoses in the United States as well as several European countries have made many providers hesitant to manage chronic pain or prescribe pain medications. Despite these limitations, providers can still establish rapport with homeless patients suffering from pain by establishing a correct diagnosis and providing care that eases suffering. In addition, there are a number of validated pain assessment tools that are available to facilitate providers' understanding of pain and how that pain changes with treatment. Lastly, multimodal strategies that employ medications, therapies, and behavioral health can reduce pain and allow improved function. Despite the substantial uncertainties listed for this group, clinicians can improve pain care for the homeless through safeguarding shared decision-making and providing appropriate guidance.

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Chapter 5
Comprehensive Management of the Lower Extremity in the Homeless Patient

Tammer Elmarsafi, Jessica M. Arneson, Jonathon J. Srour, and Gregory P. Stimac

Introduction

Homelessness is a significant, prevalent, and costly public health concern. It is estimated that 700,000 are living without shelter across the United States and Canada. This chapter will focus on the most important pathologies of the lower extremity relevant to the homeless population. Many of these issues are similar to those encountered by the general population with respect to diagnosis and treatment. Unfortunately, prognosis is often worse for a variety of social, economic, and host-related factors. Without access to proper footwear, emphasis on foot hygiene, treatment for chronic medical problems, and regular access to follow-up care, these issues can be compounded over time with harrowing results [1]. Throughout this chapter, we hope to illustrate common clinical presentations, and unique aspects as they pertain to homelessness, and discuss challenges related to the diagnosis and treatment in the homeless population. Additionally, the incidence and prevalence of each lower extremity pathology in this population are difficult to accurately capture.

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The numbers in the literature are therefore widely variable and grossly underestimated. The order of the pathologies presented is based on the degree of clinical impact to health and health outcomes and less so on prevalence of the disease.

Hyperkeratosis

Calluses and corns are areas of dermal hyperkeratosis that develop in response to chronic compressive or friction forces. Calluses can be either localized or diffuse and, in the early phases of formation, may not necessarily be painful. They are characterized by areas of relatively uniform thickness. Calluses themselves are not pathological, but rather, a normal response to dermal stress. Corns, also known as helomas, are circumscribed and sharply demarcated areas of hyperkeratosis that develop in response to repeated skin trauma. They are typically located over bony prominences such as the condyles of the metatarsals and phalanges and are generally associated with deformities of the foot, most commonly hammertoes and bunion deformities. Another common hyperkeratotic lesion is a porokeratosis. This is generally a small focal lesion with a central translucent core that extends into the dermis. These are painful lesions of the skin. Corns are classified as either hard (digital), soft (interdigital), or plantar [2]. A systematic review of foot conditions in homeless patients indicated that calluses and corns were the most common concern, which ranged from 7.7% to 57% of homeless person study participants [3].

Conditions that exacerbate development of calluses and corns include ill-fitted footwear, abnormal lower extremity biomechanics, increased activity/standing, and bony prominences [2, 4]. The etiology and presentation direct intervention, and treatment is indicated for symptomatic patients. Definitive treatment of calluses or corns requires mitigation or removal of the mechanical stress. Initial treatment should be conservative with options that include the use of silicone sleeves, toe spacers, and cushioning insoles/properly fitting shoes, and most resolve with correction [4]. Symptoms can be addressed with the removal of the central core with excision and use of skin emollients. Surgery is reserved for those who fail conservative management and is indicated for correcting abnormal mechanical stresses [2]. Deformities such as hammertoes may require surgical correction to obtain a permanent and definitive cure.

Onychocryptosis/Retronychia

Ingrown toenails otherwise known as onychocryptosis are a well-described nail phenomenon. Typically, this condition is precipitated by external compression such as ill-fitting shoes. Other coexisting findings usually include hyperhidrosis and the presence of difficulty in or lack of proper nail trimming. This is often a function of concomitant onychomycosis which can lead to nail thickening also known as onychodystrophy, or nail thickening without fungal infection. In such cases, poorly trimmed nails result in the formation of sharp spicules forming between the nail and nail fold [5]. This leads to pain, inflammation, and secondary bacterial infection. Other challenges include but are not limited to the physical inability to properly execute personal nail care such as lumbosacral degenerative disease, rheumatoid arthritis or other musculoskeletal conditions affecting the hands, or visual impairment that precludes visualization of the nail and surrounding skin. Lack of proper nail trimming tools is one of the most common reasons for lack of proper nail care. Often the nail becomes long enough to be traumatically pulled distally, which will always lead to the development of onychocryptosis. Management is stratified by severity of symptoms, and referral to a podiatric surgeon is often required. Conservative management is initiated by debridement of the affected nail followed by application of antiseptic dressings. Removal of the offending spicule is, in the general population, adequate. With neglected cases, however, or with chronic and/or infected cases, a granuloma may be present. In such cases, antibiotics and surgical intervention may be required. Surgery is also a common treatment if conservative management fails or for recurrent ingrown toenails [6].

Retronychia is proximal growth of the nail plate into the proximal nail fold that often affects the toes. Although retronychia is a recently described condition, the etiology is often due to trauma, poorly fitting shoes, and medical disease [5]. Due to the prevalence of these inciting factors in homeless patients, homeless patients may be predisposed to develop this disorder.

Tinea Pedis/Dermatophytosis

Fungus is classified either as unicellular yeast or as molds which are comprised of branched structures called hyphae. The fungi that cause superficial infections of the skin and nails are known as dermatophytes which invade the keratin on top of the epidermis and nails leading to a condition known as tinea pedis. Dermatophytes have a predilection for proliferation in dare and moist occlusive locations. Thus, the foot is the most common site on the human body. There is also a higher incidence in the immunocompromised patient. Although nearly everyone in the United States is exposed to dermatophytes, the major determinant of clinical infection is the host's immune system [7]. Given that HIV/AIDS and diabetes are prevalent in the homeless population, this cohort is at a higher risk for fungal infections of the foot. Additionally, microscopic fissures in plantar skin increase a patient's susceptibility. Along with poor hygiene, advanced age, chronic overexposure to sunlight, and diabetes are major risk factors for fissuring. A study of a 450-bed shelter in Boston in 1992 showed that 38% of residents had tinea pedis, while 15.5% had onychomycosis of the toenails [8, 9].

There are three major types of tinea pedis. Interdigital tinea appears as macerated or scaly skin between the toes, the most common location being the fourth interspace. Plantar tinea appears as scaly skin with a reddened background. While it may be asymptomatic, clinical symptoms include burning and itching [9]. Untreated, advanced tinea pedis can become secondarily infected from excoriations as bacterial portal of entry. In such cases, aggressive antifungal and often intravenous antibiotics may be required based on the degree of ascending infection.

While the diagnosis is often made clinically, the physician does have the option to biopsy or culture the affected skin. KOH and PAS preparations are useful but KOH in particular is less likely to be positive in severe cases. Treatment for fungal infections often consists of topical agents. Most topical antifungals are safe to use on the general population unless the patient has a reaction in the past. Azoles such as econazole and clotrimazole are examples which can be prescribed empirically. Oral agents must be carefully selected as there are often drug-specific toxicities, drug-drug interactions, and other considerations that should be noted when prescribing. Oral terbinafine is not a good choice in patients with liver disease, those who consume alcohol, or those who are on beta-blockers. The duration of therapy for interdigital tinea pedis infections is generally 2–4 weeks. Plantar tinea can take up to 3 months of topical therapy. If using an oral agent, treatment duration is generally 1–2 weeks for superficial skin infections. If there are significant inflammatory signs, a combination of an antifungal with a topical steroid may be indicated [8].

Prevention is aimed at keeping the feet clean and dry while wearing well-ventilated shoes that fit properly and are not too tight. Alternating shoes can help them dry in between wearing. Additionally, frequently changing socks ensures that they stay clean and dry. Simple precautions such as wearing sandals in public showers can decrease the chance for dermatophytes to come in contact with the skin. Unfortunately, the homeless population can encounter multiple obstacles to undertaking these precautions [8, 9]. In addition to these barriers to preventive health, the clinician should be aware of additional medical issues which can predispose the homeless to fungal infections. These include conditions like peripheral vascular disease, diabetes, alcoholism, and the use of vasoconstrictive drugs like cocaine.

Bacterial Infections of the Lower Extremity

Inadequate foot hygiene, ill-fitting shoes, medical disease, moisture, and trauma are inciting factors that lead to bacterial infections in the feet. Most commonly, however, underlying systemic pathology is at the root cause of lower extremity bacterial infections. A few common examples include uncontrolled diabetes mellitus, venous insufficiency and chronic lymphedema, and peripheral arterial disease. Skin conditions which increase itching may be associated with poor hygiene, scabies and pediculosis, and pruritus of renal, gallbladder, or other origins and in some cases are a component/ manifestation of an underlying behavioral syndrome. Other common causes of bacterial infection are related to intravenous drug abuse and “skin popping.” A common area seen with this practice is the web space of the toes, and on the shins, as the skin is thin, and lesions are easily hidden with clothes from the public’s eye. In all cases, these exacerbating factors lead to breaks and abrasions in the skin, which increase the risk of superficial skin infections, ulcerations, and abscesses. Progression of local infections if not addressed in a timely fashion can lead to more serious infection such as osteomyelitis, which can necessitate amputation, and systemic illness including sepsis which has a 33% mortality rate. It should be noted that with all bacterial infections, the treatment must be put into context of the overall patient condition. For example, a 24-year-old with a urinary tract infection is managed differently from a geriatric patient who can quickly succumb to urosepsis from the same condition. Each patient must be assessed on a case-by-case basis and clinical treatment should be tailored accordingly. The following infections of the lower extremity are listed by frequency of complications if not addressed in a timely fashion.

Erythrasma

Erythrasma caused by *Corynebacterium minutissimum* is the most common bacterial infection of the interdigital spaces of the feet [10]. Originally thought to be a fungal infection, it was later identified to be a gram-positive rod. Although dermatophyte infections are the most common superficial infections of the feet, they may often be confused with infection by *C. minutissimum.* Patients may be asymptomatic, but they may also endorse pruritus. It can occur simultaneously with dermatophyte or candidal infections. It is sometimes characterized as having a "cigarette paper" appearance with scaling [11]. Localized erythrasma responds well to topical agents such as clindamycin or erythromycin [12]. Widespread disease may benefit more from systemic therapy such as clarithromycin [13]. Improper diagnosis of erythrasma as a tinea infection means that it will be treated with an ineffective antifungal. If left unchecked, erythrasma can cause skin sloughing, leaving open, weeping, painful lesions that require a much longer course of treatment, local wound care, and convalescence. In such cases, time to healing becomes highly dependent on other host factors such as nutritional status and access and ability for dressing changes and supplies, and for this reason, homeless patients are often admitted with a prolonged hospital stay when this pathology is encountered, often with an admitting diagnosis of sepsis.

Cellulitis

Cellulitis of the lower extremities is a frequent cause of hospitalization in homeless populations [10]. Cellulitis is an infection of the deep dermis and subcutaneous tissue, whereas pyoderma is a purulent skin infection. Cellulitis, defined as "a rapidly spreading infection of the skin characterized by redness, pain, and swelling, and often accompanied by fever, malaise, chills, and headache," is highly prevalent in the homeless population. In fact, a review of patients seen by Boston Health Care for the Homeless Program from January 1996 to 2002 found that 7% developed cellulitis. A survey of admissions to New York University's dermatology unit indicated that 48% of homeless patients were admitted for cellulitis or other skin infections, and 81% of all admitted patients with these skin infections were homeless [14]. Most commonly, the etiology results from cuts, abrasions, bites, needle injections, surgical incisions, fungal infections, and psoriasis, and bacteria are afforded a conduit through the epidermis. If left untreated, this can lead to purulence and tissue necrosis, increasing the risk of bacteremia, endocarditis, gangrene, and sepsis. Cellulitis can be described as lymphangitis when it spreads along the lymphatics. Not surprisingly, there are multiple risk factors that make the homeless at higher risk for developing cellulitis [15] including malnutrition, poor sleep hygiene, shared living situations, and a propensity for chronic illnesses like diabetes and peripheral vascular disease. Additionally, venous stasis and edematous extremities are often concomitant and exacerbating factors for the development of cellulitis.

The typical presentation of cellulitis is a poorly demarcated area of expanding erythema that is warm to the touch, with swelling and tenderness to palpation. Constitutional symptoms may or may not be present such as fever, chills, and fatigue. The diagnosis is most often clinical, and bacterial cultures are of little value in uncomplicated cellulitis [16]. The most common pathogens implicated in cellulitis and pyoderma are gram-positive microorganisms such as *Streptococcus* species and *Staphylococcus aureus* [17]. However, in patients with underlying medical diseases such as diabetes, peripheral vascular disease, lower extremity ulcers, and some surgical wound infections, soft tissue infections are at increased risk of developing cellulitis, and infections may be polymicrobial with a mix of gram-positive organisms, gram-negative organisms, and anaerobes [18].

Antibiotics are the mainstay of treatment in cases of cellulitis. The clinical presentation and patient comorbidities dictate duration of treatment. Mild cellulitis with no systemic signs of infection can be treated conservatively in the outpatient setting with an oral antibiotic. Patients with more severe cellulitis or those with underlying comorbid conditions may require hospitalization with intravenous antibiotic therapy [19]. Patients who are not likely to obtain oral antibiotics, or at risk for treatment failure, should be given intravenous antibiotics. Failure of treatment can lead to complications which include development of deep tissue abscesses which require surgical incision and drainage and sepsis. Patients with any immunocompromise may also require intravenous antibiotics. Following eradication of the infection, preventative care including proper nutrition, elevation, and compresses should be considered. The homeless are particularly prone to cellulitis given their predilection for tinea pedis, corns, calluses, trench foot, poor shoe wear, macerated skin, and long periods of standing [15, 20].

Gas Gangrene

Clostridial infections encompass a range of conditions that include anaerobic cellulitis, myonecrosis (gas gangrene), and necrotizing soft tissue infections. Gas gangrene (clostridial myonecrosis) was previously thought to be caused by clostridial species of bacteria. However, a study of bacterial infections of lower extremity gas gangrene showed that clostridial species were rarely implicated. For this reason, the terminology generally now generally accepted to be wet gangrene, bacterial myonecrosis, or gas gangrene when there is radiographic evidence of soft tissue emphysema present. Rather, the most common isolates were *Streptococcus* species [13]. Trauma, or the presence of any open lesion of the skin, may introduce organisms into healthy tissue, and subsequent vascular compromise produces an ideal environment for anaerobic bacteria to flourish [15]. Presentation of gas gangrene may include sudden onset of severe pain that typically occurs within 24 hours at the site of trauma. The classic late clinical picture is described as an edematous, discoloration that is bronze, gray, or purple, hemorrhagic bullae, a rapidly extending margin of erythema, and palpable crepitus [16]. Gas gangrene is a surgical emergency and requires emergent decompression with incision and drainage to remove devitalized tissue. Antibiotics are also a cornerstone of treatment [16].

Puncture Wounds/Foreign Bodies

Puncture wounds can appear benign, but they should be carefully evaluated, as delays in treatment can lead to significant morbidity. Pseudomonas is a common isolate of diabetic foot ulcers. However, concern should be warranted for pseudomonas infections when patients present with puncture wounds to the feet. A relationship has been established between puncture wounds to the feet when wearing shoes and pseudomonas infections [21, 22] Osteomyelitis is common in diabetic patients with puncture wounds [21]. *Aeromonas hydrophila* and *Mycobacterium marinum* infections can result when injuries to the feet occur while in fresh or brackish water [21, 23].

Management of puncture wounds depends on presentation and patient comorbidities. In all cases, a thorough history should be obtained to determine the etiology of the puncture wound and comorbid risk factors that predispose patients for certain infections. A thorough understanding of the patient will guide appropriate therapy. Cases without any signs of infection or if the wound is superficial may only require tetanus prophylaxis [22]. Infected foot wounds are considered a medical emergency [23]. Baseline laboratory tests should be obtained such as a complete blood count, erythrocyte sedimentation rate, and C-reactive protein. While elevated laboratory values are indicative of infection, normal values cannot rule out infection nor do they predict outcomes [24, 25]. Imaging is warranted if there is suspicion of a retained foreign object or gas gangrene. Surgery may be indicated to debride necrotic tissue, perform a thorough irrigation, and culture the wound to guide antibiotic treatment.

Osteomyelitis

Osteomyelitis, or infection in bone, is a difficult condition to deal with in the lower extremity. The homeless population is at higher risk for osteomyelitis than the general population. In a retrospective study performed at Michael E. DeBakey Veterans

Affairs Medical Center with foot osteomyelitis between January 2010 and May 2015, homelessness was shown to be associated with higher treatment failure for osteomyelitis in the foot ($p < 0.001$) [26]. It should be noted that any long-standing or undiagnosed, untreated infection/open lesion can lead to osteomyelitis in the lower extremity. The soft tissue envelope of the foot and lower extremity is such that, once compromised, proximity to underlying osseous structures anatomically increases clinical likelihood of developing osteomyelitis. The most common treatments for osteomyelitis depend on underlying comorbidities, however are categorized as antibiotics alone or antibiotics with surgical intervention. In long-standing, neglected infections of the foot, i.e., the toe, a diagnosis of osteomyelitis often requires amputation of the infected digit. Osteomyelitis often requires treatment with long-term intravenous antibiotics which poses a logistical disposition problem for patients who have a history of drug abuse. In such cases, patients will have a much prolonged hospital length of stay to complete the recommended 6–8 weeks of antibiotics or are discharged to facilities which can provide this service. Many places have strict restrictions for those with underlying mental health conditions. These are some common issues and are indirectly related to such a diagnosis in this population.

Common Foot Disorders

As in the general population, the homeless population experiences a variety of musculoskeletal foot and ankle deformities. To date, there is scant literature recording the incidence of these specific deformities among the homeless. Without more definitive research, the assumption is that these deformities occur at approximately the same incidence as the non-homeless population. The difference is that without the access to footwear, ability to make lifestyle modifications, access to operative intervention, and a higher incidence of chronic diseases like diabetes, these deformities have the propensity to be more debilitating and predispose to ulcerations and infections.

Bunion Deformity

Among the common foot and ankle disorders is the bunion. A bunion comprises a bursa that arises over the first metatarsophalangeal (MTP) joint from a hallux valgus deformity. In this situation, the great toe deviates laterally. While there is evidence to show a significant hereditary component, much of the pathophysiology is thought to be from environmental etiologies. Additional pathologies in the rearfoot can influence the development of a bunion, located in the forefoot. Patients often complain of pain from the medial eminence and bursa sac that develop over the first metatarsal head. This can eventually lead to callous formation which can increase pain and can eventually lead to ulcer formation. This destabilizes the forefoot and can lead to a callous plantar to the fibular sesamoid. These progressive changes in biomechanics lead to weight shifting toward the lateral aspect of the foot during the gait cycle. If allowed to progress, the great toe (hallux) may deviate so far laterally that it may eventually overlap/underlap the second toe destabilizing the second metatarsophalangeal joint. Generally, one of the initial conservative treatments for this condition involves advice on new shoe wear that is wider with better arch support and padding. This presents a challenge to the homeless as their financial obstacles can prevent them from obtaining new footwear.

Hammertoe Deformities

Hammertoes are very common deformities that afflict the lesser digits and less so the hallux. There are several types of hammertoes and are categorized based on the joint or joints involved. The most common type is the common hammertoe which occurs at the proximal interphalangeal joint causing a callus over the joint as well as a plantar metatarsal phalangeal joint painful callus secondary to retrograde pressure. If the distal interphalangeal joint is contracted, then the patient has a mallet toe. If all the joints are contracted, then a diagnosis of a claw toe is given. These are all initially painless. However, as the deformity increases, patient’s intolerance to shoe gear also increases as a result of pain. Calluses develop which only exacerbate the pain and lead to patient frustration. In the initial phases of deformity, the toes can be reduced into normal position; this indicates a less severe form of joint pathology. When, however, there is underlying degenerative joint disease, and range of motion becomes restricted, surgical intervention is highly advised. Patients with such deformities have increased propensity for developing chronic pain, have difficulty in fitting into shoes, and are at increased risk for wound formation.

Plantar Fasciitis

Another common foot deformity is plantar fasciitis. The deep fascia in the plantar aspect of the foot is comprised of a thick band of connective tissue that attaches at the medial tubercle of the calcaneus and inserts on the capsules and ligaments that comprise the metatarsophalangeal joints. The origination of the fascia at the calcaneus is the most common site for this robust ligament to become inflamed or injured. Recent studies have shown that plantar fasciitis can develop from the force of contracture of the gastroc-soleus complex in the calf. Treatments for this condition often involve shoe wear modifications, injections, and orthotics, all of which can be inaccessible to the homeless population [27]. Although this does not result in overt deformity, and does not generally increase risk of wounds, pain associated with this can be debilitating. Patients often have difficulty describing this pain and simply state they have heel pain. Radiographs are not necessary and often negative. Heel spurs are seen even in patients without symptoms and therefore, despite common thought, are neither diagnostic nor prognostic. Patients who may lack ability to communicate effectively will often have a far delayed diagnosis.

Trauma/Burns

Orthopedic issues in the homeless population are particularly concerning as homeless adults are at risk for traumatic musculoskeletal injuries. These injuries can include sprains, strains, burns, bruising, tendon ruptures, fractures, and dislocations. There is a paucity of literature. Interestingly, the most common traumatic injuries in the homeless population occur in the lower extremity. Of these, ligament sprains, muscle strains, burns, and contusions were the most common. They are more likely to present to the emergency department and less likely to present to an orthopedic clinic for their follow-up care. In a 2014 study published in the *International Journal of Injuries and Safety Promotion*, 1,885,274 individuals presented to NEISS EDs with injuries. A search through the EMR was performed to determine if there was any mention in the narrative that patients were homeless. Thus far, this represents the comprehensive study so far into traumatic injuries in this population. However, even this study did not go into detail concerning the specific anatomic locations of injuries within the lower extremity. While strains/sprains were the most common cause of injury presenting to the ED among both the homeless and controls, the circumstances surrounding the injury were different. Not surprisingly, this study reported narratives of injury stemming from the unique challenges of homeless, such as having to leave shelters early each morning carrying heavy bags throughout the day [28]. For orthopedic fractures that underwent surgery, they were also less likely to follow-up in the orthopedic clinic [28].

One particularly surprising finding from this study was the significant percentage of burns presenting in the homeless population. While burns comprised about 2.0% of the control population in this study, they were more than 5× this percentage in the homeless population. Scant mention is made in the literature concerning burn injuries in the homeless [29]. Increased propensities for frostbite, campfire injuries, and neuropathy were all considered to be contributing factors. It is speculated that reversing this trend may positively impact outcomes and minimize complications.

Peripheral Neuropathy and Ulceration

Peripheral neuropathies encompass a broad range of etiologies, the pathophysiology being contingent on the underlying disease. The etiology of neuropathy can be due to medical illness such as diabetes, chronic alcohol use, nutritional deficiencies (B1, B6, B12, etc.), inflammatory conditions, infectious agents, toxins, medications, and trauma/injury [30]. Homeless patients suffer disproportionately from lower limb pain, which may be in part due to lifestyle factors such as ill-fitting shoes, long periods of standing, inadequate foot hygiene, nutritional deficiencies, and medical disease [31]. Symptoms of neuropathy vary widely and can include any combination of numbness/tingling, weakness, atrophy, and pain [30]. The higher prevalence for malnutrition and alcohol-related health problems among homeless populations compared to domiciled populations demands a nutritional workup when assessing neuropathy in indigent patients [32]. Treatment is directed based on the etiology of the neuropathy and may include nutritional supplementation, removal of the inciting agent, or medications.

Ulcerations, or soft tissue defects, are seen frequently in the lower extremity. These can expose any and all layers of tissue including bone and joint. This can predispose patients to increased bacterial burden and infection, particularly for immunocompromised patients [33, 34]. In fact, ulceration is a precursor in 84% of lower extremity amputations [33]. Risk factors for foot ulcerations include neuropathy, arterial disease, venous stasis, and smoking with the most common being neuropathy. In the United States, the most common cause of neuropathy is diabetes mellitus. As lower extremity ulcerations are common precursors to amputation, it is important that chronic diseases like diabetes are thoroughly addressed. While there are numerous classification schemes to efficiently and effectively communicate the severity of a diabetic foot ulceration, one of the most commonly utilized schemes is the University of Texas Classification System [33].

Foot ulcerations are unfortunately already a difficult pathology to treat in the general population. The homeless population encounters additional obstacles including lack of good shoe gear, the necessity to stand and walk for long periods of time, and lack of access to medical care for chronic comorbidities like diabetes [35]. To date, there is one interventional study that looked at diabetic foot ulcerations in the homeless population. It prospectively identified and treated 21 (2.3%) of 930 homeless individuals with diabetic foot ulcers. Treatment consisted of debridement of all necrotic tissue, drainage of abscesses, wound care, and antibiotic treatment with weekly treatment for an average of 17.5 +/− 12 months. Clinical improvement was noted in 86% of these patients. Thirteen showed complete resolution. One of these patients required amputation and later expired due to septic shock and kidney failure [35].

Frostbite

Frostbite is defined as local tissue injury and freezing which can be a result of hypothermia. The feet and hands are the most common sites for this to occur. According to multiple European studies, this condition is generally associated with damp clothing, history of previous hypothermia complications, wound infection, diabetes, and smoking. These are common risk factors in the homeless population [36].

As such, the few studies that have looked at the epidemiology of frostbite in this population show about 2% of the homeless population [37]. The mechanism of tissue death begins with the freezing and eventual destruction of cell membranes. This allows water to leak out of the cell leading to lysis of the cells. Furthermore, vasoconstriction leads to loss of oxygen for the tissues. Capillary flow is stunted leading to thrombosis. In response, inflammatory cytokines are released which further exacerbate the vasoconstriction and thrombosis [37].

Unfortunately, the homeless population is at high risk for amputation after frostbite injury due to their propensity to have many of the aforementioned risk factors and the severity of tissue injury on presentation, among other factors. The recommended initial treatment is rapid rewarming once the patient has been able to achieve hospitalization or shelter. Many of the homeless, however, present long after the initial frostbite injury has occurred, which negates many of the positive benefits of the rapid rewarming treatment phase [37]. This condition is very painful initially, however becomes a painless condition once severe damage has occurred. This is, in part, a major contributing factor in the discussion regarding the need for amputation in a homeless patient. Patients are often very reluctant to undergo an amputation for a painless condition, knowing that their mobility and thus livelihood will be compromised. This becomes an infection and sepsis risk.

Gout

Gout is metabolic in nature and distinguished by high uric acid levels. Eventually, monosodium urate crystal depositions accumulate in the joints, periarticular structures, and soft tissue planes which can lead to an acute stage with flares of synovitis in recidivism. Additionally, there is a chronic phase that can be continually symptomatic. Acute gout is monoarthritic and most commonly presents in the first metatarsophalangeal (great toe) joint although it can also be seen in the ankle, midtarsal, knee, wrist, elbow, and finger joints. Since chronic gout is marked by long untreated periods of hyperuricemia, this painful and debilitating condition is no stranger to the homeless population [38]. In a study by Chen et al. of 299 homeless participants out of two shelters in San Francisco, 6% were symptomatic for gout, generally agreed to be much higher than the general population. In addition to clinical observation, the diagnosis is often made through the visualization of crystals in the joint fluid which are classically negatively birefringent under polarized microscopy [39]. Treatment generally consists of symptomatic care (injections, NSAIDs, oral medications). Multidisciplinary long-term follow-up is important to maintain normal uric acid levels and minimize further joint destruction as well as to care for other comorbidities like diabetes, chronic kidney disease, and coronary heart disease. Clearly, the homeless can encounter barriers to these interventions [36].

Treatment, Prognosis, and Prevention

Homelessness is associated with many fundamental issues such as unstable housing, behavioral health problems, barriers to disability/social support, and lack of financial stability. Although there are many more fundamental issues in the homeless population, we will examine each of these as they play a role in access to proper footwear, transportation, health insurance, and follow-up appointments.

Footwear

Shoes protect our feet from the outside environment. Unstable housing leads to the homeless to be subjected to this outside environment even in the harshest of weather conditions. The importance of proper shoe wear is essential in preventative care of many dangerous lower extremity medical conditions such as ulcerations, frostbite, and bacterial or fungal infections. Any of these conditions can lead to the need for hospitalization and often loss of limb, ultimately changing the patients' life forever. The dramatic difference in healthcare expenditures when comparing the cost of a new pair of shoes compared to hospital admission, surgical intervention, postoperative care, and prosthesis is clear.

Behavioral health problems including substance abuse can lead to the inability of the patient to fight for their own basic needs. Two-thirds of homeless adults report a substance use and/or mental health problem, and about one in four meets criteria for a serious mental illness, compared to 1 in 17 adults in the general US population [40]. Behavioral health or substance abuse issues become the forefront of a patient's life, and proper shoe wear may seem irrelevant leading to both lack of access and incentive to protect their feet.

Alienation of family and friends often precipitates homelessness for those with the previously mentioned chemical dependencies and/or untreated mental illness. In addition, the volume of the homeless population often exceeds the social support systems resources in the area. In combination, the barriers to access charitable resources providing shoes at discounted or no cost become extremely difficult. That being said, it is very fortunate that so many charitable foundations exist to help provide protective footwear to the homeless population at any volume, especially in urban areas. Most charitable foundations focus their donations to sneakers. One study found that sneakers were the most common kind of footwear among homeless individuals (84%), followed by dress shoes (28%), sandals (22%), heels (3%), boots (3%), and no shoes (1%). The same study found that approximately 73% of participants were able to change shoes at least every 6 months [1]. Before discharging a patient from the hospital with a lower extremity ulceration or surgical site, discuss the patients' living situation and ensure they have the proper protective shoe wear given the elements of their situation.

Financial instability forces the homeless population into a position that makes it difficult to provide even the most basic needs such as new shoes. Many homeless people do have some source of income, but each person must allocate that money how they see fit: whether that be saving for proper housing, medications, hygiene products, or unfortunately substance abuse products. Thankfully there are lower cost options and charitable societies for those who have access. However, when these high-risk patients do acquire shoe wear, many have improperly fitting shoes putting them at even higher risk for complication. Macnee et al. found that 33% of homeless individuals who presented at a foot screening clinic had ill-fitting shoes [41].

Transportation

Limited to no access to transportation often makes healthcare inaccessible to many homeless people. The homeless population relies on public transportation as a primary means of travel but often they cannot afford this cost. This is particularly true in rural areas with severe geographic areas like mountainous terrain or vast distance from the nearest health center. The difficulties are not simply limited to rural areas. Even if a health center is only a few miles away in an urban setting, the financial cost or simply the lack of transportation is a major barrier to many homeless people [42].

As a homeless person, finding adequate means of travel can be worsened if they have physical disabilities [43]. If a patient is physically disabled and qualifies for transportation, this is often complicated due to unstable housing and no consistent address for pick up and drop off. In addition, the long wait for medical services can mean they miss the deadline for when to be back at the shelter to sign up for a bed for the evening [43]. Given a forced choice between a bed and medical care, shelter inevitably becomes the priority.

For the homeless patients who are trying to get back on their feet, lack of transportation becomes a primary obstacle to employment. The barriers to adequate transportation and maintaining a job are part of a vicious circle. Predictable transportation often comes with a financial cost. In order to have an income to pay for the transportation, the patient needs a job. A job may provide healthcare benefits or at least assist with income to pay for healthcare needs. Without consistent predictable transportation, the ability to get hired for a job nevertheless continue to show up on time daily to keep the job is extremely difficult. The use of public transportation, a source of frustration for the average commuter, presents a greater barrier for those who only have money for a single fair and cannot afford mistakes with routes or transfers. Unfortunately, programs like Medicaid generally do little to overcome barriers such as transportation cost to jumpstart this homeless population to getting back on their feet.

Homeless patients with behavioral health issues are at further disadvantage regarding the limited transportation options. The process to set up transportation is complicated, requiring not only high mental concentration but also access to a phone or the Internet. In one study, as many as 80% of homeless persons have tested marked deficits in cognitive functioning [41] which can only make this process that much more difficult. As previously mentioned, many of these patients are alienated from friends and family, and with the lack of proper social support, it can become nearly impossible to access the limited transportation.

Since many patients have limited to no access to transportation for proper medical care, they need to walk as a means of transportation. Increased walking among the homeless has shown to increase risk for physical injury, poor hygiene, and inadequate foot care leading to the development of foot problems. In one study, 74% of respondents stated they were on their feet 5 hours or more each day [35]. One study found that homeless individuals walked a median of 5 miles per day [39]. Commonly, increased prevalence of foot pain in the homeless population is simply related to the profound need for increasing ambulation burden. Although stress fractures are not reported in the literature, this is a finding that must be ruled out. Limitation in how much an individual can walk, as it relates to overall health and tolerance, is also related to available resources within the "bubble of distance" in which they can physically access. Lack of transportation is a major health liability, and thus homelessness is deemed by many, for this and a myriad of other reasons, as an independent indicator of health and health-related outcomes.

Lack of Insurance

Over half of the surveyed homeless service users nationwide and 70% of Health Care for the Homeless (HCH) clients have no health insurance [36]. The inability to afford private insurance while not qualifying for public insurance drives this dramatic lack of coverage. Poor adults who are not pregnant, disabled, and elderly or have dependent children are ineligible for Medicaid in most states [41]. Even if a patient is eligible, the enrollment process is very complex. Lack of required documentation to verify eligibility is the most frequently cited obstacle to Medicaid enrollment for homeless people [40, 41]. Proof of identity, residence, and income is difficult to provide without a home, a car, or a continuous employment. In addition, homeless people may not have a safe place to keep these required documents even if they were able to obtain them [40].

Predictably, the greatest difficulties in obtaining medical care are experienced by low-income people without health insurance. A study from 1987 showed the proportion of those deterred from care by financial considerations is twice as great (13%) among the uninsured as that among the population as a whole (6%) [42]. The difficulties do not end with simply seeing a physician for evaluation; homeless patients then accrue the financial burden of whatever the treatment entails. Without insurance benefits, the cost of needed treatment modalities such as medical equipment, surgical procedures, and prescription medications is high. This burden becomes even more unbearable with medical conditions requiring daily lifelong daily medication to manage such as diabetes.

Diabetes is a prominent medical condition among the homeless community and as previously mentioned contributes to a high volume of patients with lower extremity medical conditions. Most food provided in shelters or soup kitchens is high in fat, starch, salt, and sugar, which increase the risk for complications associated with diabetes [35]. Medication, whether oral or injectable, for blood glucose control is a daily medication for the rest of the patients' life. When a homeless patient does not have consistent income nor insurance, paying for this medication becomes problematic leading to increased blood sugars and worsening of the diabetes. Worsening of the diabetes ultimately leads to increased frequency of hospitalizations and ultimately cost to the healthcare system and patient.

Preventative medicine drives healthcare costs down and attempts to catch medical conditions before they progress to significant severity. The homeless population faces numerous barriers to preventative healthcare screenings, lack of insurance being a major issue. Without insurance, routine diabetic foot screenings rarely occur. When routine screenings in an office setting are unobtainable, the patients do not present until the problem has become out of control and the patient needs hospitalization. With this system in place, costs rise and the patient suffers.

Follow-Up Challenges

The ability to adhere to proper follow-up protocol is often the key to a successful outcome. Lack of transportation and insurance are just two of the many barriers that create significant challenges to follow-up medical care in the homeless population. Twenty-five percent of homeless respondents reported being seen in the emergency department for foot problems [39]. Several studies have reported that 20–21% of the homeless population presenting for a foot concern required further follow-up due to the severity of their condition. This data proves a high volume of the homeless population requires follow-up care, but it is seen throughout nearly every medical specialty that many homeless patients are lost to follow-up.

Access to housing and support service has been shown to increase adherence to follow-up treatment, decrease arrests and incarceration that disrupt treatment, and reduce costly visits to the emergency room [44]. When discharging a patient from the hospital, physicians should work tirelessly with case managers to coordinate and promote continuity of care. This can be achieved through detailed collection of any contact information from the patient, discussing possible temporary housing options, connecting patient with outreach programs, and providing patient with transportation assistance.

Behavioral disorders, substance abuse, and cognitive impairments associated with them can interfere with treatment adherence. Approximately 30% of persons experiencing homelessness have substance dependence/abuse, compared to 9% of the general population [45]. Creating an integrated, flexible model of care could improve adherence to treatment in this population. Although logistically more challenging for the physician, it is important to coordinate medical and psychosocial care with other treating physicians and consider allowing walk-in visits for patients with psychosocial disorders in order to increase adherence to treatment.

Cultural, linguistic, and educational barriers significantly contribute to follow-up challenges. Minority racial and ethnic groups are overrepresented among the homeless people in the United States [46]. Fifteen percent of Health Care for the Homeless (HCH) clients are identified as best served by languages other than English [47]. Among these patients, many do not read English well or are unable to read at all. Medical professionals should not assume that a patient could read the directions on medicine bottles or an appointment card. The inability of medical professionals to adequately provide patients with the necessary information for proper follow-up presents as a serious obstacle to healthcare.

Discussion

Homelessness is a major public health concern in North America. Recent reports from 2012 and 2013 suggest that on any given night, over 700,000 individuals across the United States and Canada are homeless. Foot conditions among homeless patients revealed prevalence of any foot problem ranging from 9% to 65% across the study populations. Among the most common concerns were skin and nail pathologies, foot infections, neuropathy, trauma, and thermal injuries which include both burns and frostbite.

The high prevalence and severity of foot conditions can be attributed to a variety of the aforementioned physical, psychosocial, and service provision factors. Lack of shelter and prolonged exposure to the environment lead to medical conditions such as frostbite, gangrene, and trench foot. The overall lack of the basic means for basic foot hygiene when coupled with the increased demand of increased ambulation burden increases morbidity related to both poor hygiene and pain-related pathology. Risks of high repetitive trauma, sleeping on the streets, and living in crowded conditions increase exposure to pathogens and increase risk of acquiring infections in those who have neuropathy from any cause. The homeless population is at a heightened risk for foot problems, yet studies show these homeless patients are unaware on the need for foot care services, uninsured to properly receive these services, and embarrassed of the condition of their feet preventing them from seeking appropriate care.

High rates of chronic disease in the homeless population such as diabetes, peripheral vascular disease, and hypertension frequently manifest as lower extremity pathology. Secondary lack of insurance, financial security, or transportation to address chronic disease leads to a higher rate of end-stage disease, uncontrolled morbidities, and high admission and readmission rates. A growing body of literature suggests that homeless individuals experience foot problems that are often overlooked, even when they are evaluated by healthcare professionals. Ultimately, a comprehensive, all-inclusive, multidisciplinary approach to the homeless person's care can provide a level of care that otherwise is too overwhelming for any one system or specialty to handle.

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Chapter 6

Reproductive and Other Related Health Concerns Among Women Experiencing Homelessness

Alison B. Hamilton and Alicia Y. Christy

Background: Women and Homelessness

Women and families are the fastest growing subgroup within the homeless population [1]. An estimated 216,211 or 39% of the people experiencing homelessness are women or girls. Nearly 40% of unaccompanied youth are women or girls. The number of women who were homeless in 2018 increased by 3% compared to 2017. The number of women who experienced homelessness in unsheltered locations—the most vulnerable group of women—increased by 4%. Of those experiencing homelessness in rural areas, a higher percentage were likely to be women; 34% resided in rural areas compared to 27% who live in urban areas. Homeless individuals, including women, suffer more mental and physical issues, with more than 50% reporting long-term health problems [2]. Women experiencing homelessness have not only been shown to have worse medical outcomes than housed women, but also their relative risk of death is higher than that of homeless males [3].

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Risk Factors Associated with Homelessness Among Women

The factors which predispose women to homelessness are numerous and include unemployment, job loss, foreclosures, sexual trauma, physical abuse, poor parenting, mentally ill parents, living in foster care, previous incarceration, and substance abuse. Intimate partner violence and sexual violence are some of the leading causes of homelessness for women and families. A large percentage of all homeless women and children become homeless when they escape domestic violence [4]. Some racial and ethnic groups are disproportionately represented among the homeless population. African Americans, for example, make up 43% of homeless families. Military Veterans are also at greater risk for homelessness. Nearly 13% of homeless adults are Veterans, and women Veterans are four times more likely to experience homelessness than non-Veteran women [5, 6]. Lack of education is also an important risk factor, and women who lack a high school diploma comprise 53% of homeless mothers [7]. In addition to psychosocial issues, there are a number of preexisting medical conditions that are more common among homeless women that can result in adverse outcomes. Homeless women who disclose their pregnancy are likely to not be accepted in shelters for single people. If the homeless woman is already in a shelter, and she discloses her pregnancy, she may be evicted. The likelihood of being rehoused during pregnancy is low, making pregnancy an added liability in securing housing.

Homelessness and pregnancy are not only independent risk factors, but they are synergistic. The lack of financial resources may cause homeless pregnant women to engage in illegal and dangerous activities as a means of survival. Women who become sex workers as a source of income subject themselves and their unborn child to a significant risk of sexually transmitted infections (STIs), as well as violence [8]. Behaviors such as illicit drug use not only increase the risk of homelessness, but it may also put pregnant homeless women at risk for hepatitis, HIV, and unintentional drug overdose. In fact, in some states, unintentional drug overdose is the leading cause of maternal death [9]. Alcoholism, which is more common in those experiencing homelessness, can lead to fetal alcohol syndrome, resulting in significant morbidity for the infants born to these mothers [10].

This chapter will focus on the reproductive and other related health concerns of women experiencing homelessness, including pregnancy, obstetric and neonatal complications, gynecologic issues, cancer screening and gender-specific cancers, and infectious diseases. Potential strategies to address these issues will be proposed.

Pregnant Women and Homelessness

Pregnant homeless women are a very vulnerable group, and homeless women are at greater risk for becoming pregnant compared to women who are housed. Access to contraception is often challenging, and as a result, pregnancy rates are higher among homeless women. Even in enhanced access to care environments, such as Europe, pregnancy rates are higher in this group. A study conducted in London found that 24% of homeless women ages 16–25 were pregnant. The authors also found that more than 75% of young homeless women continued their pregnancies [11]. In a US survey study conducted by the Midwest Longitudinal Study of Homeless Adolescents, the investigators examined pregnancy and motherhood over a 3-year period and found that 46.4% had been pregnant at baseline and almost 70% had been pregnant by the end of the study [2]. Not only is the risk of pregnancy high, but also many homeless women are likely to experience multiple pregnancies. One study reported that almost 30% of the young women in their sample had been pregnant two or more times [12].

Access to care early in pregnancy is often challenging for homeless women, which makes them more likely to experience poorer obstetrical and neonatal outcomes. Homeless women who live in rural areas are at an even greater risk. Rural residents had a 9% greater probability of severe maternal morbidity and mortality when compared to women residing in urban areas [13]. The American College of Obstetricians and Gynecologists has identified access to the appropriate level of obstetrical care as one the most important factors in decreasing maternal morbidity and mortality [14]. The target of Healthy People 2020 is for 77.9% of women to receive prenatal care in their first trimester of pregnancy; the rate in 2018 was 77.1%. Certain subpopulations such as non-Hispanic black women, Alaskan Natives, Pacific Islanders, and American Indians have much lower rates of prenatal care and early prenatal care [15]. Because of the transient nature of the homeless population, it is difficult to accurately estimate the percentage of homeless women who receive prenatal care in the first trimester, but it is very likely to be far below the national rate.

Homeless pregnant women face logistical barriers, psychosocial barriers, and attitudinal as well intellectual barriers [16]. All of these factors make homeless pregnant women a high-risk population. In the following section, we will examine the comorbid conditions that are more likely to affect this population as well as the obstetric and neonatal complications that are more likely to impact women who are homeless and pregnant.

Obstetric and Neonatal Complications Among Homeless Women

Homeless pregnant women are at risk for adverse outcomes antenatally, during delivery, and postpartum. Early prenatal care is critical, and late entry to care is associated with a number of adverse outcomes including maternal death. For this reason, both the American College of Obstetricians and Gynecologists (ACOG) and American Academy of Pediatrics recommend early prenatal care and ongoing risk assessment [15]. Early in pregnancy, women who are homeless are more likely to experience miscarriage compared with housed women. The rate of miscarriage among homeless women varies between 35% and 70%, compared to a self-reported

Table 6.1 Obstetric and neonatal complications that are higher among homeless women

Early pregnancy loss (spontaneous abortion)
Preterm labor
Preterm delivery
Small for gestational age
Fetal alcohol syndrome
Neonatal withdrawal syndrome
Maternal infections and maternal transmission of infections

Reprinted from Wenzel et al. [22]

miscarriage rate of 12% in the general population [2, 17]. A recent national study of women who used emergency shelter compared to women who did not found that adjusted odds of having nine pregnancy complications were significantly higher for homeless women, even after adjusting for behavioral health disorders [18].

Women experiencing homelessness are more likely to have premature deliveries as well as small for gestational age babies [19]. In one retrospective comparative study of housed and homeless pregnant women, 19% of infants born to homeless mothers were born prematurely. When homeless women also had substance abuse problems, the preterm delivery rate doubled, making their preterm birthrate six times the rates for housed women [20]. In addition to the many maternal complications experienced by these mothers, their infants are more likely to have prolonged intensive care stays, poor nutrition, and difficulty breastfeeding (see Table 6.1).

Gynecologic Conditions

The gynecologic problems that affect homeless women are not fundamentally different from housed women. However, homeless women are at greater risk for many conditions, and their access to medical services is much more limited. Like other marginalized groups, homeless women experience health inequities which results in both greater disease risk and poorer outcomes, including higher mortality rates [21]. In a systematic review and meta-analysis of morbidity and mortality among homeless individuals, prisoners, sex workers, and individuals with substance abuse disorders, the all-cause standardized mortality rates were consistently higher for women compared to men. Women with unstable housing are much less likely to receive gender-specific screening such as Pap smears and mammograms, which can result in the late detection of cervical and breast cancer, as well as other gynecologic malignancies such as uterine or ovarian cancer. In addition to gender-specific conditions, homeless women, like other homeless individuals, are at high risk for infectious diseases and mental and behavioral disorders which will be explored further below [3].

Homeless women who are pregnant, engage in unprotected sex and substance use, have experienced sexual violence, have greater competing needs, and have a greater severity of homelessness are more likely to report more gynecologic symptoms and conditions. Heavy alcohol use, which is more common in this population, has been associated with gynecologic problems such as amenorrhea and menstrual dysfunction. One of the earliest studies of gynecologic conditions among homeless women reported that 67% had a gynecologic condition in the previous 12 months and 71% received medical care for those conditions [22].

Gender-Specific Cancer Screening

Disease prevention depends upon access to appropriate screening. Poor access to medical care among homeless individuals has been well documented [23]. Gender-specific screenings such as mammograms and Pap smears have made a significant difference in the capability for early diagnosis and early intervention. Cervical cancer, for example, has decreased by 50% as a result of prevention and treatment strategies [24]. Unfortunately, homeless women are less likely to receive the recommended screenings compared to housed women. There is very little published literature about cancer screening practices in homeless women. Only 32% of homeless women over age 40 in one study had a mammogram within the past year [25]. These numbers are far below the CDC reported cervical cancer screening rates of 83%, which compares to the Healthy People 2020 target of 93%. The rate for breast cancer screening rate was 72%, which is nine points below the Healthy People 2020 target of 81% (Fig. 6.1) [26].

Gender-Specific Cancers

Women who lack housing are significantly more likely to have female genital cancers, particularly cervical, uterine, and ovarian cancer [27]. Low screening rates for homeless women may play a significant role in the lower cancer survival rates in this population. Among women who do access breast and cervical cancer screening

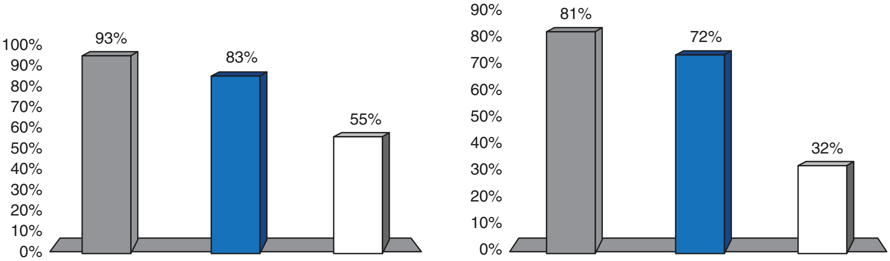

Fig. 6.1 Breast and cervical cancer screening rates. Cervical and breast cancer screening rates for Healthy People 2020 goal (striped bar), US population (blue bar), and homeless women (white bar). (Adapted from Chau et al. [25]. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6103a1.htm accessed 11/25/2019)

services, a large number do not get follow-up care. In a study of close to 300 homeless women in New York City, 65% assumed their Pap smear results were normal, or they did not get appropriate follow-up when the results were abnormal. Nearly 50% did not know how often they should be screened. Women who were not up to date on their cervical cancer screening were also less likely to understand the relationship between HPV and abnormal cytology [24].

Homeless women are more likely to engage in behaviors that are associated with higher risk for malignancies such as cervical cancer. Smoking is more common in this population, and they are more likely to be exposed to human papillomavirus (HPV), the cause of 70% of cervical cancers, and the most common STI in the USA [28]. Poor engagement with medical services, often a result of multiple barriers, leads to inadequate screening, late diagnosis, and lower survival rates. Among adults in metropolitan Detroit who were homeless at the first primary invasive cancer diagnosis, almost half were diagnosed at advanced or unknown tumor stages [27].

Strategies to Address Gender-Specific Cancers

There are multiple national initiatives, such as the National Breast and Cervical Cancer Early Detection Program, that are designed to provide screening for low-income, underinsured, and uninsured women. There is also a need, which is often unmet, to provide care in environments such as shelter-based clinics where homeless women seek care. The use of patient or peer educators is a strategy which can be implemented in shelters, even if the medical care cannot be provided in that setting [24]. Peer educators can also help mitigate the impact of provider implicit biases and prejudice against homeless women [29].

Coordination of care is critical in both cancer screening and cancer treatment. Studies of patient navigations models have been shown to have sustained improvement in cancer screening, particularly among minorities. Patient reminders and one-on-one education were several of the strategies which were found to be efficacious in a systematic review of interventions [30].

Infectious Diseases

Homeless women are an underserved group, and as such, their ability to access and engage with healthcare is significantly more difficult. The living conditions that characterize homeless populations, as well as their generally poor physical and mental health and higher rate of drug and alcohol abuse, make them vulnerable to infectious diseases. They are more likely to engage in risky behaviors, and many may become sex workers in order to support themselves. The isolation, social stigma, and criminalization experienced by homeless women make initial access and ongoing care extremely challenging. For homeless women living with hepatitis, HIV, or STIs with long-term sequelae, the consequences can be severe and, in some cases, can lead to preventable complications and even death.

The homeless environment is associated with a number of risk factors for exposure to infectious diseases. Homeless women are more likely to experience sexual assault, increasing their risk of sexually transmitted infections (STIs). Some authors have reported STI rates as high as 43% among women who have been sexually assaulted. The most common infections in one study were bacterial vaginosis and trichomoniasis caused by the parasite *Trichomonas vaginalis*. In a recent systematic review of the 2000–2016 literature on STI prevalence among homeless adults in the USA, the reported prevalence of chlamydia/gonorrhea (7.8%) was highest among younger homeless adult women [31]. The HIV incidence was low, at 1%, but follow-up testing was only performed in 26% of patients [32]. Abnormal vaginal discharge, a common symptom of some types of STI, was one of the most common gynecologic symptoms reported by homeless women [22]. The diagnosis associated with this symptom was not documented in the study, but the majority was likely to be associated with vaginitis (Fig. 6.2).

Screening for infectious diseases, such as hepatitis, is a challenge in homeless populations. Both poverty and unstable housing increase the risk for hepatitis, and infected women often have coinfections. In a group of 246 homeless women residing in San Francisco, 45.9% screened positive for hepatitis C. An alarming 27% of those who were positive reported that they had not been previously screened. Of the women who were anti-HCV positive, 61.1% were HIV coinfected. Although women with HIV were oversampled, a high rate of coinfection is consistent with other studies [33]. These statistics are particularly concerning because many of these women engage in risky behaviors such as needle sharing and multiple sexual partners; in fact, 19% of the study population reported recent injection drug use [34].

Poverty is a significant barrier to prevention, diagnosis, and treatment of HIV. Compared to men living with HIV, women living with HIV have a higher risk

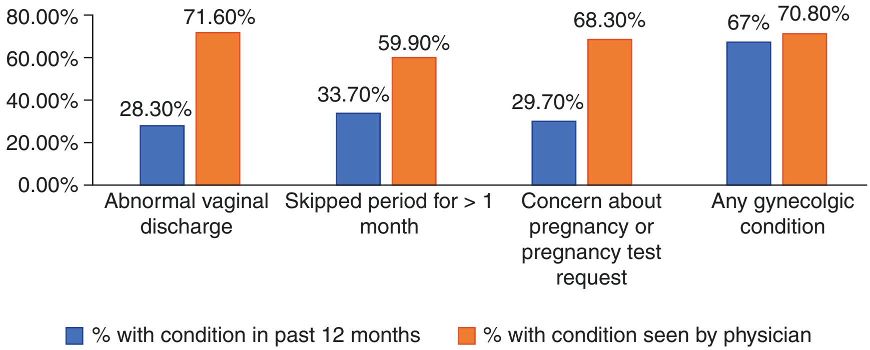

Fig. 6.2 Gynecologic symptoms and use of care. Percentage of subjects with the condition (blue bar), percentage of subjects with the symptom who were seen by a physician (gold bar). Percentage of subjects with any gynecologic condition and the percentage who were seen by a physician are shown on the right

of mortality. Furthermore, worldwide, HIV-infected pregnant women have two to ten times the risk of dying during pregnancy and the postpartum period compared with uninfected pregnant women [35]. Some of this gender disparity is likely the result of the use of sex exchange to meet economic needs. The high rate of drug use, mental illness, and victimization also play a role in the lack of consistent medical care. When women are unable to meet basic subsistence needs, they are far less likely to prioritize antiretroviral therapy [36]. Recent studies of the impact of poverty and unstable housing suggest that women who are both poor and unhoused are more likely to have an unsuppressed viral load. In a study of 120 women who used homeless shelters, low-income hotels, and free meal programs, 60% had unsuppressed viral load and more than one visit, and 19% were unsuppressed at every visit. For every ten nights spent sleeping on the street, the odds of an unsuppressed viral load were 11% higher. The odds of an unsuppressed viral load were 16% higher for every night spent sleeping in a shelter and 4% higher for every ten nights spent sleeping in a single-room occupancy hotel [36]. These results strongly suggest that housing in a critical factor in attaining viral suppression among low-income women with HIV.

Homeless women are not only at greater risk for infections, particularly STIs, but they are also less likely to receive early treatment, making them more likely to experience long-term sequelae associated with these conditions. Disease prevalence is higher in the homeless population, and infections are often the most common cause of morbidity and mortality in this group [3]. Some of the most common infections, such as hepatitis and tuberculosis, are a cause of significant morbidity, particularly if these conditions are untreated, or treatment is delayed or inadequate.

Strategies to Address Infectious Diseases

Similar to gender-specific cancer screening, screening for infection is an essential aspect of disease prevention, treatment, and avoidance of long-term complications. This is particularly true given the availability of new antiviral drugs, curative therapies for hepatitis, and medication protocols for HIV prevention following exposure. With widespread screening in this high-risk population, there is also an opportunity to avoid coinfection, which can complicate the clinical course and the pharmacological therapy. A European study of the cost-effectiveness of hepatitis screening of at-risk populations in London found HCV outreach intervention, the HepFriend initiative, to be not only highly cost-effective, but it was possibly cost saving. The HepFriend initiative model of care utilizes HCV outreach screening and peer support to connect vulnerable individuals to HCV treatment. The program identified 197 out 461 individuals who had a history of injectable drug use as HCV RNA positive, which illustrates the critical importance of screening in high-risk populations. Just as important, the program was able to successfully facilitate engagement with healthcare services [37].

There is evidence that suggests community and primary care-based models are effective in identifying and engaging vulnerable groups by offering healthcare services that are responsive to their needs. Many of these programs are directed at treating tuberculosis, but the model is applicable to infectious diseases such as hepatitis and HIV. In response to an increasing incidence of tuberculosis, the English Department of Health established a mobile radiography unit to actively screen for tuberculosis in at-risk populations. The goal of the mobile screening unit was not only to screen and find active cases but also to raise awareness and to support ongoing treatment. They also linked with relevant support services such as drug and alcohol programs and support programs related to housing and legal services. Mobile screening services have also been successfully piloted in the Netherlands and Zimbabwe [38].

There are a number of interventions such as mobile screening, peer support, education, and on-site care in shelters [39]. In the following section, we will review strategies, resources, and opportunities for advocacy.

Strategies, Resources, and Opportunities for Advocacy

In order to identify potential strategies to address healthcare for homeless pregnant women, it is important to first examine the numerous barriers to care in this high-risk population. Because the problems are multifactorial, the strategies to address the issues must be multifaceted (Box 6.1).

Box 6.1 Recommendations for healthcare providers. (Reprinted with permission from Health Care for Homeless Women [7])

- Identify patients within the practice who may be homeless or at risk of becoming homeless (i.e., ask about living conditions, nutrition, mental health issues, substance abuse, domestic violence).[a]
- Provide healthcare for these homeless women without bias, including preventive care, and do not withhold treatment based on concerns about lack of adherence.
- Become familiar with and inform patients who are (or at risk of becoming) homeless about appropriate community resources, including local substance abuse programs, domestic violence services, and social service agencies.
- Simplify medical regimens and address barriers, including transportation needs, for follow-up healthcare visits.
- Advocate for initiatives to address homelessness such as increased funding for housing, case management services, substance abuse treatment, mental health services, domestic violence programs, and primary and preventive care for homeless individuals.
- Volunteer to provide healthcare services at homeless shelters and other facilities that serve homeless individuals.[b]
- Increase access to long-acting reversible contraceptives.

[a] Allen et al. [45]; [b] Community Involvement and Volunteerism [46]

Although access to care is critical, even in countries that provide universal healthcare, homeless pregnant women are less likely to seek obstetrical care [2]. Even when care is available, there are multiple reasons for poor engagement with medical services, including the fear of losing custody of their infant [11].

The importance of engaging in medical care cannot be overstated. This begins with access to effective contraception, which will reduce both the risk of STIs and unintended pregnancies. Homeless women are more likely to have pregnancies that are spaced at shorter intervals. If these pregnancies occur at less than 18 months apart, there is an increased risk of prematurity [40]. Even in this vulnerable population, with limited resources, long-acting reversible contraceptive (LARC) uptake can be facilitated. In a study of homeless women Veterans with chronic health conditions, including mental health disorders and substance abuse, the LARC exposure among ever-homeless Veterans was 9.3%, compared to 5.4% among housed Veterans. In the Operation Enduring Freedom/Iraqi Freedom/New Dawn (OEF/OIF/OND) cohort, LARC uptake was even higher. LARC exposure in the OEF/OIF/OND group was 14.1% in ever-homeless Veterans compared to 8.2% in housed Veterans ($p < 0.001$) [41]. This is an example of the potential impact of an enhanced access to care environment such as the VA.

Another strategy to increase access to highly efficacious contraception is to offer it during the immediate postpartum period. The Society for Maternal-Fetal Medicine, for example, recommends that obstetric care providers discuss the availability of immediate postpartum LARC with all pregnant women during prenatal care as part of best practices [42].

In addition to increasing access to contraception, there needs to be effective strategies for the provision of obstetrical care starting early in pregnancy. Multidisciplinary teams are critical in addressing the needs of this complex population. Expansion of the roles of non-obstetrician healthcare providers can be pivotal in providing entry into care and screening. An example of the success of this approach is the Homeless Prenatal Program of San Francisco. The program has now expanded to include additional services such as housing, job training, and child care, in addition to specific prenatal healthcare. The clinic has also trained some past clients to be community healthcare workers in the program [16].

Another important tool is advocacy, particularly legislative advocacy. Local administrators and authorities often operate under rules and policies that discriminate against pregnant women experiencing homelessness. A pregnant woman who leaves her accommodations because they are unsatisfactory, or even dangerous, might not be eligible for priority housing because she voluntarily surrendered her accommodations, even if her pregnant status would have meant her eviction. This was the case in Halle v London Borough of Waltham Forest. The Supreme Court ruled in her favor stating the chain of causation linking her action of intentional homelessness had been broken by the birth of her baby [11].

The definitions of homelessness, and the criteria for eligibility for housing, create significant barriers to pregnant homeless women. If a woman is experiencing violence but is residing with her abuser, she may not identify herself as experiencing intimate partner violence and therefore would not be eligible for priority housing.

The exclusion of individuals with substance use disorders also eliminates many women, contributing to the vicious cycle of substance abuse and homelessness. Changes in legislation related to the existing definitions of homelessness and the exclusion criteria are critical for reducing housing inequities for pregnant homeless women.

Several examples and models for addressing homelessness exist across the USA. VA and Veteran Support Organizations, for example, have created supports and resources for Veterans who are homeless or have unstable housing. One program, the Supportive Services for Veteran Families (SSVF), provides rapid rehousing programs for homeless Veterans or Veterans that are at imminent risk of homelessness. In addition to housing identification, SSVF provides move-in and rent assistance as well as case management.

Advocacy by healthcare providers, and the community, is a very important component of the multipronged approach to providing needed support and resources to homeless pregnant women.

Partnerships between academic medical centers and local clinics can create resources for homeless women as well as teaching medical students to be effective advocates for the homeless. For example, in 2011 the Medical College of Wisconsin partnered with the Milwaukee Women's Center to establish the Homeless Outreach in Medical Education (HOME) Project. The center provides housing for homeless women and victims of domestic violence. Caseworkers assist in finding employment, permanent housing, counseling, and addiction services. Through the HOME Project, medical students (under faculty supervision) present educational modules on a variety of topics such as smoking and STIs. When desired and appropriate, these students accompanied women to their appointments to serve as advocates. This partnership provided a direct benefit to homeless women while also providing medical students important experiences with advocacy, patient-centered care, collaboration with community organizations, and resource identification [43]. Furthermore, participatory research approaches such as photovoice can serve to highlight women's strengths and assets, thereby promoting health and empowerment [44].

Conclusion

Women experiencing homelessness encounter a complex "web of vulnerability," [5] and pregnant women experiencing homelessness are particularly vulnerable due to limited access to appropriate care, physical health and psychosocial concerns, and systemic discrimination. However, many of the resources and strategies that benefit homeless individuals will also benefit homeless women who are pregnant. Increased access to healthcare in general will mean greater access to appropriate and sufficient gynecologic and obstetrical services as well. Legislative change and advocacy that results in more available housing for pregnant women and women with families will benefit all homeless mothers. The problems confronting homeless pregnant women are daunting, but they are not insurmountable. Many models of successful programs and strategies exist, and they can provide a roadmap for improving outcomes for women and their newborns.

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Chapter 7
Clinical Management of the Homeless Patient with Traumatic Brain Injury and Cognitive Impairment

Bruno S. Subbarao and Blessen C. Eapen

Traumatic Brain Injury

Introduction

Incidence of traumatic brain injuries (TBIs) in the homeless population has been researched globally, and lifetime prevalence has ranged anywhere from 8% to 53% [1]. In fact, lifetime prevalence of TBI in the homeless was estimated to be seven times the amount in the general population [2]. Even in a cohort of veterans in the United States, a TBI diagnosis was three times more likely to be found in a veteran suffering homelessness than one who was never homeless [3]. Interestingly, one Canadian study found that 70% of self-reported TBIs in their cohort occurred prior to homelessness [4]. This follows the findings from an older study by Herman et al. that risk factors for homelessness include childhood physical abuse, which often results in traumatic brain injuries [5]. Given that TBI can lead to or worsen mood issues and psychiatric conditions as well as cause cognitive deficits and other health consequences, one could extrapolate why homeless individuals find it so difficult to sustain work, maintain relationships, or perform regular activities of daily living. One study estimated that only 40% of those injured with a moderate to severe TBI are able to find successful employment [6]. Thus, it is essential for a discussion to

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take place between the provider and patient to screen for TBI and TBI symptomatology in order for the patient to have the appropriate education and awareness of resources to treat or manage this condition.

Definition

A traumatic brain injury (TBI) can be defined as an alteration of neurocognitive functions, either transient or permanent, due to external forces on the head and brain. Such external forces can come from blunt injury, as in hitting one's head on the ground from a fall or an assault with a blunt object, penetrating injuries from the use of weapons, or proximity to blasts, although the latter is certainly more applicable to a military setting.

Unfortunately, no single test is available to definitively diagnose a mild TBI [7]. However, there are several classification schema to help determine severity of TBI based on items such as the duration of post-traumatic amnesia, loss of consciousness, and alteration of consciousness. Additionally, imaging can be taken into consideration, whether normal or abnormal, but may be more instrumental as technological advances arise [8]. Classically, the Glasgow Coma Scale (GCS) has been used, where scores of 3–9 indicate a severe TBI, 10–12 a moderate TBI, and 13–15 a mild TBI, although debate exists as to whether or not the GCS is an accurate assessment tool given its low interrater reliability scores for inexperienced users [9]. Fluid biomarkers may be the next frontier to help diagnose and classify TBI, but more research is needed before these tests become mainstream [10].

Epidemiology

According to the Centers for Disease Control and Prevention (CDC), in the general population, there were approximately 2.5 million emergency department visits related to a TBI [11]. Unfortunately, true overall incidence of TBI is difficult to estimate, as mild cases very often go unreported, as is the case for the homeless population as well. However, prevalence of TBI in the homeless is estimated to be much higher than in the general population. In fact, a 2014 study by Svoboda and Ramsay found a prevalence 14 times higher of head injury in homeless men than in the general population of Canada and 400 times higher in those who are homeless and alcoholic [12]. In a study from Glasgow, McMillan et al. found that hospitalization secondary to a TBI was 5.4 times higher for the homeless than in the general population and carried a level of mortality more than twice that of a homeless cohort hospitalized without head injury [13]. A more recent 2017 study by Topolovec-Vranic et al. looked at a large sample (>2000) of homeless individuals in Canada in which over half reported a history of head injury with loss of consciousness (LOC). Perhaps not surprisingly, this study found that such a history of head injury with

LOC was associated with a multitude of adverse events including higher odds of current depression, alcohol and drug use disorders, and an increased use of the criminal justice system and emergency departments [14].

There is a high likelihood of TBI in the homeless population given that they have been found to present to the emergency department with greater incidences of injuries secondary to assaults, with self-inflicted injuries, and with increased odds of substance abuse and alcohol-related disorders [15]. Furthermore, a study by Fazel et al. found that individuals who had suffered a TBI were more likely to commit a violent crime, a finding in line with prior studies demonstrating a link between TBI and aggressive behaviors [16]. A more recent analysis of homeless adults by To et al. found that in their cohort, those with a history of TBI were almost twice as likely to get arrested or incarcerated during the year following their interview and three times as likely to be a victim of a physical assault [17]. Thus, optimizing care for homeless patients with TBI may have significant added downstream benefits.

Pathophysiology

The primary mechanism of injury in TBI is the initial insult itself. In a blunt injury, acceleration-deceleration forces after impact can cause the brain to hit against the intracranial structures, directly affecting the areas contacted. In some instances, the brain will bounce back, and the polar opposite region of the brain will again impact the intracranial structures. This is known as a coup-contrecoup injury [18]. Additionally, rotational forces can cause shearing injury which may stretch and tear axons within the white matter of the brain. This is known as diffuse axonal injury [19].

Secondary mechanisms are more complex and involve an inflammatory and biochemical cascade that can impair the blood-brain barrier and lead to cerebral edema. Glutamate, an excitatory neurotransmitter, is released in toxic amounts due to the mechanical disruptions of neuronal membranes [20]. At the same time, sodium-potassium pumps try to re-establish ionic balance, but may exhaust energy stores in the process [21]. This, in turn, will mean that neurons will rely on anaerobic mechanisms for glucose metabolism, increasing the production of lactic acid. If lactic acid builds in the brain, disruption of the blood-brain barrier and cerebral edema may occur [22].

Acute Management

For most individuals with a mild traumatic brain injury, recovery will occur in a short time, around 7–10 days. However, for approximately one third of individuals who suffered a concussion, post-concussive symptoms may persist well beyond the typical timeframe for recovery [23]. TBIs of all severities can result in a multitude of physical, emotional, and cognitive symptoms. Such symptoms include headaches, dizziness, memory deficits, decreased attention and concentration, impaired sleep, and increased irritability [24]. In the homeless population, persistent symptomatology may be more frequent given their predisposition to risk factors for delayed recovery such as premorbid psychiatric conditions and prior history of concussion [25]. Providing education on traumatic brain injury and the expected course of recovery is essential, as it has been shown to be associated with reduced stress and symptom burden at 3 months post-injury [26].

For those with more severe TBIs seen at the emergency department, management should always begin with basic life support assessment for circulation, airway, and breathing. Importantly, although hyperventilation is sometimes used as a means to lower intracranial pressures, hyperventilation has also been shown to increase levels of mediators of secondary brain injury [27]. In regard to circulation, hypotension is a typical concern, and the goal is to maintain normal physiologic blood pressures ideally through use of non-cross-matched packed red blood cells, as permissive hypotension does not apply for TBI management [28].

Physical examination with a neurological focus can begin afterward, with evaluation of the pupils to look for signs of increased intracranial pressure, scoring their presentation using the Glasgow Coma Scale score to help determine severity of injury, and assessing for any open wounds, penetrating objects, or any other traumatic injuries [28].

Ordering a non-contrast head CT is important for any individual with a Glasgow Coma Scale (GCS) score less than 13, who is on warfarin or has a bleeding disorder, or with a clear skull fracture. For individuals with a GCS of 13–15, the decision to order a non-contrast head CT can be made using the Canadian CT Head Rule. The rule states that if there was a head injury with one of the following, a CT scan should be ordered: GCS lower than 15 at 2 hours post-injury; suspected skull fracture; any sign of basilar skull fracture including hemotympanum, raccoon eyes, and rhinorrhea; two or more episodes of vomiting; 65 years of age or older; amnesia before impact of greater than 30 minutes; and a dangerous mechanism of injury including a fall from great heights, assaults, or being struck by a motor vehicle [29]. For those with CT findings of intracranial hemorrhage, consultation with neurosurgery is warranted.

For moderate and severe traumatic brain injuries, the American Academy of Neurology (AAN) and the Brain Trauma Foundation (BTF) recommend that seizure prophylaxis be initiated for a duration of 7 days, but not longer, even in the presence of additional risk factors [30, 31]. Seizures are characterized by the timeframe in which they occur after injury: immediate seizures occur within 24 hours, early seizures occur within 7 days, and late seizures occur any time after 7 days [32]. Prophylaxis is essential as a means of reducing secondary injury, especially as early seizures are present in 22% of moderate to severe traumatic brain injuries [33]. Post-traumatic seizures could cause cerebral metabolic crisis and edema and are associated with hippocampal atrophy [34, 35]. Current recommendations advise the use of phenytoin or levetiracetam as the prophylactic agent of choice for early seizures, but no anti-epileptic drug (AED) has demonstrated efficacy in decreasing incidence of late seizures [36].

Admission into the intensive care unit (ICU) is recommended for patients with moderate to severe traumatic brain injuries, as optimizing cerebral blood flow may help prevent secondary insult. Unfortunately, after TBI, cerebral blood flow autoregulation may be disrupted. Typical measures of cerebral perfusion pressure (CPP), a measure of cerebral blood flow, range from 60 mmHg to 160 mmHg. If CPP falls below this range, it poses a risk of ischemia and infarct. If CPP goes above 160 mmHg, concern for cerebral herniation exists [37].

Cognitive Impairment

Introduction

Cognitive impairment is almost always present, if even just transiently, after TBI, with the risk of permanent impairments increasing with severity of TBI [38]. There is a 4–40% prevalence rate of cognitive impairment in the adult homeless population, with impairments occurring earlier in life than in the general population [39]. Cognitive impairments are a risk factor for becoming homeless and may impede an individual's ability to escape homelessness by interfering with their ability to sustain employment and/or obtain or comply with rehabilitative and medical services [39, 40].

In a 2017 analysis of a cohort of homeless and vulnerably housed individuals who suffered from a TBI, MRI findings of focal neurological injury were associated with diffusely lower gray matter volumes and lower white matter integrity, findings that correlate with poorer cognitive functioning overall [41]. Cognitive impairments after a traumatic brain injury can manifest as problems in attention and concentration, executive functioning, and memory [42]. Executive functioning encompasses planning, judgment, and emotional and cognitive aspects in decision-making among other purposes. Thus, executive function is critical for successful employment, relationships, and higher order activities of daily living. Unfortunately, impairments in executive functioning are commonly seen, even after mild TBI [43]. Thankfully, the recovery curve tends to be most severe in the acute period after TBI and gradually improves over time. But this trajectory is often affected by a myriad of other conditions [44]. Depression and anxiety, higher pain scores, and poor sleep have all been associated with an increased severity of subjective cognitive impairment [45]. Thus, it is essential to take a holistic approach to management and identify and treat any potential contributing factors to optimize cognitive functioning.

Late Seizures

As mentioned earlier, late seizures are ones that occur any time after 7 days from the original TBI and carry such a high risk of recurrence that a diagnosis of post-traumatic epilepsy (PTE) is made following seizure activity in this timeframe [36].

Ongoing seizures have the potential to permanently alter brain connectivity which could lead to impaired cognitive functioning [46]. Furthermore, epilepsy has been shown to not only have a negative impact on quality of life and to impair an individual's ability to drive independently, but it also negatively affects job opportunities, mental health, and safety, all significant concerns in the homeless population [47].

It is essential to treat a first late seizure with an AED for a typical duration of 2 years for the aforementioned reasons, and referral to neurology services for management is appropriate for these individuals [48]. Importantly, a 2017 evidence review found that no pharmacological agent has evidence demonstrating efficacy in prevention or treatment of PTE in adults. However, there was limited high-level evidence for the use of levetiracetam in pediatrics [49]. It should also be noted that studies in children have found that certain AEDs can have a negative impact on cognitive effects, and selection of an AED for a homeless individual should be mindful of these side effects [50]. In order to limit cognitive impact, other nonpharmacological options can be considered, but again, they lack a large evidence base. Such options include surgical resection for the treatment of focal seizures and vagus nerve stimulation [49].

Substance Abuse

An essential lifestyle modification to consider is screening for and recommending abstinence from substance use given the elevated frequency seen in the homeless population, as well as the fact that alcohol misuse is a highly common risk factor for TBI [51]. In fact, some estimates demonstrate that up to 73% of individuals who suffered a TBI were intoxicated at the time of injury, and up to 79% of individuals with a TBI have a premorbid history of alcohol misuse [52, 53]. Certainly, substance use can impede cognitive recovery as it has been shown to lead to cerebral atrophy, mood disturbances, cognitive impairments, and an increased risk of a second TBI [54].

Addressing substance abuse is ideally accomplished through the use of substance abuse counseling and mental health clinics. Additionally, in the homeless population, one important factor in achieving abstinence may be utilizing case management services to coordinate care, as a 2013 systematic review found both improved housing outcomes and reduced substance misuse with this intervention [55].

Tobacco smoking is another substance implicated in exacerbating impairment in cognitive function, as studies demonstrate an association between depression and anxiety with tobacco use, although the direction of the association remains in question [56]. Depression, as discussed later, is highly associated with cognitive impairments. There is also an association between chronic obstructive pulmonary disease (COPD) and cognitive impairment, most likely due to the low oxygen saturation levels [57]. Given that about three quarters of the adult homeless population are tobacco or e-cigarette smokers [58], this could potentially be a primary target for treatment to improve cognitive functioning and improve health and well-being.

Depression

As alluded to earlier, psychiatric conditions, and most prominently, depression, may contribute adversely to cognition. Depression after TBI is seen at rates of up to 40% [59]. A risk factor for depressive or anxiety disorders following TBI is a prior history of psychiatric conditions [60]. Major depressive disorder (MDD) in and of itself is a highly prevalent psychiatric condition that can negatively impact cognition and psychosocial functioning [61]. Some estimates of prevalence of MDD in the homeless population reach up to 40.9% [62]. Attention and focus are frequently affected in MDD, but impaired cognition overall is part of the *Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition* (DSM-5) diagnostic criteria for major depressive episode [63].

Some pharmaceutical treatment options for MDD without TBI have shown cognitive benefits in small studies. One meta-analysis found improvement in executive functioning utilizing antidepressants for those with MDD without psychosis [64]. Another found a benefit on a composite measure of cognition with the use of vortioxetine in MDD [65]. A smaller study in patients with bipolar disorder found the use of intranasal insulin demonstrated significant improvements in executive function versus placebo unrelated to changes in mood symptoms [66].

Unfortunately, even in periods of remission, cognitive impairments have been known to persist independently of mood symptoms [67]. It is worth noting, however, that depressed individuals who were pharmacologically treated at the time of their TBI had significantly fewer clinician visits for post-traumatic symptoms than those left untreated at 3, 6, and 12 months post-injury [68]. Although lacking research with large randomized controlled trials, a 2019 meta-analysis of pharmacological treatments for depression after TBI found that pharmacological treatment options only demonstrate mild to moderate effectiveness, and the medications demonstrating the most consistent beneficial effects were sertraline, followed by methylphenidate, and citalopram [69]. Although older studies have found improvements in memory with SSRIs [70], more research is certainly needed to replicate and validate these effects in this population.

Nonpharmacological treatment options for depression can include cognitive behavioral therapy, mindfulness, and supportive psychotherapy. Unfortunately, a 2015 Cochrane review on these interventions for post-TBI depression found such low-quality evidence; thus, no recommendation for any intervention could be made from the current pool of research [71]. Still, given the complexity of TBI, a multimodal approach to treatment is often the best strategy for management, and some small studies do show promise utilizing nonpharmacological therapies. A 2011 study by Hudak et al. demonstrated neurobiological changes on morphometry including increased cortical thickness and brain activity after cognitive behavioral therapy for post-TBI depression [72]. In a 2012 study assessing mindfulness-based cognitive behavioral therapy for post-TBI depression, significant reductions in the Beck Depression Inventory-II scores as compared to the control group were seen and maintained at 3 months of follow-up [73]. Finally, a 2014 randomized controlled trial comparing cognitive behavioral therapy and supportive psychotherapy concluded that any form of psychotherapy can provide small but meaningful improvements in post-TBI depression [74].

Sleep Disorders

Sleep disorders including insomnia, sleep apnea, hypersomnia, and narcolepsy affect 46% of individuals after a TBI and can lead to significant impairments in cognitive functioning [75]. Prevalence may be even higher with moderate to severe TBIs as one prospective study demonstrated that 84% of individuals in their cohort had a sleep-wake cycle disorder (SWCD) at rehabilitation admission, and 59% 4 weeks later [76]. Importantly, poor sleep has a strong association with other conditions that may lead to impaired cognitive functioning, including depression, pain, and anxiety [77]. In a 2014 study evaluating individuals with insomnia for cognitive impairments utilizing neuropsychological testing, clinically significant deficits in attention and episodic memory, and memory of past personal experiences and events, were found [78].

In the homeless population, unsafe and uncomfortable sleeping environments, health and psychiatric conditions, stress, and pain are just a few of the conditions that could cause or exacerbate sleep issues [79]. A 2015 study found that in their cohort of sheltered homeless adults, less than half admitted to getting the recommended 7–9 hours of sleep per night [80], a challenging barrier to optimizing recovery after traumatic brain injury. Although much more research is needed to assess optimal interventions, one 2019 study found that promoting physical activity in the homeless population may benefit those with hypersomnia (10 hours of sleep or more), but, unfortunately, did not find benefit in those with inadequate sleep [81].

Another sleep condition whereby the repeated collapse of the upper airways causes apneic or hypopneic events throughout the course of sleep, obstructive sleep apnea (OSA), has demonstrated an association with depression and cognitive impairment [82]. A more recent 2017 study by Leng et al. confirmed the association between sleep-disordered breathing and increased risk in cognitive impairment, but also notably found a worsening of executive function [83]. Although no consistent effect on cognitive performance was seen with one review [84], utilizing a continuous positive airway pressure (CPAP) device has been shown to improve health-related quality of life measures that were otherwise impaired by a history of OSA [85].

In the general population, taking a thorough history of symptoms, daily and nightly routines, medical and psychiatric history, painful conditions, daytime napping, medications, alcohol or substance use, caffeine use, and computer or cell phone habits can lead to both a proper diagnosis and strategies for treatment [86]. Many questionnaires exist to help diagnose a sleep disorder, but due to their subjective nature, polysomnography, an objective, overnight sleep assessment using electroencephalography, electromyography, and electrooculography, is the diagnostic method of choice [87].

Based on their history, an initial approach to management can begin with lifestyle modifications as able. For some homeless individuals, restricting daytime naps and maintaining a consistent, nightly sleep schedule may be of benefit [88]. With a holistic approach to their healthcare, one could expect improvements in sleep quality as pain issues, psychiatric conditions, and their unsafe environment, if possible, are addressed. Still, the American Academy of Family Physicians recommends cognitive behavioral therapy for insomnia as a first-line intervention in the general population [89]. Cognitive behavioral therapy is a combined cognitive and behavioral treatment approach typically consisting of five dimensions: cognitive therapy for education and to address misconceptions of poor sleep; stimulus control for limiting overstimulating activities prior to and during time meant for sleep; sleep restriction to consolidate sleep at night; sleep hygiene to address best sleep practices of maintaining routines, good dietary habits, and a comfortable sleeping environment as able; and relaxation techniques to help reduce muscle tension and cognitive arousal prior to sleep [90].

There are many concerning factors in regard to the pharmaceutical management of insomnia. Firstly, studies are demonstrating that medication adherence is overall poor in the homeless community [91]. Secondly, major drug classes used in the treatment of insomnia are risky, especially in the context of homelessness and post-TBI care. Benzodiazepines, for example, are associated with a risk of abuse and dependence and cognitive impairments [92] and may impede neuroregeneration after TBI [93]. Z drugs, such as zolpidem and eszopiclone, have also been found to produce next-day cognitive impairments [94]. Furthermore, a 2015 population-based cohort study found an increased risk of dementia with the use of hypnotics after TBI [95]. Lastly, these individuals may already be taking medications to address mental health issues and other medical comorbidities, and there exists the potential for drug-drug interactions and side effects that may do more harm than good in this context.

Although there are many options for the treatment of insomnia using pharmaceuticals, limited evidence in the TBI population creates uncertainty as to the most appropriate selection. Two medications worth noting are exogenous melatonin and the melatonin agonist ramelteon. One recent randomized controlled trial comparing the efficacy of exogenous melatonin to placebo in patients with TBI found improved sleep quality and sleep efficiency with decreased levels of anxiety [96]. Similarly, in a pilot study of TBI patients, ramelteon not only was found to increase total sleep and provide a modest improvement in sleep latency as compared to placebo but also demonstrated improved scores with neuropsychological testing, especially in executive functioning [97].

Headaches

Post-traumatic headaches (PTH) are defined by the International Classification of Headache Disorders (ICHD) as headaches that occur within 7 days after an injury to the head or neck, or within 7 days after emerging from an unconscious state or after cessation of a medication that may mask the headache. Its phenotypic presentation often resembles a migraine-like or tension-type headache disorder [98], but can mimic any other headache phenotype, causing a significant challenge with diagnosis and treatment [99].

PTH is the most prevalent symptom after concussion and one of the most persistent as well [100]. Potentially due to the pain and discomfort, a recent review by Minen et al. found associations between depression, anxiety, cognitive impairment, and sleep issues with PTH [101]. Clinical studies have shown poor cognitive functioning, specifically in the domains of information processing speed, basic attention, executive functions, verbal and nonverbal memory, and verbal skills during migraine attacks, but data is conflicting in regard to whether these deficits are present in between attacks [102]. A 2017 study also found that increased frequency and duration of attacks are associated with worse cognitive functioning based on neuropsychological testing [103]. Thus, the treatment of headaches should not be overlooked in an effort to maximize cognitive functioning.

Current consensus guidelines for the treatment of PTH are not unique to the condition. Rather, the strategy is to first determine which primary headache phenotype it most closely resembles and use the treatments recommended for that headache type [104]. However, it is worth noting that some preliminary research comparing brain structure abnormalities under MRI for PTH and migraine found differences in brain structure, which increases the likelihood of each having a unique pathophysiology, and, ultimately, different treatment strategies [105].

Regardless, lifestyle modifications are an essential first step in management and can include limiting caffeine intake, reducing alcohol consumption, a focus on diet and exercise, optimizing sleep, and decreasing stress [106]. Beyond this, pharmaceuticals may be considered and are typically prescribed as prophylactic or abortive treatments, depending on the frequency of headaches. Unfortunately, a 2019 systematic review of pharmacological treatments for acute and preventative treatment of post-traumatic headaches found insufficient evidence to recommend any pharmacological agent in the treatment of PTH [107].

Alternative options for treatment can include cognitive behavioral therapy, acupuncture, biofeedback, and physical therapy. These too have a very limited evidence base in regard to efficacy for treating PTH, but could be beneficial for those suffering with common comorbidities of mood issues, sleep difficulties, and/or musculoskeletal pain, for example, and to additionally lessen an individual's reliance on pharmaceuticals which can carry a host of side effects [108].

Treatment of Cognitive Impairment

In order to receive an in-depth analysis into deficits involving executive functioning or any other cognitive domain, neuropsychological testing is recommended where available. In addition to identifying areas of impairment, neuropsychological testing can also aid in prognosis, guide rehabilitation strategies, and evaluate for interval changes once management begins [109].

After identifying areas of impairment with neuropsychological testing, the next step to consider is cognitive rehabilitation, typically provided by speech and language pathologists (SLP) or occupational therapists (OT). Cognitive rehabilitation is typically an individually tailored program to improve cognitive impairments by utilizing both restorative and compensatory strategies [110]. A cognitive rehabilitation provider will again assess cognitive skills, but this time in a more practical sense, meaning assessment of an individual's ability to function in a community setting, to perform activities of daily living, and to successfully perform work and leisure activities [111].

From a 2019 systematic review on the efficacy of evidence-based cognitive rehabilitation, the Cognitive Rehabilitation Task Force (CRTF) has found evidence to support its use for treatment of attention deficits, mild memory deficits, social communication deficits, and executive functioning deficits and to reduce cognitive and functional disability after a TBI [112]. Taking a holistic approach, it is also important to note that cognitive rehabilitation for those suffering from mood disorders, although unrelated to TBI, found moderate-large effects for attention, working memory, and global functioning and demonstrated improvements in brain activity by functional neuroimaging [113, 114].

Cognitive rehabilitation has an added benefit in that it may lessen the need for pharmaceutical agents to treat cognitive impairment in the homeless population, especially since some stimulant medication options have abuse potential [115]. Furthermore, a 2015 Cochrane review on potential pharmacotherapeutic agents to treat chronic cognitive impairment in TBI found insufficient evidence to determine if any particular agent is effective in that role [116]. Still, methylphenidate is one medication that has shown benefits in improving attention and concentration after TBI [117], but again, consideration of potential side effects, drug-drug interactions, and monitoring for abuse is warranted.

Interestingly, a study in 2006 by Caplan et al. found that improvements in housing also improved executive functioning in individuals [118]. This is certainly an ideal intervention if possible, as several Housing First studies on homeless individuals who were provided independent living accommodations have demonstrated increased housing retention, improved quality of life, and reduced rates of reoffending such that they concluded that providing housing should precede any other medical interventions in this population, especially for those with severe mental illnesses [119].

Summary

Traumatic brain injuries are believed to be common in the homeless and in vulnerably housed individuals. Unfortunately, traumatic brain injuries are associated with cognitive impairments. Though with mild TBIs, expectations are of a full, swift recovery, a small percentage of them, along with moderate and severe TBIs, can have persistent cognitive deficits. Understanding that cognitive function is highly correlated with employment status and the ability to retain work [120, 121], the importance of proper treatment and management of TBI and cognitive impairment cannot be overstated in this population. A holistic approach works best, keeping in mind that many factors can negatively affect cognition including substance abuse, pain, psychiatric conditions, and poor sleep. In choosing the appropriate treatment methods for these individuals, rehabilitation strategies and psychotherapies may be favored, as barriers to treatment with medications for the homeless often include a lack of access to primary care physicians, costs of medications, and theft [122]. In addition, nonadherence to medication prescriptions is common and increased when it comes to younger individuals, those with harmful drinking patterns, and those without a primary care physician [123]. Ultimately, having an awareness of TBI and the potential complications associated with the condition is an excellent starting point, as TBIs can vary widely in presentation, necessitating an open mind, a flexible approach, and a tailored management for each unique patient.

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Chapter 8
I'm Old and on the Street: How Did this Happen and Now What Do I Do?

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Introduction

Today's older adult population is very different in several ways than previous generations [1]. First, the number of seniors (due to the aging of the baby boomers, born between 1946 and 1964) is staggering. During the next 40 years, adults aged 65 years and older in the United States alone are projected to nearly double to 95 million persons. At the same time, this group is becoming more racially and ethnically diverse, such that the proportion of Caucasian non-Latino population will drop from the current 77–55% in the same time frame. When compared with previous cohorts of seniors, this group is more educated, remains in the labor force beyond age 65 in larger numbers, and is living longer. They are also less likely to be poor, with the overall poverty rate for American elderly currently at 9% (vs. 30% in 1966). However, economic disparities exist such that 17% of Latinos and 19% of African American seniors live in poverty. Beyond these changes, when older adults retire, income becomes fixed, but expenses continue to rise, with housing and healthcare expenses among the more rapidly rising. Geriatric syndromes, such as falls, urinary incontinence, and functional impairment, on average occur at age 75 and older, and are strongly associated with poorer health outcomes, including institutionalization and mortality [2]. While most elderly men live with a spouse who can assist if functional abilities decline, most elderly women live alone [3].

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The older homeless population in many ways reflects that of the general population and is aging, however, at a more rapid rate than that seen in the general population. Recent studies that have looked at aging trends among homeless in six North American cities found that one in three homeless is aged 50 years and older [4] and the median age of US homeless is nearing 50 years [5]. Baby boomers appear to have experienced higher rates of homelessness in their lives than previous cohorts. Older homeless adults are also more likely to have poorer health, be further away from social supports, experience longer duration of homelessness, and lack a career area [6]. Studies also suggest that homeless adults have significantly higher mortality rates at younger ages than housed counterparts. On average, the life span of a homeless individual is cut by 17.5 years [7]. For homeless males, the average age of death is 56 years, and for women, it is 52. Mortality patterns also vary on sheltered vs. unsheltered status. A recent 10-year cohort study found that unsheltered homeless adults had an all-cause mortality rate three times higher than homeless who mainly sleep in shelters and nearly ten times higher than that of the general adult population of Massachusetts [8]. The causes of death in older homeless are similar to those in the general population such as cardiovascular disease and cancer [9]. Compared to younger homeless, older persons are more likely to have chronic diseases, geriatric syndromes, frailty, and end-of-life concerns and appear to age at an accelerated rate [10]. Homeless in their 50s exhibit proportions of chronic diseases similar to housed adults but who are 15 years older [10–12].

How Homelessness Occurs Among Seniors: Chronic Recurrent Versus Onset In Later Life

Homeless older adults are heterogenous, and the pathways to homelessness are multifactorial as they are for younger individuals. These factors may include deinstitutionalization, poverty, and the lack of affordable housing [13]. Evictions, death of a spouse or significant other, loss of income, family dysfunction, and gradual loss of social supports are additional triggering events for homelessness among seniors. Elderly homeless are more likely to have the added vulnerabilities of co-occurring chronic medical illness, sensory deficits, cognitive impairment, and longer chronicity of homelessness.

In a population-based sampling study in Oakland, CA, 350 homeless adults aged 50 and older (median age 58 years) were recruited and underwent enrollment interviews for a prospective cohort study [14, 15]. The authors found that older homeless adults who first became homeless before age 50 (57% of sample) had more adverse life experiences such as mental health and substance use problems, or imprisonment, and lower achievement of milestones such as marriage or full-time employment, compared to persons with later onset of homelessness (43% of sample) [15].

In the same study, individuals whose first homelessness occurred before age 50, compared to those whose first homelessness occurred after age 50, had lower educational attainment (31% less than high school/GED vs. 18%) and a longer duration of lifetime homelessness (4.2 years vs. 2.0 years) [15]. *During childhood*, individuals with early onset homelessness (onset < age 50) versus late onset homelessness (onset > age 50) had higher juvenile incarceration rates (28% vs. 16%), higher rates of childhood abuse or neglect (67% vs. 55%), more chronic illness diagnosed in childhood (13% versus 3%), and higher childhood drug use problems (48% vs. 32%).

Life course experiences in the same study were also different in *young adulthood* (age 18–25 years) with individuals with early onset (< age 50) versus late onset (> age 50) of homelessness. Higher prevalence of imprisonment during young adulthood (59% vs. 43%) and higher prevalence of mental health problems (25% versus 15%), alcohol use problems (48% vs. 30%), and drug use problems (70% versus 54%) were found respectively in the early onset (< age 50) and late onset (> age 50) homelessness groups.

In middle adulthood (26–49 years), persons with first homelessness before age 50 had higher prevalence of underemployment (54% vs. 29%), traumatic brain injury (22% vs. 9%), and drug use problems (75% vs. 59%). Given the differing life course experiences and current vulnerabilities of older homeless individuals, prevention and intervention strategies should be adapted to address the different needs of homeless individuals.

Dimensions of Homelessness Among Older Adults

Social Dimensions of Homelessness

There are a variety of social determinants associated with homelessness. They are typically grouped into three categories: predisposing vulnerabilities (poverty, social isolation), structural factors (lack of affordable housing), and lack of a safety net (lack of income, health insurance) [16]. These factors can determine the duration, frequency, and type of homelessness that may be experienced.

Definitions and Types of Homelessness: One of the challenges in studying homelessness is that the definition and classifications of who is homeless vary widely. An individual can experience chronic homelessness, short-term homelessness, or episodic homelessness, and during those periods, the individual can be sheltered or unsheltered. Chronic homelessness typically refers to individuals who have had repeated or continuous experiences of homelessness for 12 months or longer. Individuals who experience chronic homelessness tend to have physical disabilities and/or mental health disorders that interfere with the person's ability to obtain/sustain gainful employment or engage with society [17]. Episodic homelessness refers to an individual or family who falls in and out of homelessness [18]. Episodic homelessness most often occurs in relation to mental illness or addiction [18]. Short-term homelessness occurs when a person is forced into homelessness due to a life event. Life events such as loss of occupation, death of the sole income earner in the family, domestic violence, and displacement due to a natural disaster are all causes of short-term homelessness. In January of 2018 alone, 3900 people who stayed in shelters in the United States were reported homeless as a result of a natural disaster [17]. When an individual or family becomes homeless, they initially may reach out to friends, family, or community housing in an effort to obtain shelter. Sheltered homeless individuals are classified as individuals who are staying at a friend or family member's house, in an abandoned building, in community shelter, or in a tent. Unsheltered homeless are classified as individuals who sleep outside or on the sidewalk. According to the *2018 Annual Homeless Assessment Report to Congress*, on a single night, roughly 553,000 people were experiencing homelessness in the United States [17]. Of that 553,000, roughly 359,450 were sheltered with the remaining 193,550 unsheltered.

Predisposing Vulnerabilities: Poverty and Social Isolation

The rates of elderly homeless individuals in the United States are increasing, and poverty and economic vulnerability are significant contributors. It is projected that homelessness among seniors older than 65 will more than double by 2050 to 93,000 [19]. In 2018, 9.2% (4.7 million) of individuals aged 65 and older were living at or below the federal poverty level [20]. A larger number of elderly are economically vulnerable, with 45% having incomes below 200% of the poverty threshold [21]. Economic contributors to this high level of poverty include stagnant wages that make it difficult for low- and even middle-income people to save for retirement, decline in pensions with ever greater reliance on Social Security and SSI, and the need to use a larger proportion of income for housing and healthcare, making it difficult to have funds available for emergencies or financial crisis, like the recent recession [22]. More than 28% of Americans aged 50–64 have no retirement savings at all. The recent recession significantly impacted this group of older adults in that many lost equity in their homes, or lost their homes. They also were the group more likely to have lost their jobs and who experienced difficulty in finding new employment. This resulted in using savings and/or initiating retirement benefits early, causing a lower payment. Homelessness is recognized as a social determinant of health that is associated with poorer outcomes for several reasons. Being homeless leads to poor nutrition, exposure to infectious diseases, exposure to the elements and adverse living conditions, high rates of injuries, lack of social supports, poor access to healthcare, and reduced adherence to medications [23]. Homeless older adults may be particularly affected by social isolation. A survey done of Social Security recipients aged 55 and up found that half of the test group was living alone prior to losing their homes [24]. Isolation can also have adverse effects on the elderly individual's cognitive and mental state as well. Social supports can improve healthcare outcomes [25]. In women at risk for heart disease, social support contributed to lower atherosclerosis levels [26]. Social supports may be particularly protective for minority populations [27].

Structural Factor: Lack of Affordable Housing

Although more than four million seniors are at the poverty level, 60% receive no rental subsidy from the government. This group is overrepresented among recipients of the Section 8 housing voucher program, accounting for nearly half of all such voucher distribution. According to the US Census Bureau, the average monthly mortgage payment for a US homeowner is $1030 [28]. Added housing costs include property taxes, homeowners or coop fees, all of which are in addition to the mortgage payment and typically increase annually. Median national monthly rent for a one-bedroom apartment is $960 [29], but often increases annually. Currently, however, in the United States, the highest Supplemental Security Income (SSI) rate is $771 per month for an individual and $1157 for a couple [30]. Retired workers have an average Social Security monthly benefit of $1411 [31]. Elderly individuals living at the federal poverty level are thus often forced to choose between basic necessities such as food, housing (and associated costs), and clothing and costs of medications and medical and mental healthcare visits. Even when seniors own their own homes, as property values increase, associated property taxes, insurance, and rising costs of utilities can price them out of their homes. These data all point to the significant and growing demand for affordable housing units for seniors.

Lack of a Safety Net

Elderly homeless individuals are often unable to qualify for state and federal economic safety net programs. For example, to qualify for full Social Security retirement benefits, an individual must have 40 Social Security credits and be at least 65 years of age. Social Security credits are earned through paying Social Security taxes. In 2019, $1360 in gross earnings equals one credit, and an individual can earn up to four credits annually (Social Security Administration 2019). A person may begin to receive SSR payments at age 62; however, the amount will be reduced. While more research is needed, estimates indicate that only about 25% of homeless are able to maintain gainful employment [32], such that the majority of homeless would not qualify for SS retirement. In addition, the accelerated physiologic aging associated with homelessness indicates that many of these individuals develop disabling medical conditions up to 15 years younger than they would be able to qualify for SS retirement. Therefore, chronically homeless individuals may not have worked long enough, or be old enough to qualify for SS retirement benefits. To qualify for Social Security Disability Insurance (SSDI), the individual must be out of work or expected to be out of work for one full year, have a medical condition so severe that the Social Security Administration includes it in the list of impairments determined to be disabling, be unable to perform the work done before due to the medical condition, be unable to perform other work, and be younger than 65. If the person is working and gross earnings are more than $1040/month, he/she will not qualify for SSDI. Here again, many chronically homeless elderly will not qualify for SSDI. The qualifications to receive Supplemental Security Income (SSI) are similar in that the individual must be 65 years of age, or be blind or disabled, and/or living below the poverty line.

Similarly, these government programs have associated government-sponsored health insurance (Medicare or Medicaid). Being elderly and homeless can cause a variety of major health concerns including sexually transmitted diseases, malnutrition, skin disorders, infectious diseases, dental and periodontal disease, degenerative joint diseases, and physical injuries from physical and sexual assault [33]. Elderly individuals who are homeless or in poverty may also be hesitant to seek out medical assistance for injuries or health concerns because they do not have the financial means to pay for the visit, or afford treatment, rehab, or medications. The average annual out-of-pocket healthcare cost for older adults was $4734, three times higher than younger households [34]. Avoidance of accessing healthcare leads to more advanced disease, which ultimately leads to higher healthcare costs, higher morbidity, and higher mortality in this group.

Physical Dimensions of Homelessness

Researchers have argued that because chronically homeless persons develop chronic and age-related diseases at younger ages, they should be eligible to receive services directed to older adults at age 50 rather than age 65. A study of homeless veterans found that on average, this group is admitted for medical and surgical conditions 10–15 years earlier than housed veterans [35]. In a civilian population, homeless individuals had higher rates of geriatric syndromes (functional impairments, falls, and urinary incontinence) than a comparison group that was 20 years older [10]. Compared with the general population, homeless persons are more likely to smoke, and although having similar rates of hypertension and diabetes, these illnesses are more likely to be poorly controlled [36]. Older homeless persons, as well as homeless women and transgender persons, are more likely to be victimized [37]. Homeless persons demonstrate significantly higher levels of emergency department visits and/or acute hospital admissions. When admitted, they tend to have longer lengths of stay. The most common reasons for emergency room and hospital visits include falls, hypothermia, frostbite, burns, poisoning (illicit substances or medications), assaults, traumatic brain injuries, and suicide [23].

Sensory impairments are also more common among older homeless adults. Approximately 17% of those 65 and older report visual problems [38], and one in three reports hearing loss (NIDCD). Visual problems were reported by 45% of homeless elderly and hearing loss reported by nearly 36% [12]. Sensory impairments make it difficult to follow written and verbal medical instructions, heed alarms and warnings, and increase social isolation. Homeless seniors have very limited access to eyeglasses or hearing aids. In the Brown study, of the 126 homeless subjects who reported hearing loss, only three had hearing aids. While there are community programs that provide glasses, they require a prescription from a medical professional.

Among a nationally representative community sample in the United States, the prevalence of dementia among those aged 71–79 is 5% and increased with age, such that the rate for the entire sample older than 71 was 13.9% [39]. Little is known about cognitive impairment and homeless in the United States. One recent study found that among 350 homeless seniors, nearly 26% had cognitive impairment [12]. It is important to bear in mind that not only was this rate higher than that seen in community samples, but also the average age of participants in this study was 58 years. Cognitive impairment is thus more commonly found in the homeless population and at much younger ages than seen in housed in samples.

Psychological Dimensions of Homelessness

Psychological, as well as physical, social, and existential symptoms in older (>age 50) homeless adults were evaluated in an 18-month observational study [40] in Oakland, CA, in 2013–2014 in which 283 participants completed symptom interviews [41]. Most individuals in the sample were men and African American with a median age of 59 years (range 51–82). Over half of the individuals had experienced childhood abuse (physical, psychological, verbal, or sexual abuse), and almost half had experienced recent abuse. Over a third used cannabis regularly. Over half (58%) of the cohort experienced psychological symptoms. High prevalence of moderate to severe depression (47%), post-traumatic stress disorder (21%), loneliness (40%), feelings of anxiety (36%), and regret (27%) were found in this cohort. The rates of other psychological symptoms measured in the study included hallucinations (10%), violent impulses (9%), and suicidal thoughts (5%) [40].

In a separate analysis using the same longitudinal study cohort [40], it was found that homeless adults in their 50s and 60s have a similar prevalence of geriatric conditions, including cognitive impairment and functional decline, as adults in the 70s and 80s in the general population. Twenty-six percent of study participants, for example, were found to have cognitive impairment. The authors also found using a multivariate analysis that moderate-high physical symptom burden in this homeless group was associated with psychological issues including history of childhood abuse, cannabis use, anxiety, hallucinations, and loneliness [41].

The HOPE HOME study data were separately analyzed regarding childhood adversities and their association with mental health outcomes among older homeless adults [42]. Childhood adversities ($n = 7$) were defined as physical neglect, verbal abuse, physical abuse, sexual abuse, parental death, parental incarceration, and child welfare system placement. Participants in the study with one childhood adversity had elevated odds of reporting (1) moderate to severe depressive symptoms and (2) lifetime history of suicide attempt compared to those without history of childhood adversity. The odds for both outcomes further increased with additional history of childhood adversity exposure. Participants in the study with a history of four or more childhood adversities had higher odds of lifetime history of psychiatric hospitalization. Among adversities reported, childhood physical abuse was higher in the sample (33%) than in the general population (15%). Also, a high prevalence of parental death occurring during participants' childhood (21.4%) when compared to the general population (0.3%) was found. In the overall HOPE HOME sample, 13% reported a lifetime history of suicide attempt, and 19% reported a lifetime history of psychiatric hospitalization.

There is also a significant relationship between history of incarceration and homelessness and mental health outcomes among older individuals. In the HOPE HOME study cited above, older homeless individuals had history of substantial rates of incarceration as youth and young adults [40]. In another study, older pre-release prisoners (e.g., on parole) were at risk for post-release homelessness regardless of veteran status [43]. Another study has shown that among US veterans transitioning from prison to community in later life have higher rates of homelessness and are at considerable risk of attempting suicide and dying by drug overdose or other accidental injury compared to those never-incarcerated [44]. In a 6-month emergency department longitudinal study evaluating older adults initially assessed while incarcerated, and then at subsequent self-reported emergency room visits, 54% reported recent homelessness, 44% reported serious mental illness, and 69% reported substance use disorders [45].

In summary, there are many psychological dimensions of homelessness in older adults which present treatment challenges. For example, the importance of assessing and treating anxiety in older homeless-experienced adults, which is bidirectionally linked with physical illnesses, has been emphasized [41]. Furthermore, the same authors advise that shelter and housing interventions should address loneliness, a significant source of distress and contributor to clinical symptoms, by encouraging a sense of community with targeted group activities. Finally, the authors suggest that a home-based primary and palliative care (HBPC) program may serve as a good model of a healthcare delivery system that could be adapted to provide comprehensive services in places where currently and formerly homeless people live.

Treatment Implications: Geriatric-Specific Models of Housing and Care

The Department of Housing and Urban Development administers the Continuum of Care homeless assistance system which is designed to address the issue of homelessness with some programs targeting seniors. Table 8.1 describes the fundamental components that should be addressed through a Continuum of Care [46]. In 2019, the program awarded $130 million to over 300 community housing authorities to provide rapid housing and transitional services to homeless individuals [47]. The remainder of this section will focus on components with specialized geriatric components. (Table 8.1).

Table 8.1 Fundamental components of a seamless and coordinated homeless continuum of care

Component	Description	Examples
Prevention*	Stabilization services and/or urgent/emergent short-term financial assistance	Landlord-tenant mediation; one-time rental or utility financial assistance; financial counseling
Outreach and assessment	Identify and address immediate needs of homeless	Provision of blankets/clothing/shoes, mobile healthcare teams
Emergency shelter	Safe, secure temporary residence that often serve as point of entry into homeless system	Drop-in day centers that provide food and showers, congregate buildings for overnight stays, hotel/motel vouchers, soup kitchens
Transitional housing	Interim placement for up to 24 months to enable obtaining personal and financial stability	Community housing programs that include recovery services, life and job skills training, housing search and placement services, on-site mental health and substance abuse counseling, benefits assistance
Permanent supportive housing	Combines subsidized housing assistance and ongoing permanent supportive services for persons with chronic medical and mental illnesses, and some focus on seniors	Tenant-based rental assistance
Permanent affordable housing	Long-term, safe, adequate affordable housing	Housing vouchers; urban redevelopment

* Target population are those at risk for homelessness

Emergency Shelter: Homeless individuals who are mentally ill and/or disabled or elderly require specialty housing arrangements. Many housing agencies and shelters do not accept individuals with a prior history of behavioral or cognitive issues, especially if there are incidents of aggressive or violent behaviors. Even when shelters do accept the individual, they often do not have needed specialty services. Shelter halls and doorways may be unable to accommodate wheelchairs and walkers. Some housing agencies may be concerned about possible liability for a behavioral incident or if a death occurs from illness or as a consequence of a fall. Most shelters close during daytime hours, thus requiring the older adult to find alternate locations to spend the day. Frequently used locations include shopping malls, museums, and libraries and, when weather permits, parks.

The Homeless Shelter Directory [48] provides information regarding such resources as location of local shelters and soup kitchens, rent assistance programs, free dental care, free cellphones, HIV testing, free hair care and personal hygiene products, and Section 8 subsidized housing information. This and other resources can identify those shelters with support services that focus on the needs of seniors. Shelters are thus an emergency option, particularly during times of severe weather (hurricanes, hypothermia, wildfires, heat waves, etc.) but should not be thought of as the permanent solution, or best option, particularly for older adults.

Permanent Supportive and Affordable Housing: Permanent supportive housing that provides on-site wraparound services including medical, psychiatric, case management, vocational assistance, and substance abuse treatment is recognized as a national strategy for ending homelessness including seniors [40]. HUD administers the section 202 Supportive Housing for the Elderly Program which provides financial advances to private nonprofit organizations for construction and renovation of existing structures to serve as supportive housing for very low-income seniors, providing rental subsidies to make them affordable. Seniors aged 62 and over who can live independently apply for and, if eligible, receive a housing voucher. The voucher will cover part of the rent, but the senior will be responsible for paying up to 30% of their household income (pension, SS retirement, etc.) toward housing costs. The voucher does not cover utilities and can only be used at HUD-approved housing units. There are often waiting lists to get a voucher. While offered support services vary by location, typical services can include daily congregate meals, cleaning, case management, and transportation. Information regarding support services by state are available online [49]. In some states, resources can include financial assistance with utilities, food pantries, health clinics and prescriptions, and debt/mortgage assistance. Supportive Housing has a significant positive impact on outcomes. Ninety-two percent of formerly homeless seniors in Seattle's Housing Health Outreach Team remained housed 1 year after engagement, and more than half had established a primary care provider [50]. Similarly, 83% of formerly homeless seniors residing in the Woodstock Hotel had an identified primary care provider, and more than 97% remained in stable housing over a 3-year period [50]. Communities which have declared an end to functional homelessness, particularly among veterans, have credited permanent supportive housing [51]. Despite these reports, the National Academies of Sciences, Engineering, and Medicine have called for the Departments of Health and Human Services and HUD to convene subject matter experts to examine research and policy on the permanent supportive housing model to expand the database on the healthcare outcomes.

Long-Term Care

Older homeless adults living in shelters have high rates of geriatric conditions, which may increase their risk for acute care use and nursing home placement. This is a currently unrecognized gap in the continuum of care services needed by homeless and is not included as a fundamental component. With the aging of the homeless population, it is likely that long-term care will eventually be added. The prevalence of geriatric conditions among older homeless adults was higher than that seen in housed adults 20 years older [12]. In a large retrospective cohort study of Medicaid-only older adults and persons with disabilities in California, 18% of new users of support services entered skilled nursing facilities versus home- and community-based services [52]. In homeless, status was associated with a four times greater likelihood of admission to a skilled nursing facility.

A large Veterans Health Administration study was conducted to examine the specific nursing home care needs for previously homeless veterans [53]. The records of all veterans (*N* = 114,013) admitted to VA nursing homes nationally between 2010 and 2016 were evaluated. Previously homeless veteran nursing home users were found to have substantially different needs than those who had been stably housed prior to nursing home admission. Previously homeless veterans, compared to the stably housed veterans, were more likely to have substance use disorders, mental health diagnoses, dementia, and trimorbidity (co-occurring substance abuse, mental illness, and chronic physical illness). Veterans who were homeless at nursing home admission were also younger, unmarried, member of a minority group, and less likely to have used VHA-provided community-based long-term care services and supports. As noted in other studies with non-veteran elderly homeless, they were also more likely to experience geriatric conditions significantly earlier in their life and to have complex medical and social needs. These findings make it clear that even when older homeless are admitted to long-term care, because of the complexity and chronicity of their needs, they will present unique challenges.

A result of these challenges is a phenomenon known as "hospital dumping," in which a nursing home resident is sent to a local hospital for a medical or mental health condition and then the nursing home refuses to accept the patient back. Based on known vulnerabilities and comorbidities, previously homeless nursing home residents are more likely to be "dumped." The causes are many, but the two most frequently cited are behavioral problems (including threats and assaults) and costs of caring for the person exceed the Medicaid daily rate [54]. This is the nursing home counterpart of eviction. Long-term care ombudsman offices exist in each state and receive requests to mediate when these types of evictions occur. In fact, in 2017, improper eviction or inadequate discharge/planning was the most common complain handled by ombudsman programs. While filing a grievance with the long-term care ombudsman is possible, there are no significant consequences, and more often than not, a different nursing home will have to be found [55].

End-of-Life Care: Advanced Care Planning

Homeless people who have been given a terminal prognosis of 6 months or less to live would benefit from and desire to receive hospice care should it apply for Medicaid and Medicare. For those homeless persons who qualify, the vast majority of hospice expenses are covered. A significant challenge in providing these services, however, is that hospice providers may not have an address, or location, to send nurses, social workers, or chaplains for regular visits. Even when there is a known location, staff may not able to visit the person. For example, a homeless patient who lives in a tent in a wooded area and is adamant about saying in his/her tent may not be able to receive care as the area may be deemed unsafe for the clinical workers to conduct their assessments and administer the patient's medications.

This could lead to the person being referred for admission to a skilled nursing facility or hospice unit, if the person can be convinced. Similar challenges to those described for skilled nursing admissions would also apply in this case, with the added challenge that the person has a terminal illness. Prior history of aggressive behavior, substance abuse issues, or criminal record (especially arson and sexual crimes) serves to significantly reduce the facilities willing to accept the person. An additional challenge is the completion of an advanced directive. Many homeless seniors are estranged from their relatives and close friends. It is thus difficult to designate a healthcare surrogate or proxy in the event the person becomes incapacitated. Some hospice providers will offer to assign a social worker to serve as the proxy. Another consideration to address is the disposition of the person's belongings, including pets.

Pilot programs to better serve homeless persons at end of life have started to emerge [56]. In Seattle, a mobile team evaluates care needs and establishes a care plan with the homeless person. In Chicago, Northwestern Hospital contracts with a local respite program to provide short-term housing post-inpatient stays to enable the homeless person to recover. In Los Angeles, a similar partnership has been established with local motels to reduce inpatient lengths of stay and more costly acute inpatient care while at the same time providing a safe hygienic location where homeless can receive palliative services and recover from procedures. The Health Care for the Homeless Clinicians' Network has published recommendations for end-of-life care for homeless persons. [57], which include worksheet to assist homeless persons identify their particular wishes, values, advanced directives and advance care planning, options for care and choices at end of life, and a sample will.

Conclusion

Homelessness among older adults is a complex multifactorial societal concern. Access to needed resources and service is challenging for several reasons. The longer an adult has been homeless, the lower the likelihood of obtaining and sustaining permanent housing. Long-term care is a particular challenge and ideally will include teams with expertise in behavioral interventions, enhanced communication, and a focus on harm reduction. Pilot programs are being developed to find alternate locations to provide subacute and respite services, as well as palliative and hospice care. Permanent supportive housing is the best strategy to address the social, medical, and mental health comorbidities that are found among older homeless. Guidelines for assisting homeless seniors with advanced care planning and end-of-life decision-making are available for clinicians who work with homeless seniors. In the end, the most important idea to keep in mind is these individuals have led complicated, and often highly stressful, lives and may be looking to you, the clinician, to help them find themselves, their goals, and their preferences.

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Chapter 9
Hospital Discharge Challenges of the Homeless Patient

Ira Y. Rabin and Kathleen B. Savoy

Introduction

In 2009, roughly 1.5 million individual (1/200) Americans experienced homelessness during the year.

From the perspective of our hospital which is in D.C. and sees many patients from Maryland, in 2018:

- The state of Maryland alone had 7144 people experiencing homelessness on any given day and more than 1400 people experiencing chronic homelessness [1].
- Washington, D.C., saw 6900 experiencing homelessness on any given day and almost 1800 people chronically homeless [1].
- Overall, 550,000 people experienced homelessness on any given night in 2018 (17/10,000 people in the United States) [2].

Homelessness has a significant impact on hospitals and the course of a hospitalization as these individuals have a higher need for acute care services and often have longer and more expensive hospital stays [3]. Since these individuals are more likely than others to be uninsured or underinsured, these extended lengths of stay are often not paid in full, if at all, leaving hospitals with significant financial risk. This potentially impacts other patients as precious beds needed are utilized by patients with extended stays due to homelessness and other social challenges rather than for medical necessity.

In addition, homeless people experience poor access to healthcare, which can lead to delays in diagnosis and presentation of disease states in more acute and dire

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circumstances. This is a key contributor to the disparities in life expectancy between homeless individuals and the general population. In 2019, it was noted that homeless people live approximately 12 years less than the general population [4].

Homelessness is also tied to increased utilization of the emergency department. As many of these individuals do not have established physicians or insurance, the emergency department becomes the only option for these patients since they are open 24/7 every day, and by law, Emergency Medical Treatment and Active Labor Act (EMTALA) cannot turn anyone away from seeking care.

As mentioned above, they often present with advanced presentation of diseases because of delays in seeking care, resulting in higher rates of hospitalization and 30-day readmissions when compared to the general public. In one study, homeless patients were more likely to be admitted to the hospital and when admitted, stayed an average of 1 day longer than non-homeless patients [5]. Hospital costs have also been found to be higher for homeless patients [6]. The full extent of these problems is not well understood as many studies are primarily of single cities or single types of unmet needs [7].

Specific Issues for Discharging the Homeless

It is now time to explore the specific and unique challenges to discharging homeless patients from the hospital setting, with the focus on barriers not associated with the general public. The typical patient returning to a normal home environment is usually given medication prescriptions (or actual medications); instructions for diet; certain activities to undertake or abstain from; instructions for follow-up appointments; management of any ongoing symptoms, wounds, or bandages; as well possible durable medical equipment (walkers, commodes, medical devices).

In addition, the patient may receive a visit from a visiting nurse or aide, and nowadays, most patients receive either a follow-up phone call, email, or text within a day or two after being discharged to check on their condition and any potential issues with transitioning back to the outpatient setting. Furthermore, the hospital, in most cases, communicates with the patient's primary care doctor and/or other providers about the hospitalization often by faxing or emailing a copy of the discharge summary.

All of these vital elements that help ensure a safe discharge are extremely challenging with a homeless patient [8]. There are several characteristics of homeless people that affect the provision of treatment and the planning of healthcare services. Due to living circumstances, it can be challenging to develop and maintain a treatment plan. Homeless individuals are commonly discharged from hospital to locations that do not support recovery or access to follow-up care (e.g., shelters or the street). For example, how can one do certain exercises or other activities with no home or place do them? It is also nearly impossible to store medications when one has no bathroom or cabinets.

This assumes that the patient can afford or has insurance coverage for medication in the first place. For many homeless patients, medications often compete with food, or maybe shelter for one night, as they often can only choose one [9]. As many medications are chronic, even if the patient had insurance or could otherwise cover the cost of the medication, without transportation to routinely pick up medications, compliance becomes quite difficult. In fact 60% of homeless patients discharged reported no plan for transportation [3] and that 50% of the time, no one from the hospital staff even inquired about their transportation needs [3]. Many medications also have significant side effect profiles that necessitate proximity to bathroom or a bed [9].

Most durable medical equipment suppliers will only deliver to a patient's home, so obtaining these vital devices is simply impossible for the patient living on the street. Adhering to a specific diet is unfeasible for someone without a fridge, pantry, or money, who often relies on handouts or what is found in trash cans and dumpsters for sustenance. Poor nutrition is very common among the homeless and malnutrition can exacerbate chronic health issues [10].

Since many homeless do not have established relationships with physicians, follow-up appointments are usually made with clinics (if at all) and not with a specific physician. Patients are less likely to be compliant when given general instructions to follow up with a clinic as opposed to an actual provider.

Free clinics, where providers likely do not have a prior relationship or will have a future longitudinal relationship with the patient, are more likely to address only simple and low-acuity problems instead of major diseases that affect homeless patients, like tuberculosis, HIV, Chronic Obstructive Pulmonary Disease (COPD), and hepatitis C [11]. Communicating details of the hospitalization is that much more difficult when the discharging physician has no idea where to send a discharge summary. This lack of communication and continuity of care contributes to further utilization of the ED and readmission to the hospital [12].

Management of wounds and bandages is very difficult on the street. Without access to clean water and supplies, this aspect of care is almost impossible for many homeless patients. Moreover, the street is simply not a place that is conducive for proper convalescence. In situations where patients are at the mercy of the elements day and night, likely not sleeping well and not maintaining proper hygiene, many medical conditions that necessitated the index admission simply get worse, or new conditions are at risk of developing.

This discussion surrounds just the patient who is being discharged "home." Many hospitalized go to rehabilitation facilities until they have strengthened whatever physical deficits may be present or completed a course of treatment. In general, rehabilitation facilities will not admit patients without a "disposition," meaning, in essence, they refuse all patients who do not have a home to go to (including shelter). This translates to the homeless patient for all intents and purposes being shut out from these vital services available to the general population.

This also is a key driver of the increased length of stay these patients experience during their acute care hospital stay as hospitals cannot safely discharge these patients to the street or a shelter when they need inpatient rehab. Often in these cases, hospitals simply keep the patient weeks or even months longer than necessary until the patient can safely be discharged to the street or shelter. This is often unpaid even with insurance as the carrier deems this continued stay not medically necessary in the hospital. In fact, lack of safe discharge options causes discharge delays 60% longer than housed patients [6].

Much of what is discussed above addresses the clinical challenges faced when discharging a homeless patient. There are many other potential hurdles hospitals face when discharging homeless patients that are equally as important as the medical details. While transportation has emerged as a leading social determinant of health in the general population as it directly impacts patients' ability to comply with follow-up appointments and refill medications, lack of transportation may hinder the actual discharge of the homeless patient. The vast majority of hospital discharges occur during the late afternoon and evening. Homeless are frequently discharged to shelters or streets after dark with no transportation [6]. This can render the patient vulnerable to the elements and crime and of course less likely to comply and participate with clinical discharge instructions.

In addition, there are several social factors that cannot be overlooked when discussing the safe discharge of a homeless patient. Many homeless patients feel shame causing them to be less likely to access the medical system, or if they do, follow through with clinical instructions [13]. There is also a tremendous amount of mistrust of the healthcare industry that homeless patients have developed. Whether they feel they might be looked down upon by others for simply being homeless, lack the insight to proactively participate in their care, or simply do not make healthy choices, many homeless assume a negative interaction when seeking care.

This leads to delays in seeking care overall and patients feeling the care they would receive will be suboptimal. In fact, more than half of participants in the survey stated they delayed seeking care (60%) with 44% of homeless patients assuming they would receive worse than the general population [3]. Mistrust can have a direct impact on care and mistrust of providers can lead to leaving hospital against medical advice (AMA). One study showed that homeless patients leave a hospital AMA at rates of 9.3% compared to just 1.3% for the general public [14]. When these homeless patients leave prior to being medically stable, it is certainly not surprising that leaving AMA has been shown to increase likelihood of 30-day readmission among people experiencing homelessness [14, 15].

Lack of housing also increases the chances that one will become a crime victim, especially for women [9]. While this certainly includes crimes like theft and robbery, it is unfortunately true for violent crime as well. In fact, not having stable housing increased odds of women experiencing sexual assault by three times [16]. Victims of violent crime are more likely to suffer from shame and isolation and fear of interactions, including with healthcare providers.

Crime victims, especially those without access to resources, are also more likely to suffer from post-traumatic stress disorder which can complicate other medical conditions and often goes undiagnosed or not adequately treated in this population. When these patients get hospitalized, this complex social history can cause an increased length of stay and increased severity of illness and lengthen the discharge process as their follow-up needs are much more complex.

Shelters in many cases are not the answer. Many homeless fear shelters as theft and beatings are common. In addition, many homeless cannot get into shelters. Sometimes patients discharged to shelters are turned away when they arrive [3]. This could be because they are found to be medically complex or sometimes simply because of lack of space. In addition, many simply prefer the street over a shelter.

Example

Our team once had a patient who insisted on going back to a street corner that happened to be right next to a 7-11. The clinical team and social work team at first refused to discharge the patient feeling it was not safe. The patient refused any shelter or other case management interaction. The team finally decided to call the 7-11 to see why the patient was so adamant about going to that street corner. To the team's surprise, the store manager knew that patient and explained that the patient performed some odd jobs for the store in exchange for food and nominal pay. This really emphasized how important it is to communicate and understand homeless patients' preferences and wishes.

Mental Health and Substance Abuse

While all the social and medical issues discussed above can greatly impact the ability to assure a safe discharge of homeless patients, arguably the greatest barriers to discharge are mental health conditions and substance abuse. Unfortunately, mental illness and substance abuse often go hand in hand, and when a homeless patient is dually afflicted, it can make the discharge process extremely complex and frustrating for both the patient and the healthcare team. Rates of mental illness in homes have been noted to be as high as 80–95% [9, 17], and nearly half (43%) suffered from both mental illness and substance abuse simultaneously (https://nhchc.org/wp-content/uploads/2019/08/homelessness-and-health.pdf) [4]. These staggering rates point to a lack of resources to adequately treat these patients in the community [18].

Substance abuse is the most common of an index hospital admission in the homeless and greatly increases the risk of a 30-day readmission to the hospital [9]. Even for those who want to seek treatment for substance abuse, the lack of both social and family support and a stable living environment greatly diminish the chances for both initial success and, of course, long-term success without relapse. As resources are scarce for homeless patients to enter and follow through with the longitudinal care needed to defeat substance abuse as well as control mental health conditions, many homeless wind up in a continuous cycle of episodic hospitalizations for acute issues. Since care teams and cities have few long-term solutions to offer, and homeless patients lack the resources to comply with follow-up care, long-term control of mental illness and substance abuse remains elusive [18].

Substance abuse can also cause and exacerbate many serious health conditions. For example, chronic alcoholism is associated with liver disease, pancreatic conditions, heart failure and other forms of heart disease, as well as the development of several types of cancer and long-term cognitive impairment. All of this can complicate hospitalizations, both clinically and socially.

For example, someone who is homeless, who has no family, and who cannot participate in his or her own care because of either acute or chronic cognitive impairment may need a court to appoint a guardian to assist with medical decision-making. This process can take weeks or even months while the patient lays in the hospital. For those who are cognitively impacted, the lack of stable housing, financial challenges, and lack of other resources such as family, friends, and transportation make it less likely the patient will seek follow up for their addiction.

Example
A patient was admitted to a Washington, D.C., hospital after injecting heroin on the street. Aside from the acute effects of the heroin, the patient suffered bacterial endocarditis of his mitral valve and acute kidney injury requiring temporary dialysis and was intubated for respiratory failure. He spent a total of 103 days in the hospital. Though this homeless patient received education about drug use and resources to utilize as an outpatient, 2 days after discharge, he was back in the hospital with another overdose.

Solutions

So, what can be done to help ensure safe discharges of patients?

Education

Medical schools and residency programs focus very little on social determinants of health. Rarely when dealing with an acute medical issue do providers focus on a patient's social situation until it is time for discharge. Even then, because providers have little education and training on social determinants, they are often reluctant to discuss a patient's homelessness either because they are uncomfortable, fearful, or simply don't know what to do or what resources are available. Most often providers will simply say "talk to social work."

Educating providers throughout all areas of school and training will enable them to develop the skills, knowledge base, and comfort to address homelessness early on in a hospitalization. This can build trust and rapport with the patient from the start and avoid many of the pitfalls mentioned earlier in this chapter that can endanger the patient after discharge. Coursework at the medical and nursing school levels, as well as early iteration with social workers and discharge planners during clinical training, should become mandatory for all bedside providers.

Entrance to Lower Level Facilities

As mentioned above, subacute and acute rehabilitation facilities rarely, if ever, take homeless patients because of the eventual difficulty with "disposition" once the time in rehab comes to an end. However, if hospitals can discharge patients to shelters or to the street, why can't rehab facilities? We need to change the culture of these facilities that for years has felt discharging to the street or a shelter is taboo. In reality, we are preventing patients from getting adequate skilled services that they would surely benefit from.

From physical and occupational therapy to completion of intravenous antibiotics and medication and other training, patients gain so much from stays at rehab facilities when clinically indicated. Why do we continue to deny these services to patients simply because they are homeless? With training of facility case management staff, safe transitions from rehab to shelters or the street can easily be completed. The medical community must embrace this change, one that can be a lifesaver for the homeless population.

Additional Resources

Most states have regulations ensuring homeless patients have basic clothing, food, and medication prior to discharge. Yet more could be done. Food drives and clothing drives could enable hospitals to give patients additional articles of clothing and extra food before leaving.

Additional social workers and population health workers would be resources to contact shelters to check on the well-being of patients who have gone there as well as refer to and follow up with support programs, such as substance abuse programs. In addition, if workers from these programs could make an initial visit to the patient in the hospital before discharge, outpatient follow-up may be is much more likely. This of course would take additional resources on the outpatient side but would be well worth the investment to prevent the continuous cycle of substance abuse, continued readmissions, and most importantly poor outcomes including death.

Automatic Mental Health Referral

As mentioned earlier, homeless patients suffer from mental illness and/or substance abuse at very high rates compared to the general population. Hospitals should consider partnering with local agencies and providers to secure at least one outpatient appointment regardless of insurance or financial status upon discharge. In coordination with many of the other points outlined here such as additional outpatient caseworkers and attention to transportation needs, these appointments could be the springboard to better longitudinal outpatient mental healthcare resulting in fewer readmissions and better overall health outcomes.

Recuperative Beds

Several cities such as Chicago, San Diego, and others have started collaborating with hospitals to place homeless patients in temporary housing for patients to recover for short periods of time after hospitalization. These respite type beds allow patients protection from all the elements and a safe environment to convalesce after an acute hospitalization. Many of these housing units are former abandoned buildings converted to simple housing units with a bed, bathroom, and fridge with food. This setup enables patients to have a place to store medication, have time to continue to recover from illness in a warm and safe environment, and have adequate food while doing so.

Ideally, the hospital and city should ensure outpatient case managers are assigned to these patients to ensure coordination of care, such as making sure patients have filled prescriptions, have scheduled appointments, and confirm arrival of medical equipment, visiting nurses, or therapists. While recuperative beds can be costly at the outset, the prevention of readmissions, longer length of stays, and poor outcomes makes this well worth the investment.

Transportation

Many hospitals have entered into relationships with Uber and other ride services when patients are ready for discharge. Others provide vouchers for public transportation. As noted earlier, lack of transportation is a major contributor to homeless patients' inability to keep follow-up appointments or get medications. Hospitals in partnership with the city should consider providing homeless patients opportunities to continue utilizing these services beyond just at the time of discharge. Even if just for a few days, these trips can be vital to a safe transition out of the hospital in terms of keeping that first follow-up appointment or obtaining discharge medications.

Conclusion

There are no quick fixes to the challenges surrounding a safe discharge of a homeless patient from the hospital. From logistics to mental health and substance abuse and lack of city and hospital resources, these challenges will continue to plague our society. However, with greater attention, education, and commitment of finances and other resources, we can make a difference and help save and improve the lives of many of our most vulnerable among us.

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Part II
Psychiatric Issues and Treatment

Chapter 10
Why Persons with Serious Mental Illness End Up Homeless

Marsden McGuire, Sarah Kristi Bell, Michal Wilson, and Maria D. Llorente

Introduction

There is a significant overlap between the cohort with serious mental illness and individuals experiencing homelessness. Poverty, neurocognitive deficits, and past deinstitutionalization are factors likely contributing to this correlation. When SMI and homelessness co-occur, provider challenges and patient consequences are compounded. Special subpopulations and the overall aging of the homeless population add additional complications. To effectively intervene, it is essential to consider the complex needs of homeless individuals with SMI, be mindful of patient, provider and system barriers to care, and offer multiple interdisciplinary team-based interventions. Housing First, Enhanced Permanent Supportive Housing, Trauma-Informed Care (TIC), Crisis Intervention Teams (CIT), Assertive Community Treatment (ACT), and other integrated service models are examples of specifically tailored strategies and recovery-oriented approaches that can assist in achieving better outcomes for this high-need population.

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Case Study

Mr. J is a 45-year-old African American man with a 20-year history of schizoaffective disorder and intermittent polysubstance use disorder (primarily alcohol and cocaine). He is HIV and hepatitis C positive, has high blood pressure, and has had more than 60 lifetime psychiatric hospitalizations. When housed, he does not typically use cocaine; however, upon return to homelessness, he also relapses into substance abuse. He has difficulties adhering to antipsychotics when homeless as the medication helps him to sleep, but he is afraid that it will make him too sleepy to be able to respond appropriately to threats of violence or having his belongings stolen.

He supports himself financially through Supplemental Security Income (SSI). Although he qualified for a subsidized housing voucher and was housed, the longest duration of housing was 4–6 months due to repeated failures to pay his portion of the rent, such that he was evicted, lost the voucher, and returned to homelessness. This happened five times in a 4-year period, despite being enrolled in an Assertive Community Treatment program that specializes in working with homeless individuals with SMI. Further, his psychiatric and medical visits were scheduled to facilitate drop-in visits to improve adherence.

At present, he has been permanently housed for 24 months, has kept most of his medical appointments, and has been adhering to antipsychotic medications. The primary intervention that led to these improved outcomes was understanding that the patient was unable to manage his money independently. The team worked with him to set up electronic rent payments, such that his rent is paid the same day his SSI direct deposit occurs. Similarly, he set up electronic funds transfers into a savings account the day of his direct deposit. He cannot easily access that account to withdraw funds and to date has been able to save $100.

This case illustrates the complexities of working with an individual who has co-occurring psychiatric, medical, and substance use disorders and who is homeless. He lives in a large urban metropolitan area, where the cost of housing is high, and although he was able to engage with the housing Continuum of Care, simply having obtained housing is insufficient for him to permanently exit homelessness. This chapter will review the forces that have contributed to homelessness among persons with SMI and the models of care that have been associated with successful transitions to permanent housing and improved outcomes in this population.

American Deinstitutionalization: Impact on Homeless and SMI

Homelessness has been found in American society since early colonial times. At that time, homelessness was viewed as a moral deficiency, since those who were good Christians would have their needs met by God. The term “sturdy beggar” came with the colonists from Europe and was used for persons who were able-bodied but "chose" to beg or obtain resources from charities rather than work [1]. These individuals were variously viewed as criminals, were a threat to public order, and were ostracized or punished severely. The associated stigma and moral judgment attached to homelessness has its roots from these views. The primary solution for homelessness at that time was thought to be employment, and initial efforts at ending homelessness were to provide work opportunities.

Homelessness is a complex societal problem, however, resulting from multiple causes, including poverty, natural disasters, lack of affordable housing, industrialization and the migration from rural communities to urban centers, war and its consequences, and changes in governmental policies [2].

Similarly, historically, mental illness was viewed as a moral failing, associated with shame and often punishment for the individual and, at times, their families [3]. To deal with disruptive behaviors, states began opening institutions to address the seriously mentally ill. These were variously termed hospitals and asylums and offered shelter and varying types of services. Some provided workhouses and self-sustaining farms, and many remain operational today. At their peak utilization in the mid-twentieth century, the average daily census in these institutions was more than 500,000 people.

In recent times, one of the most significant contributors to homelessness, particularly among the seriously mentally ill (SMI), was the governmental policy of deinstitutionalization. Deinstitutionalization was a policy that grew out of the civil rights movement and was driven by three forces which occurred simultaneously. First was the development and wide use of antipsychotic medications that offered the promise of cure. Unfortunately, while these medications were found to be highly effective in treating symptoms of illness, they do not offer functional improvements.

The second set of forces were reports of mental hospitals being cruel and inhumane places [4]. Despite the lack of evidence that individuals with SMI could function and live independently in the community, while receiving treatment and rehabilitation, the Community Mental Health Act was passed in 1963. It provided federal grants to states for the establishment of community mental health centers to provide inpatient, outpatient, partial hospitalization, and crisis intervention [5].

The third force was the growing costs for states to support the mental institutions. This changed with the passage of the Medicare and Medicaid Act of 1965 which established a payment source for patients in a nursing home or a general hospital. While states had to cover the full costs of state mental hospitals, costs for nursing home and general hospital care could now be shared with the federal government [6]. This led to mentally ill persons simply moving from one form of institutional care to another, a process known as transinstitutionalization. Despite the well-intentioned efforts, analyses have shown that outpatient care and community-based facilities never replaced inpatient or public institutions, and costs of caring for those with SMI have not been reduced [7].

Additionally, in 1980, a more stringent process for disability determination for and reductions in Supplemental Security Income (SSI) occurred [8]. Persons with SMI are thus more likely to live at or below the poverty level. Today, only about

38,000 persons with SMI continue to reside in state mental hospitals. Compare that with more than ten times that many imprisoned persons with SMI [9]. Deinstitutionalization has, thus, unfortunately, been a failed policy which has resulted in many persons with SMI becoming chronically homeless and/or imprisoned.

Prevalence of Serious Mental Illness (SMI) among Homeless

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines *serious mental illness* (SMI) as "a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet diagnostic criteria specified in the Diagnostic and Statistical Manual (DSM) [10] and has resulted in serious functional impairment, which substantially interferes with or limits one or more major life activities" [11]. The NIMH definition of SMI is more parsimonious: a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities [12]. Mental health conditions such as schizophrenia, schizoaffective disorder, and severe bipolar disorder are examples. In addition to the above characteristics, chronicity and the presence of psychotic symptoms that can adversely impact judgment and cognition are clinical features that are commonly seen. Of note, substance use disorders and neurocognitive conditions (inclusive of dementia and related conditions as well as delirium) are typically not considered SMI, although these disorders share many features of the definitions of SMI.

Figure 10.1 shows the past year prevalence of SMI among US adults in 2017 [12]. In that year, there were an estimated 11.2 million adults with SMI representing

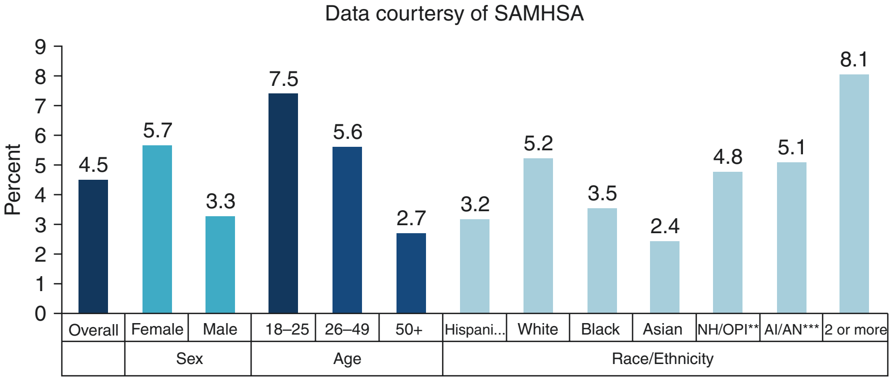

Fig. 10.1 Past year prevalence of serious mental illness among US adults (2017) [12]. (Reprinted from NIH/NIMH. Mental Illness. https://www.nimh.nih.gov/health/statistics/mental-illness.shtml)

4.5% of the total adult population. The prevalence of SMI was almost double among women (5.7%) compared with men (3.3%). Young adults (18–25 years) had the highest prevalence of SMI (7.5%) compared to older adults (26–49 years = 5.6% and 50+ years = 2.7%). With respect to race, SMI prevalence was highest among adults reporting two or more races (8.1%), followed by whites (5.2%), while it was lowest among Asian adults (2.4%). (Fig. 10.1**).**

SMI is associated with increased rates of co-occurring substance use disorders, medical conditions, and mortality. A recent systematic review and meta-analysis of mortality among people worldwide with mental disorders examined mortality risks by type of death, diagnosis, and study characteristics and suggested the median potential reduction of life span from the burden of a having a mental disorder was 10 years [13]. A review that was more specific to SMI indicated that, in the United States, adults with SMI die 25 years earlier than the general population with 50–60% of the cause due to potentially treatable cardiovascular risk factor [14].

Prevalence rates of homelessness vary greatly depending on location (or system), definitions of homelessness, and adequacy of measurement. At the national level, the state of homelessness is assessed thru a yearly one-night point-in-time count conducted by local Continuums of Care. On a single night in January 2018, roughly 553,000 individuals were experiencing homelessness in the United States. Of these, 65% were sheltered and 35% were unsheltered. Roughly 24% of homeless individuals had chronic patterns of homelessness defined as possessing a disability and being continuously homeless for 1 year or more or experiencing at least four episodes of homeless in the past 3 years where the combined duration of episodes is at least 12 months. In addition to being homeless for longer periods, this subpopulation identified as chronic is much more likely to be unsheltered with nearly two-thirds sleeping in cars, under bridges, on benches, or other settings not meant for human habitation [15].

What is the likelihood of encountering SMI in a given homeless sample? There is a high rate of SMI within the homeless population, and the prevalence of SMI in those experiencing chronic homelessness is estimated to be even higher [16]. Note that estimates are that between 20 and 50 percent of people who are homeless have SMI. A broad review of the prevalence research [17] concluded that between one-third and one-half of people who are homeless have SMI.

Conversely, what is the likelihood of encountering homelessness in a given SMI population or a population determined to be at risk? In one study of a large urban public health system (over 10,000 patients), the 1-year prevalence was shown to be 15% [18]. Homelessness was associated with male gender; African American ethnicity; lack of Medicaid; a diagnosis of schizophrenia, bipolar disorder, or substance use disorder; poorer functioning; and greater use of inpatient and emergency-type services.

In public mental health systems, prevalence of homelessness is even higher, supporting a positive correlation between homelessness and SMI. For example, Kuno et al. [19] found a prevalence rate of homelessness of 24% among those with SMI. The homeless persons were more likely to be African American, receive general assistance, have a comorbid substance use disorder, and utilize significantly more inpatient psychiatric, emergency, and healthcare services than the subjects who were housed. Notably, more subjects utilized intensive case management services after shelter admission showing that shelters are a potential vital portal to appropriate clinical care.

SMI is thus more prevalent among homeless compared with housed populations. A review and meta-analysis of 29 eligible surveys of 5684 homeless individuals from seven countries [20] revealed the most common mental disorders to be alcohol dependence (8.1–58.5%) and drug (other than alcohol) dependence (4.5–54.2%). However, the prevalence of psychotic illnesses was of a similar magnitude (2.8–42.3%). Co-occurrence of SMI with alcohol and other substance use disorders is significant across homeless settings. For example, Ding [21] studied 253 male homeless veterans admitted to a transitional housing program in an urban northeast setting and found 37.2% had co-occurring psychiatric and substance use disorders.

An important question is whether the homeless population (and the prevalence of mental disorders) is changing over time. North [22] conducted an important study of three comparable population-based data sets completed at 10-year intervals (1980, 1990, 2000) in St. Louis. The study found that the prevalence of psychiatric illness, including substance use disorders, is not static. A significant increase in homelessness was found among minorities, and in rates of mood and substance use disorders, and especially drug use disorders (mostly cocaine) among women. Cocaine abuse had not been common in 1980, but by 1990, it was the drug of choice. This specificity casts doubt on whether these findings from St. Louis are generalizable since different environments have variable demographics and economic circumstance. However, the principle of dynamic change in characteristics of the homeless holds important implications for anticipating and planning for their social and medical needs. It also emphasizes the importance of conducting regional research and inclusion of minorities and women.

Another valuable finding from the North study [22] is the increasing median age of the homeless population over time. Among homeless men, the median age rose from 33 to 43 over 20 years. Among homeless women, the median age rose from 26 to 35. The authors point out that due to the persistent movement of individuals in and out of homelessness and the lack of a centralized registry, it is unknown whether the same individuals remained homeless, thereby accounting for a significant proportion of the median age increase. More recently, Spinelli [23] reported that the national median age for single adult homeless persons is 50 years. This is significant because homeless adults 50 years and older have rates of falls, cognitive impairment, and activities of daily living (ADL) dependence that exceed those of housed adults who are 15 to 20 years older.

Although a causal relationship between SMI and homelessness cannot be proven, the relationship is clearly bidirectional with rates of one condition present at higher than expected rates when the other condition is present. The identification of independent risk factors for SMI and homelessness is therefore doubly important. Successful intervention to prevent or diminish the effects of risk factors for one condition could potentially lower the prevalence rates of both. A number of studies have indicated that specific mental health diagnoses, including bipolar disorder and schizophrenia, are risk factors for homelessness [18]. There is evidence that adverse life events, such as physical abuse, foster care, and incarceration, are potent risk factors for becoming homeless [24]. The same study showed similarly that risk factors can impact the likelihood of exiting homelessness. Female sex and engagement with a partner were associated with a higher probability of exiting homelessness. Relationship problems, psychotic disorders, and drug use problems were associated with chronically remaining homeless.

Homeless persons who belong to sexual and gender minority groups have not been well studied but may be at particular risk for negative outcomes if they become homeless. A recent study examined differences in physical and mental health problems and domestic violence among these groups and their heterosexual and cisgender (i.e., non-transgender) counterparts [25]. Transgender men were found to be at particular risk for physical health problems, mental health problems, and domestic violence or abuse. Transgender women were more likely to report posttraumatic stress disorder compared to their cisgender counterparts.

Stigma, Vulnerabilities, and Barriers to Care

Stigma

The act of stigmatization involves attribution of a negative value to a person. The result is that the individual is regarded or treated in a disadvantageous way. In some case, the attribution may be correct (e.g., if someone is unable to suppress a socially undesirable behavior), but the response need not be to stigmatize them. Stigma whether derived from internal or external sources creates barriers to care for those seeking treatment for mental health concerns, including alcohol and substance use disorders. It further leads to decreased self-esteem and has the effect of curtailing many opportunities throughout the life span [26, 27]. Mental Health America has outlined steps that can be taken to assist those at risk for stigmatization (including homeless with SMI) by overcoming the reluctance to seek care (or recognize the need for care) through proactive partnering [28]. These steps increase the opportunities for meaningful connection and ideally the creation of a stable, predictable, resourced, and safe environment.

Partnering can improve outcomes for stigmatized persons by improving access to:

- Physical and mental health resources.
- Integrated physical and mental health treatment.
- Trauma-informed treatment (especially for women and combat veterans).
- Care coordination during transitions.
- Employment and housing support.
- Education and skills training.
- Peer support.

Two key points are worth making here. Integration of mental health services into primary medical care settings has significantly improved outcomes and patient satisfaction while lowering costs. This benefit is even greater in settings that serve persons with high medical and psychiatric comorbidity and where transitions in care are frequent – precisely the predicament of many homeless persons and especially those with SMI. Despite the current state of stigmatization of persons who are homeless or have SMI, there is reason for hope when one considers that the recent widely held prejudices against persons with cancer and HIV have been tremendously reduced.

Unique Vulnerabilities of Homeless Persons with SMI

Homeless persons, or those at risk of homelessness, do not necessarily share a singular or unique set of vulnerabilities. However, certain combinations of these vulnerabilities greatly increase the likelihood of a person becoming, and remaining, homeless. The main intrinsic vulnerability of homeless persons with SMI is the nature of SMI itself. Many persons with SMI exhibit significant denial of illness and/or lack of insight. Some persons with SMI have difficulty recognizing the benefit of services offered. Further, as mentioned previously, SMI may result in self-stigmatization and a consequent reduction of appropriate healthcare and social service utilization.

Boyd [29] examined a population of homeless veterans using the Internalized Stigma of Mental Illness (ISMI) scale to measure internalized stigma at baseline and the Symptom Checklist-90-R (SCL-90-R) at baseline and follow-up (3 and 6 months). Internalized stigma severity was associated with greater depressive and psychotic symptoms at 3 and 6 months, while Alienation and Discrimination Experience were the ISMI subscales most strongly associated with these symptoms.

Many vulnerabilities affecting the homeless SMI population are external or system-related. On the most fundamental level, exposure to violence, trauma, disease, and weather is an example. Survey estimates suggest that trauma is a nearly universal experience for homeless persons that may occur before or during their period(s) of homelessness. If these traumatic events result in the expression of PTSD, the risk of becoming and remaining homeless (either chronically or recurrently) increases [28]. Thus, SMI and PTSD appear to have additive effects on the risk for being homeless.

Another external/systemic vulnerability experienced by most homeless persons is repeated transitions in care and lack of a recovery system. The phenomenon of cycling through an array of health and social services only to fall back into periodic and extended bouts of homelessness demonstrates a disintegrated care system. The reasons for this disintegration are complex. Development and sustainment of an integrated system that truly supports recovery is highly challenging. Adequate funding is necessary but insufficient. Anthony [30] notes: “A recovery-based mental health system assumes that recovery can occur without professional intervention, requires support from an outside person, and can occur even though symptoms recur. Such a system also assumes that recovery can change the frequency and duration of symptoms, and that recovery is not a linear process."

Without a recovery system in place, higher rates of adverse events (morbidity and mortality) will predictably occur. Martell [31] looked at 1751 homeless persons in Honolulu (not limited to SMI) and noted dramatically higher age- and sex-adjusted acute hospitalization rates of 542/1000 person-years (vs. the general state rate, which presumably included some cases of SMI, of 96/1000 person-years.) Similarly, homeless persons had significantly higher than expected acute bed days (4766 days vs. expected 640 days). Rates of admission to the state psychiatric hospital were even more striking: 105/1000 person-years for the homeless cohort vs. the state rate of 0.8/1000 person-years. Homeless persons spent 3837 bed days compared with the predicted number of 139 days.

Even more striking is the risk of early mortality due to homelessness in combination with SMI. Recall that SMI alone is associated with approximately a 25-year reduction in life expectancy [14, 32]. Schinka et al. showed that homelessness in younger and middle-aged veterans (age 30–54) resulted in a hazard ratio of 2.9 for risk of death over a 10-year period, consistent with previous studies (see Fig. 10.2). Significantly, the three main causes of death (cardiovascular disease, neoplasms, external causes) were similar for the homeless and non-homeless groups suggesting an acceleration of processes associated with "normal" aging and environmental exposure. The same group conducted a similar study of older veterans which showed an even higher mortality differential between homeless and non-homeless veterans [33].

This study tracked mortality rates and causes over an 11-year follow-up period and found the frequency of all-cause deaths for the homeless sample (35%) to be

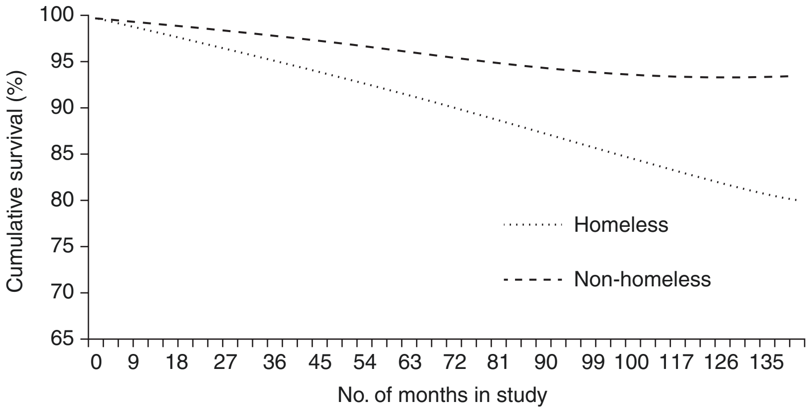

Fig. 10.2 Survival curves for homeless and non-homeless veterans aged 30–54, identified in 2000–2003 and followed through 2011, United States [32]. Data sources: data provided by the US Dept of Veterans Affairs, the Northeast Program Evaluation Center, the VA Corporate Data Warehouse, and the Epidemiology Program of the VA Office of Public Health.(Reprinted from Schinka et al. [32])

double than the control sample (18%). Homeless veterans were, on average, 2.5 years younger at the time of their death compared to non-homeless veterans. The authors acknowledge that effects of SMI (and other psychiatric diagnoses) were potential confounders in these studies; however, other studies have shown that homelessness is clearly an independent predictor of early mortality [34]. (Fig. 10.2**).**

Barriers to Care

There are numerous provider, patient, and systems barriers that make it difficult for homeless persons with SMI to receive appropriate care. Provider barriers are arguably the most preventable but are deeply connected to systems barriers, such as the need for specialized education and training. Additional examples of provider barriers include the provider's own biases and stigma, an inability to detect and/or work with a patient's negative symptoms, lack of familiarity or comfort in exercising a recovery approach, and failure to use evidence-based interventions (e.g., Housing First).

A common example of a provider-level barrier to care is the lack of an understanding of and training in Trauma-Informed Care (TIC). This is especially significant given the high rate of trauma exposure and associated PTSD among the homeless. TIC provides a basic understanding of how trauma affects the lives of individuals who seek services [28]. While no single definition of TIC exists, the three basic components are (1) an understanding of trauma at multiple organizational levels (e.g., clinical, training), (2) creation of a safe space for the patient with trauma and their providers (e.g., shared decision-making, respect for privacy, confidentiality, cultural awareness including awareness of trauma triggers), and (3) building on patient strengths (e.g., fostering skills, resiliency, self-care, and empowerment). Without these components, re-traumatization and lack of recovery are more likely to occur.

The high prevalence of trauma within the homeless adds an additional level of complexity to this vulnerable population. A trauma-informed approach is, therefore, essential to support engagement and recovery. Hopper et al. provide a detailed overview of the argument for and core principles of Trauma-Informed Care (TIC). TIC is characterized by themes of trauma awareness, an emphasis on safety, choice and empowerment, and utilizing a strengths-based approach [35].

Patient barriers to care include poor understanding of treatment recommendations, income limitations, physical disability, comorbidities, neurocognitive impairment, poor social skills, inability to manage money effectively, self-perception challenges (self-efficacy), and self-stigma. Patient barriers would appear to be promising targets for intervention due to their specificity – if a homeless individual can overcome one or more of these barriers, their chances for exiting homelessness improve. Two major patient barriers affecting homeless persons with SMI are particularly challenging to overcome: self-stigma and neurocognitive impairment.

Self-stigma has powerful consequences for its bearer including reduced ability to access resources, the presence of co-occurring psychiatric conditions such as depression and anxiety [29], and difficulties in comprehension or acceptance of the recovery model. Designing research studies to isolate the effects of self-stigma or to determine the extent to which self-stigma is caused or worsened by homelessness is difficult. However, Markowitz [36] studying relationships between stigma, psychological well-being, and life satisfaction among persons with mental illness in an outpatient population showed that anticipated rejection (a component of self-stigma) is associated strongly with discriminatory experiences (which are more likely to be experienced by homeless compared to non-homeless persons).

Neurocognitive impairment appears to be highly prevalent in the homeless, many of whom have SMI and/or substance use disorder. Stergiopoulos [37] conducted neuropsychological testing of 1500 homeless adults (18 + years) with mental illness including information processing, memory, and executive functioning. Approximately half the sample met the criteria for a SMI or substance use disorder, and almost half had experienced severe traumatic brain injury. Testing results indicated 72% of participants had cognitive impairment in at least one domain. Over 80% of the variance remained unexplained by their statistical model, indicating that it is likely that multiple unknown factors contribute to this population's high impairment rate. Of note, neither a history of traumatic brain injury nor duration of homelessness contributed to the likelihood of increased cognitive impairment.

Bousman [38] administered brief neuropsychological (NP) battery (including learning, recall, processing speed, executive function, and verbal fluency) in a sample of ever-homeless and never-homeless adults entering outpatient psychiatric treatment. Notably, this study controlled for demographic, substance use, psychiatric, and premorbid intelligence quotient status. They found high rates of NP impairment in both groups (46%–54%) with no significant differences in global NP impairment although the never-homeless showed somewhat better levels of processing speed and executive function. Cognitive processing speed and mental health symptoms that cause interpersonal problems appear to be interrelated factors affecting attainment and retention of housing in veterans with SMI and SUD [39]. Problem-solving skills in the setting of cognitive deficits has also been recognized as an important factor and one that is potentially amenable to intervention by combining social learning approaches with cognitive remediation strategies [40].

In older adults, an increased risk of cognitive impairment risk exists which may be a risk factor for becoming homeless (and therefore be overrepresented in the homeless population). Hurstak [41] strikingly found that older (50+ years) homeless adults displayed a prevalence of cognitive impairment three to four times higher than has been observed in general population adults aged 70 and older, a finding consistent with other studies that hypothesize an accelerated aging process in the homeless that results in higher than expected morbidity rates (at all ages) and earlier than expected mortality.

What are the major system-level barriers to care and which are most responsive to intervention? System barriers are perhaps the most challenging to overcome due to their complexity and include poor integration of care needs, transportation and scheduling challenges, lack of effectiveness and quality of care research, and systems-level stigmatization.

Studies designed to answer these questions are difficult to perform, but many models of care have been suggested with several showing special promise. In many ways, system-level barriers simply fail to incorporate features that are known to facilitate engagement or retention of the homeless into an appropriate array of social and medical services. These features include stabilizing the environment (e.g., through home- or community-based service provisions), providing choice in housing (e.g., transitional vs. interim vs. permanent, independent vs. integrated), and flexibility in levels of care (matching care delivery with need) [42, 43]. The availability and quality of medical and mental health services hold promise since best practices exist to improve the healthcare status of those who are or who may become homeless. However, medical and psychiatric care models must adhere to principles of integration within a wider, comprehensive network of services in order to be fully effective.

In a qualitative study review, Drake [44] noted that recovery as a journey is a common theme among persons with mental illness and cites their emerging sense of "agency and autonomy, as well as greater participation in normative activities, such as employment, education, and community life." He then notes that, despite this apparent level of awareness and direction, the majority of people with SMI do not actually live in a manner consistent with the recovery framework and maintain high rates of unemployment, homelessness, and disengagement. He attributes this discrepancy to multiple system-level failures and, in particular, the misapplication of a medical model to homelessness (rather than a comprehensive and integrated model).

To highlight the complexity of providing appropriate services to those most in need, which requires addressing all three barrier categories – provider, patient, and system – consider data from the National Comorbidity Study (NCS) [45]. This study found the national prevalence of SMI among adults to be 6.2%. Among these respondents, less than 40% were in receipt of stable treatment; the rest did not believe they needed treatment. Those who were in treatment reported common barriers (52%, situational issues; 46%, financial difficulties; and 45%, lack of treatment effectiveness). The most commonly reported reason for treatment rejection was wanting to solve the problem on their own (72% of those refusing treatment and 58% of those dropping out of treatment). Younger respondents had greater degrees of unmet need than older respondents but were more likely to perceive a lack of need for treatment. Rural respondents, who also had greater unmet needs than urban respondents, were more likely to be in treatment (which the authors attributed to less stigma in rural than urban settings).

Models of Care and Outcomes

The seriously mentally ill experience disruptions in emotional, cognitive, and social functioning. While mood-stabilizing and antipsychotic medications can treat some of the symptoms (mood lability, anxiety, disorganized thinking, and psychotic symptoms), more comprehensive services need to be made available to address functional and social impairments. The remainder of this chapter will address three strategies to address homelessness among those with SMI: Housing First, Enhanced Permanent Supportive Housing, and integration of mental health treatment models of care.

Housing First

In the 1990s, Pathways to Housing in New York developed a model of providing intensive support to house persons with SMI who had been chronically homeless. This model became known as Housing First. Persons were housed with no preconditional requirements, such as mandatory mental health or substance abuse treatment engagement and/or sobriety [46].

The Housing First model has four major components [47]. The first component is the immediate provision housing and services based on the homeless person's personal preferences and choices. This means that the clinical team inquiries about the type of housing, neighborhood, and specific services that the individual is interested in obtaining. This enables the team to better understand what the person's priorities are, and it builds a sense of ownership and participation on the part of the homeless person. Most homeless report that stable housing is their highest priority.

The second component separates housing and clinical services. Housing is arranged through landlords and independent housing units. Support services are provided by off-site staff and agencies, although the clinicians may visit in the person's home. This is to facilitate the person being able to transition to alternate housing and yet maintain continuity of care with their treatment team.

The third component entails adopting the belief that persons with SMI can make reasonable choices. The team thus supports the individual, even if a failure occurs. This recovery approach builds and supports the person's strengths, celebrates successes, and facilitates learning and person-driven decision-making. The fourth component is community integration. The person resides in an apartment building where most residents do not have SMI. They are encouraged to attend and participate in community activities and events and are provided information on local service agencies, libraries, churches, and community centers.

In a recent Canadian study, Housing First participants spent 73% of the 2-year study period in stable housing, vs. 32% of the same period among controls [47]. The model also produced improvements in community functioning and quality of life. In another study, the participants randomly assigned to Housing First were housed sooner, spent more time stably housed, and spent fewer days hospitalized than the controls in Continuum of Care programs [48]. A recent study has also found that Housing First significantly improved antipsychotic medication adherence among formerly homeless persons with schizophrenia [49].

Enhanced Permanent Supportive Housing

Once an individual with SMI has been housed, what enhancements in terms of support services should be offered? The National Coalition for the Homeless has identified that certain services and resources facilitate success in both sustaining housing and improved outcomes. These include mental health treatment services, primary care access, community reintegration, living skills training (such as money management and budgeting), peer support, educational and employment counseling and opportunities, and outreach/engagement case managers [50].

Mental Health Models of Care

Of the numerous models of care that have been used over the years in treating persons with SMI, Assertive Community Treatment (ACT) is particularly well suited to serving clients who are homeless. ACT is an evidence-based approach used since the 1970s to deliver mental healthcare to the severely mentally ill. The ACT model first began in 1972 in Wisconsin and is now utilized at mental health treatment centers in all 50 states as well as internationally [50]. According to the National Mental Health Services Survey of 2017, there were 1583 ACT teams operating within the United States [52].

ACT differs from routine mental healthcare in that it seeks to meet the patient where he or she is at, whether at home, in a shelter, or on the streets. ACT involves mobile teams of providers from a variety of disciplines who travel to meet clients within their own communities. A typical ACT team might include a psychiatrist, a nurse, a peer support worker, a substance abuse counselor, a social worker, and a case manager knowledgeable about available housing and community supports.

ACT seeks to reduce hospitalizations and arrests and improve housing stability of those with SMI by ensuring they receive care even during times when they lack the stability to come in for a scheduled outpatient appointment. ACT teams also differ from more traditional models of mental healthcare in that a team member is always available in order to provide clients with 24/7 access to help in the event of a crisis. ACT has been shown to be a cost-effective model of care due to a proven reduction in both duration and frequency of hospitalizations, a reduction in utilization of emergency services, and a reduction in homelessness and psychiatric symptom severity [53].

Another model of care which is frequently useful when working with homeless persons with SMI is the Crisis Intervention Team (CIT) [54]. CIT refers to a police-based model of care in which police officers collaborate with local mental health professionals and facilities. The goal of this model is to improve the interaction between police officers and those with serious mental illness who are in a state of crisis, as well as to improve the safety of all involved when officers respond to a crisis call. CIT training also aims to help officers recognize those individuals for whom mental health treatment may be an appropriate alternative to arrest.

The CIT model began in Memphis in 1988 and has since spread throughout the United States. CIT programs all share several foundational characteristics. The program typically involves an initial 40 hours of training to officers selected from among those who volunteer for the CIT team, in addition to yearly refresher courses. This specialized training includes de-escalation techniques, suicide prevention, recognizing the signs and symptoms of serious mental illnesses, as well as information about the available resources within the community.

There are some variations among CIT programs as well [55]. Some police jurisdictions offer specialized training classes such as interacting with youth or veteran populations. A CIT program may also involve the training of emergency dispatch personnel on what constitutes a mental health crisis that should be directed to a CIT officer. As emergency dispatch is often not under the jurisdiction of the police department, CIT programs vary in the extent to which emergency dispatch personnel are trained or utilized in the program. Other variations in CIT programs include the percentage of officers trained. While it is often the case that officers may volunteer for the training, some jurisdictions require that all officers undergo CIT training, given that any officer may encounter a crisis involving a person with serious mental illness [53]. Regardless of program specifics, the CIT model aims to improve the safety of both police officers and those with mental illness in a state of crisis, as well as to expedite mental health treatment of those experiencing a mental health crisis who otherwise may not receive the appropriate care [55]. Officers who have undergone this training rate it positively and report increased confidence in their abilities to and effectiveness in dealing with mental health issues [56].

Conclusion

There has been a long-standing historic relationship between serious mental illness (SMI) and homelessness. SMI interferes with an individual's ability to function socially and occupationally and, as a result, to sustain independent community living. For several reasons, deinstitutionalization, although well-intentioned, fell short and led to significant homelessness among those with SMI. Simply offering medication to homeless persons with SMI will not address functional needs. Homelessness in this population is complex and requires multiple psychosocial interventions, multidisciplinary team interventions, and specialty models of care.

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Chapter 11
Nonadherence and Mental Health Treatment in Homeless Populations

Rita Hargrave and Paul Noufi

Introduction

Homeless individuals with chronic physical and mental illness often experience nonadherence to treatment interventions and lapses in access to healthcare. Compared to the general public, homeless individuals more often use emergency department services, experience longer hospital stays and suffer worse treatment outcomes. This chapter will outline factors that are critical in understanding the barriers to engagement and adherence among homeless individuals with severe mental illness. This chapter will discuss the following:

- Risk factors for nonadherence
- Barriers to adherence
- Consequences of nonadherence
- Strategies to reduce nonadherence

Risk Factors for Nonadherence

Strong predictors of nonadherence among homeless individuals include:

- Low rates of attendance at follow-up visits [1]
- Comorbid substance use disorder and adherence [2–4]
- Duration of homelessness for more than 3 years [4]
- Poor insight and negative attitudes about pharmacotherapy [2]

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Barriers to Adherence

Barriers to adherence may be due to several factors including (1) provider attitudes and behaviors, (2) patient attitudes and behaviors, and (3) treatment setting limitations.

Provider Attitudes and Behaviors

The attitudes of healthcare providers about homeless individuals' lifestyles and behavior may affect their prescribing practices. The relationship between physician attitudes and treatment disparities for homeless population has been extensively examined in the context of the diagnosis and management of HIV/AIDS. When physicians believe that homeless patients will not be adherent to medication regimes, they may' be more reluctant to prescribe antiretroviral medications to them [5]. Some authors suggest that these provider attitudes may contribute to delayed treatment for HIV/AIDS for African Americans, Latinos, women, and the poor [6]. There is little research which examines the relationship between the attitudes and behaviors of mental healthcare providers and treatment disparities of homeless individuals with severe mental illness.

Patient Attitudes and Behaviors

Patient perceptions and attitudes about medications may significantly influence their adherence to pharmacological management of chronic illnesses such as rheumatoid arthritis, HIV, and schizophrenia [7].

Patients may have difficulty managing complex medication regimens [8]. Patients with insecure housing often face restrictions on when and how their medication can be taken and stored. Poor insight and negative attitudes about medication are strong predictors of nonadherence [2]. Many homeless individuals are concerned about whether disabling medication side effects may increase their vulnerability [9, 10]. Homeless individuals may feel that medication therapies will not be effective or helpful.

Some homeless individuals feel that accessing primary care or mental health treatment is a secondary priority in the face of their other daily challenges. Individuals with insecure housing struggle with the impact of exposure to the elements, poor nutrition, and poor hygiene. They may be dealing with substance use disorders and the trauma of criminal victimization [11]. Homeless individuals may feel unwelcome at healthcare settings. They often feel that they have not been listened to and have not been able to actively participate in their medical decision-making [10].

Ethnoracial minority homeless individuals maybe especially prone to having diminished trust in healthcare systems [12]. If these individuals also have mental illness/substance use disorders, they are at increased risk for experiencing stigma and discrimination. This confluence of negative social and interpersonal experiences in healthcare settings may also cause them to delay or avoid treatment. Some homeless individuals may have limited insight about their illness, lack mental health literacy, and minimize their symptoms. These beliefs and behaviors contribute to the high rate of treatment nonadherence observed among homeless individuals with severe mental illness.

Treatment Setting Limitations

A variety of treatment setting limitations may impede the ability of homeless individuals to form ongoing productive relationships with their healthcare teams. These issues are particularly relevant for ethnoracial minority individuals with unstable housing. Clear communication and collaboration between patient, family, and provider is critical is essential in the management of chronic illnesses in homeless individuals.

Government−/state-funded healthcare services which serve a large percentage of ethnic/racial minority patients are often underfunded and have inadequate resources [13]. Long waiting times in clinics are reported by homeless individuals and are obstacles to their engagement in care [14]. Outpatient clinics may be geographically distant from public spaces frequented by homeless individuals. Both urban and rural communities may have inadequate public transportation systems to serve homeless individuals [15]. Many treatment facilities lack resources to track people with insecure, transient housing, arrange transportation, or provide individuals with reminders of upcoming medical appointments [16].

Homeless individuals are uninsured and have fragmented mental health and medical care which contributes to their high utilization of hospitals and emergency department services [17]. A study conducted in Alabama found the prevalence of unmet needs for care among homeless people rose from 32% in 1995 to 54% in 2015. These results suggest that US healthcare resources are inadequate to meet the needs of low-income and underinsured people [18].

The Consequences of Nonadherence

Impact on Patients

Epidemiological studies suggest that 40–60% of homeless individuals experience severe mental illness or substance use disorders. Homeless individuals with psychotic and mood disorders have high rates of medication nonadherence contributing to psychiatric morbidity. Homeless individuals with severe mental illness are at increased risk of experiencing disabling symptoms such as impulsivity, suicidality, disorganized behaviors, hallucinations, and delusions. Medication nonadherence increases the risk of self-injurious, suicidal, or aggressive behaviors. Homeless individuals with untreated psychiatric disorders have increased risk for becoming the victims and/or the perpetrators of violence, suffering physical injuries, and arrests [19, 20]. Homeless individuals compared to the general public are at greater risk for suicide. Additional risk factors for suicidal behaviors among homeless individuals include inadequate psychiatric follow-up and poor engagement in mental health treatment [21–24].

Finally, nonadherence with medications may contribute to severe psychiatric symptoms and multiple psychotic episodes which affect the functional abilities of homeless individuals. Research on patients with schizophrenia suggests that recurrent psychotic episodes may cause significant cognitive impairment and rapid decline in their functional abilities [25].

Impact on Healthcare Systems

Multiple studies report that homeless individuals compared to the general public have higher rates of emergency department visits and hospital admissions [26–28]. Homeless patients compared to the general population are less likely to have stable sources of ambulatory care [5]. Medication nonadherence in homeless populations is estimated to contribute up to 290 billion dollars in US annual medical costs [29]. Nonadherence with psychotropic medications in homeless populations contributes to increased risk of psychiatric decompensation, relapse, and re-hospitalizations which contribute to increased healthcare costs. At this time, no publications were available for review which specifically investigated the effect of nonadherence to psychiatric medications on the healthcare costs.

When psychiatrically ill homeless patients are admitted to the hospital, they frequently require interventions by multidisciplinary treatment teams for their comorbid medical disorders (e.g. tuberculosis, HIV and hepatitis) which leads to increased healthcare costs [30, 31].

Strategies to Improve Adherence

There has been limited comprehensive national research on the efficacy of specific strategies to increase treatment engagement and adherence to mental health interventions (e.g., psychiatric medications, psychoeducation) in homeless populations. Many of the strategies discussed in this chapter have been extrapolated from studies targeting adherence to treatment of AIDS/HIV and other chronic medical illnesses. Potential strategies to improve treatment adherence include modification of (1) provider practices and attitudes, (2) patient behaviors and attitudes, and (3) treatment setting factors.

Provider Practices and Attitudes

Healthcare staff would benefit from training designed to improve communication with and promote personal empowerment in the homeless population. Healthcare providers would benefit from education about the environmental conditions of homeless people. The providers could adapt the current chronic disease management protocols to meet the special needs of this population [23, 32, 33].

A study that compared residents and faculty in psychiatry to those in emergency medicine reported that psychiatry residents and faculty exhibit more favorable attitudes toward homeless persons. The authors suggested that medical schools need to develop curricula to overcome inaccurate or stigmatizing beliefs among medical students, residents and faculty [34].

In terms of provider practices, a prospective intervention study of homeless individuals with severe mental illness reported that treatment with depot injectable long-acting injectable antipsychotics was significantly associated with higher adherence to medication regimens [4].

Providers could also consider utilizing peer navigators to promote engagement, health education, and adherence with healthcare interventions among homeless individuals. Peer navigators (PNs) have been proposed to address health disparities for ethnoracial minorities with mental illness and homeless individuals [35]. Peer navigation is a specialized form of the *patient* navigation used in cancer care. PNs have been successfully trained and utilized to guide patients through the complexities of managing cancer treatment regimens [36]. PNs have similar “lived experiences” and ideally cultural backgrounds as their clients and provide empathy and practical strategies for solving barrier to accessing health care resources. support in engaging with [35].

PNs would benefit from practical training about the challenges of living on the streets. The training could help PNs become more able to identify and manage problem behaviors their clients which jeopardize their ability to participate their health care treatment the health. PNs could benefit from training in crisis intervention and stress management techniques which they could use while assisting homeless individuals establish treatment relationships at healthcare facilities.

Several authors have recommended implementing a multidimensional comprehensive approach (behavioral interventions, psychosocial treatments, and medication management) to improve adherence among homeless individuals. This intervention could include psychoeducation focused on disease management, the importance of medication, and the development of medication routines. Medication pillbox organizers and appointment cards have been recommended as a low cost and simple behavioral intervention [29, 35].

Patient Attitudes and Practices

Lack of health literacy among homeless individuals may contribute to treatment nonadherence (e.g., impaired medication management, reduced attendance at follow-up visits) [37]. Implementation of a targeted educational program for patients on the importance of medication adherence, health and wellness strategies, and regular attendance at medical appointments would be helpful for homeless individuals.

Homeless individuals may benefit from training in anger management and communication skills to improve their ability to work more effectively with healthcare providers.

Treatment Setting Factors

Advocates for expanded services for the homeless community should continue to collaborate with healthcare administrators, mental healthcare providers, and local governments to design and implement interventions to reduce barriers to mental health and primary care. Government−/state-funded healthcare services need to:

1. Increase the number of mental health and primary care providers in outpatient treatment settings to reduce clinic wait times
2. Increase the number of multidisciplinary mental health services for diagnosis and management of mood disorders, psychotic disorders, and substance use disorders
3. Provide case management, individualized reminders for clinic visits, and transportation for homeless individuals to reduce the number of missed appointments and disruptions in care

Conclusion

Most studies about adherence and service utilization among homeless individuals have been composed of small sample sizes and do not represent the diversity of communities across the country. The 2014 Cochrane review of randomized controlled studies of interventions for enhancing medication adherence suggested the most scientifically valid studies involved multiple components including ongoing support from allied health professionals (e.g., pharmacists), psychoeducation, supportive psychotherapy (including motivational interviewing or cognitive behavioral therapy), and regular treatment support by health professionals, family, and/or peers [38]. Only five of those studies reported modest improvements in both adherence and clinical outcomes.

Homelessness is a dynamic phenomenon which varies with the exigencies of the specific community, city, and state where it occurs. National multisite research is needed to determine how the combination of ethnicity, homelessness, and mental illness impacts healthcare needs in homeless individuals. Future studies should employ larger sample sizes. Corrigan et al. suggest designing research about homelessness using community participatory model [11] which involves partnerships between researchers and members of homeless community. This study design provides more valid results than epidemiological traditional approaches.

This chapter highlights an urgent need for large multinational and multisite research that investigates the complex interplay of adherence, mental illness, and homelessness while accounting for ethnic, racial, and sociodemographic characteristics of the populations. Future research will need to develop innovative strategies that help overcome the barriers of traditional research in this field.

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Chapter 12
Homelessness and Substance Use Disorders

Gary W. Stablein, Bruce S. Hill, Samaneh Keshavarz, and Maria D. Llorente

Introduction

Among the homeless, there are high rates of substance use disorders, primarily alcohol and illicit drugs. Homeless individuals face unique challenges when engaging in treatment for substance use disorders, which likely contributes to the high rate of treatment failure observed among this population. Features of homelessness that correlate with increased rate of treatment relapse include unstable living environment and lack of social supports. For these reasons, understanding and addressing substance use disorders and homelessness can have a significant impact on the availability and delivery of care to this population and has the potential to improve outcomes.

Prevalence of Substance Use and Abuse Among Homeless

Determination of the prevalence of SUD among the homeless population is difficult and varies based on several factors, including inconsistent definitions of

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homelessness, population studied (youth v. elderly; male v. female), varied sampling strategies (structured interview v. self-report), and location of sample (telephone v. shelter v. hospital setting v. primary care clinic). However, the consistent finding is that substance abuse is more common among homeless than in those who are housed. The Substance Abuse and Mental Health Services Administration estimates that 38% of homeless people are dependent on alcohol and 26% abused other drugs [1]. Other studies have found that over a third of homeless individuals experience alcohol and drug problems [2]. In a recent survey of homeless adults aged 50 and older in California, nearly two-thirds had used at least one illicit drug in the previous 6 months and exhibited moderate severity symptoms [3]. A literature review on SUD among homeless from seven Western countries found that alcohol dependence affected 38% of the male samples (range of 9–58%) and drug dependence affected 24% of the total sample (range of 5–54%) [4].

The most common substance used by a national sample of homeless adults is tobacco. Nearly 75% smoke cigarettes [5]. This prevalence of tobacco use among homeless is four times that of the general US population. Not surprisingly, smoking-related deaths among homeless occur at twice the rate seen among housed persons and significantly contribute to the higher and younger mortality seen among the homeless [6].

Alcohol is the primary substance of abuse in nearly 49% of homeless who were admitted to a substance abuse treatment facility, followed by opioids (22%) and cocaine (14%) [7]. Crack cocaine use not only predicted greater homelessness at baseline; it also predicted greater homelessness within 6 months among those who were initially housed [8].

Of concern is the finding that over the past several decades, rates of substance abuse among homeless persons seem to be rising among both men and women, with the observed change mainly in illicit drug use [9, 10]. Further, when compared with people who are housed, those who are homeless have more severe substance use disorders [11]. An interesting finding is that substance-related presentations to an urban emergency department is highest at the beginning of the month and steadily declines thereafter [12]. This finding was stronger for patients with primary substance use disorders than for patients with other mental illness. This pattern closely corresponds to access to disposable income from federal disbursements, including social security, veterans pensions, and welfare.

Outcomes Associated with Homelessness and SUD

Substance abuse increases the risk that a person will become homeless, often through the inability to maintain professional obligations (i.e., work, school), and once that occurs, the likelihood of obtaining stable housing independently is significantly reduced. SUD disrupts relationships with social supports, including friends, family, and community members, leading to further social isolation. Additionally, they face greater obstacles in accessing general and preventive primary care services, as well as addiction treatment and support for recovery.

Use of substances is associated with significant morbidity and mortality among homeless persons. For those who are living on the streets, intoxication poses particular safety risks due to increased vulnerability to theft, assaults, rape, and arrests [13]. SUD can lead to increased risk for contracting communicable diseases (i.e., through shared needles usage, risky sexual behavior, poor hygiene, etc.), accidental deaths (through falls with subsequent subdural hematoma, overdose), and an overall deterioration of health [14]. A study that observed physical and mental health in homeless illicit drug users in Dublin, Ireland, found that "current and previous drug users were five times more likely than non-drug users to suffer from multi-morbidity and current drug users were 4 times more likely compared to never drug users to have a lower perceived quality of life" [15].

In the USA, studies have found higher mortality risks in homeless than in the general population, often from preventable causes [16]. O'Connell reviewed data from several studies and determined that homeless have a three to four higher mortality rate than the general population. A history of alcohol use or intravenous drug use further increased the risk by an odds ratio of 1.5. Homeless persons are at particular risk for drug overdoses [17] and suicidal thinking or attempts [18]. In a recent study, homeless adults with SUD were significantly more likely than those without SUD to have suicidal ideation [19]. More than two of every five opioid overdoses among homeless were due to opioids alone [20] (Table 12.1).

Two-Way Relationship Between SUD and Homelessness

Substance use disorders are often cited as significant determinants of homelessness [21]. Addiction can lead to loss of job, disruption of social ties, and, for low-income persons, loss of housing [1]. Substances may be used to cope with problems; however, this leads to further employment instability and difficulty finding and keeping stable housing. In this model, alternatively referred to as the social selection or

Table 12.1 Substance implicated in overdose deaths in homeless adults [20]

Drug class	Number of overdoses (% of total)	% involving other/multiple drug classes	% involving alcohol intoxication	% involving other/ multiple drugs or alcohol
Any drug	219 (100.0)	39.7	30.6	54.3
Opioids	177 (80.8)	44.6	29.9	57.1
Cocaine	82 (37.4)	64.6	32.9	73.2
Antidepressants	21 (9.6)	90.5	52.4	95.2
Benzodiazepines	16 (7.3)	87.5	56.3	100
Antipsychotics/ neuroleptics	8 (3.7)	87.5	37.5	87.5

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"drift down" hypothesis, homelessness is the result of the progressive social and economic resource losses associated with substance use disorders [22].

Alternatively, homelessness can lead to SUD. In this model, known as social adaptation or social causation, once homeless, the person may become increasingly more socially isolated and can begin to turn to a substance of abuse, such as alcohol or illicit drugs, to manage the stresses of homelessness. Some homeless individuals may use alcohol and drugs to be accepted in the homeless community [22]. As early as 1946, researchers estimated that one third of homeless people in their investigation became heavy drinkers as a consequence of homelessness and related factors [23]. In another study by the UK, 80% of respondents had initiated using at least one new substance since becoming homeless [24].

Comorbid Psychiatric Disorders in Homelessness and SUD

Psychiatric disorders commonly co-occur with substance use disorders among homeless. Homelessness is associated with more severe psychiatric symptoms and a higher number of prior admissions for mental illness [25]. Similarly, people with both SUD and mental illness have been reported to be at greater risk for homelessness due to the severity of their symptoms, denial of illness and/or need for treatment, refusal to engage in services, and use of multiple substances [26]. Regarding personality disorders, both Clusters A (paranoid, schizoid, and schizotypal) and C (avoidant, dependent, and obsessive-compulsive) are found more often among homeless [27]. Homeless persons with serious mental illness are more likely to experience violence (assault, rape, injury), exposure to the elements, and accidents and to have been exposed to trauma as children [28–31]. Post-traumatic stress disorder is thus highly prevalent among homeless, with 18–48% meeting current criteria for PTSD and between 35 and 52% meeting lifetime criteria [32]. PTSD rates are particularly high among homeless women. A recent study of 148 homeless women in 3 US cities found lifetime prevalence of PTSD to be 42.6% [33]. Nearly 75% of this sample also met criteria for at least one SUD.

Treatment Considerations

Homeless persons with SUD are very challenging to work with. Even if housed, the situation may not be stable, and they remain at high risk for a return to homelessness. Clinical understanding of the natural history of SUD has changed the way we think about treatment. The expected relapses and remissions linked to subsequent treatment episodes reframe SUD as a chronic disease better served by the Chronic Care Model (CCM) [34]. Addressing their needs consists of a multi-pronged approach, including outreach, screening, assessment, behavioral interventions, and psychopharmacologic assistance to successfully manage acute detoxification and, in some cases, medication-assisted interventions.

The clinician often should serve in the role of reminding the patient of his/her goals and reasons for desiring sobriety and permanent housing and to consistently offer hope, when the patient has difficulty seeing it for themselves. Abstinence and sobriety are very difficult to achieve and sustain. It is often helpful to think about success in measured steps: longer periods of sobriety between relapses, shorter periods of relapse before requests for detox/assistance, and gradual acceptance of need for treatment services.

The Chronic Care Model

Treatment for SUD has adapted the Chronic Care Model [34]. CCM is a comprehensive model which uses evidence-based system changes to meet the needs of growing number of people who have a specific chronic disease. Thus the first adaptation is to view SUD as chronic diseases that would benefit from comprehensive care. CCM traditionally has six components to affect functional and clinical outcomes associated with disease management (Table 12.2).

Programs which have successfully implemented the CCM strategically used well-trained addiction clinicians and/or clinical social workers for SUD chronic care [36]. Populations in which this health systems model has been successfully implemented have included homeless veterans [37, 38] and homeless women with alcohol use disorder [39], as well as housed low-income individuals with alcohol or opioid use disorder in primary care setting [35].

Table 12.2 Chronic Care Model adapted to care for SUD

Element of the Chronic Care Model delivery	Application to delivering care for SUD
Self-management support	Is the delivery system designed to ensure the delivery of evidence-based care for SUD?
Clinical information systems	Is there expert consultation available to help clinicians adhere to evidence-based SUD treatment practices?
Element of the Chronic Care Model Delivery	Is the leadership supportive, and are resources provided to support the delivery of SUD care?
Self-management support	Is the delivery system designed to ensure the delivery of evidence-based care for SUD?
Clinical information systems	Is there expert consultation available to help clinicians adhere to evidence-based SUD treatment practices?
Community resources	Is the leadership supportive, and are resources provided to support the delivery of SUD care?

Katherine et al. [103]. Table 1. © Johns Hopkins University Press. Reprinted with permission of Johns Hopkins University Press [35]

This model is successful in the treatment of SUD for several reasons. First, longitudinal care specifically addresses the chronic nature of SUD [40]. Second, integrating this multi-pronged care at primary care level addresses concerns regarding stigma and reaches out to the location where many individuals will initially present for treatment [41]. Lastly, this model has demonstrated effectiveness in sustaining recovery [42].

Outreach

Homeless persons may not be aware of the services available in the immediate area. Initial efforts at outreach should first address basic needs to better engage the patient. Information should be provided regarding how and where to obtain identification cards, local temporary shelters, food/soup kitchens, and places that are available to shower and do laundry. Additional services that may be helpful include where to access use of a computer or fax so that patients can apply for jobs, attend school and complete homework assignments, and also maintain the social contacts they may have. In addition, those persons who are disabled will also need information regarding applications for entitlements, including government assistance for income and housing subsidies.

Once basic needs are addressed and a trusting relationship has been established, information about local behavioral health and substance abuse treatment programs can be shared. One small sample of assertive outreach to homeless persons with SUD demonstrated success in 41% of the group entering treatment [43].

Screening and Assessment of SUD

Adequate assessment tools are needed to identify the needs of homeless individuals with SUD, who experience unique circumstances and are particularly vulnerable for sensory loss, comorbid medical conditions, and, in some cases, cognitive impairment [44]. Access to appropriate assessments can further the development of preventive measures and treatment practices, which can yield improved health outcomes. Assessments should be customized and constructed specifically for the homeless. For example, while there are many assessments that screen for sleep quality or nutrition in the general population, these assessments lose validity among the homeless, given that this population often does not have a bed in which to sleep or access to food preparation and storage appliances (i.e., refrigerators).

The following tools have been validated for use that takes into account the specific circumstances of homelessness:

- Addiction Severity Index (ASI) [45]
- Beck Depression Inventory (BDI II) [46]

- Brain Injury Screening Questionnaire (BISQ) [47]
- Brief Instrumental Functioning Scale [48]
- Colorado Coalition for the Homeless Consumer Outcome Scale [49]
- Delighted-Terrible Faces Scale (DTFS) [50]
- Rural Homelessness Interview Schedule [51]
- Life Fulfilment Scale (LFS) [52]
- Nottingham Health Profile [53]
- Short-Form Survey 12 (SF-12) [54] and/or Short-Form Survey 36 (SF-36) [55]
- World Health Organization Quality of Life 100 (WHOQoL 100) [56] and/or World Health Organization Quality of Life BREF (WHOQoL-BREF) [57]

Behavioral Interventions

There are a wide range of evidence-based treatments that have been studied and found to be effective in homeless with SUD. Examples include motivational interviewing, assertive community treatment, intensive case management, 12-step programs, and contingency management. Among treatment programs that offer these services, six core principles that facilitate the reduction of substance use disorders among people who are homeless have been identified and are listed in Table 12.3 [58]. (Table 12.3**).**

Motivational interviewing (MI) has an extensive evidence base and wide applicability [59]. This modality can be used to facilitate acceptance of substance abuse treatment, transition to permanent and supportive housing, and case management services [60]. MI typically starts with an evaluation of the addictive behavior, its consequences, and the social and personal context of use. Personalized feedback is offered and guided by reflective listening, resistance reduction, and avoidance of arguing with the client. Direct advice is offered which challenges the client's assumptions but leaves the decision and responsibility to the client. Within the adult population, brief motivational interviewing is shown to decrease alcohol use, drug use, and smoking.

Intensive case management services can address the unique and extensive needs of homeless persons. An advantage of intensive case management is that the case manager can serve to coordinate services that are often fragmented and delivered

Table 12.3 Core principles associated with reduction in substance use disorders among homeless persons

Emphasis on client choice regarding treatment decisions
Development of a positive relationship between the client and the provider
Use of assertive community treatment approaches to service delivery
Housing (especially supportive housing)
Assistance with basic instrumental needs (food, income, clothing, etc.)
Flexibility and nonrestrictive policies

through many providers and agencies. An added advantage is that the case manager can serve to navigate multiple systems of care with and for the homeless person, in a way that he/she might not be able to do for themselves.

A shelter-based assertive community treatment (ACT) intervention in which homeless persons worked with a consistent social worker and psychiatrist was more likely to enter treatment than those who received standard treatment with the available provider [61]. This intervention resulted in 51% of participants engaging with a substance abuse program versus only 13% of the standard group. A related randomized trial compared ACT (a client-provider ratio of 1:15 or 1:10) with an integrated intensive clinical case management approach (ratio of 1:25) [62]. Both interventions were equally successful with approximately 1/3 of participants in each group achieving remission.

Group-based interventions demonstrate high levels of success in this population. A recent randomized clinical trial examined alcohol use among young homeless adults [63]. The treatment intervention used group processes including facilitator behavior, participant change talk (CT), and sustain talk (ST). Participants were followed for 3 months. Group CT was associated with decreased likelihood of being a heavy drinker at the 3-month follow-up. Peer groups and consumer-run drop-in centers are also valuable resources for people who are homeless, particularly if those centers also provide core services, such as shower and laundry facilities, and access to computers and telephones [64].

Alcoholics Anonymous (AA) is an effective group intervention for homeless persons with SUD due to affordability, non-intrusiveness, and ease of attendance. Additional benefits include the mentorship and fellowship seen which creates a socially supportive, non-judgmental environment [65]. The phases of Alcoholics Anonymous participation and recovery have been described as follows: “hitting bottom, first stepping, making a commitment, accepting your problem, telling your story, and doing twelfth step work” [66]. Narcotics Anonymous has adapted the AA model but replaces “alcohol” with addiction and serves to assist anyone who wishes to obtain sobriety from any substance of abuse [67].

AA and NA, however, may not be helpful for all homeless persons and, often, are utilized after an individual has secured housing. AA and NA emphasize prioritizing recovery and sobriety above everything else. However, when an individual has very basic unmet needs, such as securing shelter or food, these become the priorities [66]. Additionally, chronically homeless persons with SUD are at high risk for remaining homeless, and thus delays in being able to find and maintain quality housing [68]. Studies suggest that having economic and housing stability is almost a requirement to maintaining sobriety [69]. This in part has led to the evidence-based model of Housing First, in which abstinence is not a requirement for program entry [70]. In fact, one study found an 80% housing retention rate among persons who were chronically homeless, with SUD and a co-occurring mental health diagnosis when a Housing First approach was used [71].

Faith-based services are also available to address the needs of homeless persons with SUD. One study found that participation in religious-oriented programs did not significantly change the individual’s level of religiosity or religious participation

[72]. However, greater religious participation was associated with positive outcomes in housing, mental health, substance use, and overall quality of life.

Contingency management programs utilize behavioral psychology principles. Clients earn vouchers or obtain prizes or privileges as they achieve sobriety and maintain abstinence or achieve other behavioral change goals [73]. This type of a program has consistently shown higher rates of abstinence among homeless persons with cocaine use disorders [74] and reductions in risky behaviors, including quantity of substance use [75].

Medications for Substance Use Disorders

Access to medication-assisted treatments and adherence is very difficult for homeless individuals. The barriers include understanding medication instructions, keeping to a schedule, and being able to afford and store medication [76]. In addition, some persons are reluctant to take medications that may cause sedation as they have a need to be alert to potential assaults. As a result, studies have found that being homeless was associated with the lowest rates of medication adherence [77]. This may also play a role in the high use of hospital services.

Homeless persons with substance use disorders are at high risk for overdoses and related mortality [78]. A recent study found that half of opioid misusers had personally experienced an overdose and most of the sample had witnessed someone else's overdose [79]. Given the current epidemic of opioid overdose deaths, there is an urgent need for more widespread access to naloxone.

Naloxone is a short-acting prescription opioid antagonist, which actively displaces heroin and other opioid drugs from the mu opioid receptor. It rapidly reverses the effects of opioids and, in the event of overdose, is lifesaving, with rapid return of consciousness and independent breathing. Clinically, this is true whether the overdose is of an illicit drug, such as heroin, or a prescription opioid medication, obtained via prescription or diversion. Emergency naloxone kits, known as "take-home naloxone," are available in the USA, and although available in injectable and nasal spray forms, the nasal spray is more cost effective (approximately $30 for a twin pack) [80]. These kits can now be prescribed as part of the comprehensive care of persons who have opioid use disorders.

Studies have found that lay public friends and family members are highly willing to provide emergency care while waiting for traditional first responders to arrive [81]. Since 2017, 49 states and the District of Columbia legally allow pharmacists to dispense naloxone [82]. Naloxone should be prescribed to any person who is using heroin or other opioid products and instructed in its use [83]. These take-home kits have significantly increased naloxone availability [84].

Education should also be provided to the person's identified social contacts, friends, and/or family members in order to improve the likelihood that naloxone will be used and effective. Further, use of naloxone has been implemented in homeless health clinics and shelters [85, 86].

Office-based buprenorphine treatment for opioid disorders has been found to be as effective for homeless persons as it is for housed persons, but they required more clinical support during the initial month of treatment [87].

Settings of Care

Homeless persons use emergency department services much more frequently than do people who are housed for several reasons [88]. Homeless persons may have more severe disease, lack access to other forms of care, and often have medical comorbidities that may require evaluation and treatment. One model to evaluate and treat these persons while reducing the need for psychiatric hospitalization is the use of Mobile Crisis Teams [89]. People who are homeless also are more likely to be admitted for substance-related disorders than those who are housed [90]. They have longer lengths of stay once admitted, higher costs associated with the admission, and higher readmission rates [91, 92]. They also are more likely to enter a detoxification program [93]. However, detoxification alone is often ineffective with relapse rates varying by substance of abuse but range 60% for alcohol [94], 60–80% for cocaine [95], and 65–80% for opioid dependence [96].

For these reasons, adequate discharge planning is critical. Short-term (2–6 weeks) transition residential programs, when available, have been associated with significantly lower relapse rates [97]. Residential treatment can also improve social skills and enhance a sense of community and social connectedness. These programs can successfully reduce depressive symptoms, as well increase the person's ability to tolerate distress. The ability to tolerate distress has been associated with better outcomes among individuals with addictive behaviors [98].

Making housing continent upon substance abstinence produces higher rates of drug abstinence than non-contingent housing [74, 99]. Recent studies have added reinforcement-based treatment (RBT) to abstinence contingency housing [100]. RBT is an intensive day treatment program which consists of cognitive behavioral group therapy, abstinence-contingent recreational activities, vocational assistance, individual counseling, and housing support. The addition of RBT further improves treatment outcomes [101, 102].

Conclusion

Working with homeless individuals who also have substance use disorders is challenging. Based on available data, the most effective models of care address basic core needs first, particularly secure housing. The management of substance use disorders is best understood through the chronic care model of illness. Establishing trust with a consistent treatment team is needed, and through the use of motivational interviewing and other behavioral strategies, the person will not only be more likely to engage in substance abuse services but also more likely to sustain sobriety and recovery. Encouragement of participation in 12-step programs and faith-based groups will further a sense of community and facilitate the establishment of new social supports. When the person has co-occurring psychiatric and medical conditions, additional resources that can evaluate and treat acute conditions and offer preventive services will need to be coordinated. Because of the magnitude and complexity of services that are needed, the ideal mechanism is to provide a "one-stop shop," in which all of these services are offered in a single location. Clinical, social, and core services could be offered, as discussed below.

The clinical services should offer primary care, mental health, and substance use services at the same location. The substance use services would ideally include peer support counseling, group, and 12-step options, preferably with contingency and/or reinforcement approaches. Naloxone should be offered as part of comprehensive treatment to any person at risk for opioid overdose.

The social services would facilitate education regarding criteria for various government aid programs, including housing options (transitional, residential programming, subsidized, etc.), how to obtain needed documents (birth certificate, DD-214 for veterans, identification card, etc.), and how to apply for those programs. The social services would also include information regarding educational and vocational programs and, if the person is disabled, application for disability programs.

Core services would include space for showers, laundry facilities, computers, fax machine and telephone access, non-denominational chapel or meditation room, and emergency food pantry. Through this "one-stop shop" model, care is delivered in a patient-centered and coordinated fashion, which ultimately provides improved outcomes for the patient and less cost for society as a whole.

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Chapter 13
Management of Homeless Suicidal and Aggressive Patients in the ED

Elspeth Cameron Ritchie

Background

Assessing psychiatric patients in the emergency department (ED) for admission to psychiatry is often a challenging task. Yet it is the bread and butter of any psychiatric ward which has an emergency department (ED) that receives patients. Whether they should be admitted or not depends on numerous factors, from dangerousness to outpatient follow-up care availability. These will be further outlined below.

In the case of patients who are homeless, concerns regarding the possibility of secondary gain often come arise. Does someone want to come in because they are having command auditory hallucinations or for a warm bed or a sandwich? Is it the end of the month, and they have run out of monies from their disability check? If intoxicated, and with a blood alcohol level of 384, will they experience withdrawal symptoms that are potentially life-threatening?

Many of the homeless chronic patients are well-known to the psychiatric system, at least at our hospital. The knowledge can help guide treatment decisions. But that familiarity can breed complacency or compassion fatigue. After all, homelessness and substance abuse are certainly risk factors for suicide.

There is a high comorbidity between substance abuse and homelessness, as covered elsewhere in this volume. Often, patients are referred to substance abuse programs, which they do not follow up with for numerous reasons. This may be another source of frustration for the clinicians.

There are no easy answers presented here. Similarly a literature search did not reveal simple guidelines either. There are some guides which focus on suicidal patients in the emergency department in general [1–3] and mention homelessness as an additional risk factor.

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We have found that while there are any policies about admission to psychiatric wards, they normally focus on exclusionary criteria, such as dementia and severe autism. In addition, there are patients who clearly need admission and others who would not likely benefit from hospitalization. But the gray areas are harder, especially with the homeless population.

Here we will present case examples, with pros and cons towards admission, discharge, or reassessment when appropriate.

Factors to Consider for Admission to the Psychiatric Ward

When weighing whether to admit any patient, there are numerous factors to consider, such as:

- Past history of treatment.
- Suicide risk factors.
  - Including static and dynamic factors such as homelessness and substance abuse.
- Risk factors for violence.
- Whether the patient is brought in on an involuntary basis.
- Availability of outpatient services in the community.
- Compliance with outpatient treatment.
- Behavior on the psychiatric unit in the past hospitalizations.
  - Were they aggressive?
- Therapeutic benefit of past treatment.
- Medical status and compliance with medical treatment.
- Psychiatric and medical bed availability.
- Weather outside (extremes of hot or cold, rain or snow).
- Insurance (because of EMTALA, we do not consider insurance of patients in the ED but may consider insurance on transfers from other hospital ERs). (EMTALA is covered on the Centers for Medicare & Medicaid Services. Emergency Medical Treatment and Labor Act website [4].)

Every hospital is different in their capacity to admit patients. The examples below are reflective of my work at a local hospital in DC, with a relatively good capacity for admitting both voluntary and involuntary patients.

Composite Case Examples

These are composite case examples, designed for teaching points. They do not represent single identifiable patients. They will be discussed using the framework above. We hope that the case examples could be used for teaching purposes in psychiatry residency programs. There are no clear right or wrong answers here.

Very typical presentations follow:

Case 13.1

Mr. A. is a 56-year-old patient who has presented to the ER numerous times in the past 5 years. About half the time he is admitted and other times discharged "with resources." He is followed by a Core Service Agency (CSA) and is on an ACT (Assertive Community Treatment) team, but he does not engage with them. He lives in a shelter and is well-known to the shelter staff.

He presents, as he often does, with suicidal ideation, "wanting to jump onto the Metro tracks." He claims to have command auditory hallucinations, telling him to jump.

He has history of two serious suicide attempts in the last 5 years, once by slicing himself on the throat with broken glass and once by cutting himself with a knife.

He has a history of drug and alcohol abuse, specifically cocaine, PCP, and about a fifth of vodka a day.

The inpatient psychiatry ward is almost, but not completely, full.

When hospitalized in the past, he usually stays about 3 days, does not participate much in treatment, and says after about 2 days that he is "better and ready to go."

However, he is not aggressive on the ward and expresses gratitude for the treatment.

To Admit or Not

This is a hard one, as he does not benefit therapeutically much for hospitalization. We called his CSA and ACT team. They recommended admission because of his non-compliance. We decided to keep him in the section of the ER for psychiatric patients (known to us as "the Annex") and reassess in the morning.

In the morning, after gratefully consuming double portions of food, he said that he no longer wanted to come in to the hospital. We did not feel he met criteria for involuntary inpatient admission. We called the CSA and ACT team, who reluctantly came to pick him up from the hospital.

Case 13.2

Ms. B is a 65-year-old female who is brought in by police on an involuntary basis after being found in the local bathroom of Union Station. Here in Washington DC, the involuntary paperwork is known as an "FD-12."

She had been aggressive with the train customers who had just arrived for New Year celebrations. She was aggressively panhandling and cursing at those who did not give her money.

She is well-known to local behavioral agencies but has been resistant to both outreach and treatment.

She was brought to our local ER, where her glucose was found to be 584 and her blood pressure 180 over 110.

She was also rumored to have bedbugs and lice. However, after a shower in the ER, these bugs could not be verified.

She was stabilized in the ER and presented to psychiatry for treatment. However, her blood sugar remained in the low 400 s and her BP continued high (180/110).

Apparently, she had been living on the streets near Union Station (in Washington DC). Her guardian wanted to have her admitted to the state psychiatric hospital, which does not take patients directly, but only after stabilization at a local hospital.

She was also known to the staff from many previous hospitalizations. She normally was loud and intrusive and occasionally tried to hit staff or patients.

To Admit or Not

We discussed her case and felt that she warranted admission for medical reasons because of her high glucose levels. However, the ER brought her blood pressure and sugar down and did not think she met criteria for a medical admission. The medicine staff also knew her and were reluctant to take her to medicine because of her bad behavior on medicine.

So she was admitted to psychiatry. However, the routine blood pressure and glucose checks continued to be high, and when she spiked again at 200/115, a “rapid response” was called. She went back to the ER and was admitted to medicine. After 3 days, she was discharged back to a shelter.

Another week later, she was back in the ER, and the cycle repeated.

Case 13.3

Mr. C was also well-known to psychiatry. He lived on the streets and in the parks, and normally he resisted outreach efforts and mental health treatment.

He was brought in by the local homeless outreach team; they were concerned about his ulcers on the feet.

The FD-12 talked about self-neglect and wearing too few clothes for the freezing cold weather.

Upon examination, his feet were gangrenous, with several toes completely black.

To Admit or Not

He was admitted to podiatry, where he refused to let his toes be amputated. “You are just trying to take off my feet,” he yelled.

The consult/liaison team was consulted and found he lacked capacity for decision-making. His gangrenous toes were then amputated. The surgery went well.

The C/L team prescribed an anti-psychotic. After several days, he revealed to us the name and contact for a family member. He was linked to a core service agency, got into housing, and has been doing well ever since.

Case 13.4

Mr. D. is a 27-year-old male from Honduras who was brought in by police for getting drunk and screaming epithets at passersby. He was also exposing his genitals.

He was brought in by the police on an FD-12 (involuntary detention).

His blood alcohol level was 384 on admission.

He had many similar presentations in the last year and was usually discharged from the ER.

He apparently varied from living on the streets to other homeless shelters.

He did have a history of withdrawal with shakes and tremor, but not delirium tremens.

He was an undocumented immigrant with no health insurance. He did have a connection with a Spanish-speaking core service agency.

To Admit or Not

Another case which could go either way. In this case he was not admitted the first three times but was on the fourth visit within 3 weeks.

We got in touch with his family in Honduras, who were relieved to know he was still alive. We got him into substance abuse counseling, and he has remained sober for the last 6 months.

Case 13.5

Miss E. is a 27-year-old woman who had been living under a bridge after she was kicked out of her home because of her disruptive behavior, probably a combination of PCP uses and either bipolar or schizoaffective disorder.

She was invited to Thanksgiving dinner with her relatives. She became disruptive and loud. Her parents called the police after she threatened them with a pair of shears. The police brought her to the ER on an FD-12 (involuntary detention).

In the ER, the normal labs were done, which showed a positive pregnancy test. Her urine drug screen also showed cannabis, cocaine, and PCP use.

An ultrasound in the ER showed her to be about 20 weeks pregnant. Apparently, she had not gone for any prenatal care. She denied that she was pregnant.

To Admit or Not

This case was also complicated. She was on an involuntary status. She was pregnant. But she was also well-known to the psychiatry staff as being disruptive on the ward.

On the other hand, we could not see her going back to sleeping under the bridge, while pregnant.

We admitted her. She refused to allow the obstetrics consult service to see her. She wanted to leave and demanded a court hearing.

The judge felt that her symptoms were mainly because of drug use and not mental illness. Our mental health law in DC (the Ervin Act) covers mental health issues and not substance abuse. She ordered her release.

A month later she was back in the ER, after a miscarriage. She was there on a voluntary basis. Our staff evaluated her, but this time she was voluntary and did not want to stay so we released her.

Case 13.6

Mr. F was brought to the ER after an overdose where he was found unconscious and barely breathing. The ambulance provided him with Narcan (naloxone) and he revived quickly.

Upon evaluation, he was deemed to be a 54-year-old gentleman with a bad heroin habit. He also uses other opioids such as fentanyl. His habit cost him his job and his wife. Not able to pay his rent, he was soon in the shelter system.

In the ER, our peer recovery coaches and intake team evaluated him.

To Admit or Not

He did not want admission, and we did not feel he met criteria for the mobile crisis team to do the petition for involuntary admission.

The peer recovery coaches did give him literature and resources for a substance abuse treatment program in the city, which he said he would go to. When they called to follow up, he had not made it there.

Two months later he was brought back by EMS, again unresponsive. This time he could not be revived. Toxicology showed high levels of fentanyl in this blood.

Conclusion

As these examples show, there are no easy decisions with homeless suicidal or violent patients. These case examples are presented as a way to think about patients when evaluating them in the ER.

There are numerous other case examples which could be outlined, but we hope these will serve as platforms for discussion, both with ER and psychiatry staff.

In a perfect world, we would have unlimited capacity for admissions to the hospital, as well as a respite system, as covered in other chapters. We would have enough housing to shelter all the vulnerable in our society. We would have perfect laws, which both respect the autonomy of the individual and take care of them when they are ill.

However, we live in an imperfect time and try to do the best we can with what we have.

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Suggested Readings

Readings for Frequent ED Utilization and Malingering

https://www.ncbi.nlm.nih.gov/pubmed/10763402?dopt=Abstract
https://ps.psychiatryonline.org/doi/full/10.1176/appi.ps.201800140
https://ps.psychiatryonline.org/doi/10.1176/ps.2007.58.3.335

Readings for Concepts of Compassion Fatigue

https://www.nytimes.com/2019/12/09/us/compassion-fatigue-homeless-california.html
https://www.researchgate.net/profile/Beth_Stamm/publication/266284945_Helping_the_Helpers_Helping_the_Helpers_Compassion_Satisfaction_and_Compassion_Fatigue_in_Self-Care_Management_and_Policy_of_Suicide_Prevention_Hotlines/links/566f5c1008ae4d9a425725c7/Helping-the-Helpers-Helping-the-Helpers-Compassion-Satisfaction-and-Compassion-Fatigue-in-Self-Care-Management-and-Policy-of-Suicide-Prevention-Hotlines.pdf
https://sophia.stkate.edu/cgi/viewcontent.cgi?article=1116&context=msw_papers

Readings for Assaults in ED and how to De-Escalate Patients and Enhance Safety

https://www.acep.org/administration/violence-in-the-emergency-department-resources-for-a-safer-workplace/
https://www.mdedge.com/psychiatry/article/76047/practice-management/take-caution-emergency-and-inpatient-psychiatric
https://www.psqh.com/analysis/employee-safety-preventing-violence-in-the-emergency-department/

Chapter 14
Clinical Management of Homeless LGBTQ+ Patients: Overcoming a History of Discrimination and Invisibility and Improving Care Through Education, Training, and Advocacy

Rebecca Gitlin, Kavita Demla, and Daniel D. Sewell

Introduction

Individuals who identify as sexual or gender minorities face a myriad of challenges, both in becoming homeless and when seeking to avoid homelessness. In addition to the physical and mental difficulties that all homeless people encounter, these individuals often face the additional challenges of discrimination, invisibility, social stigma, and rejection by their family members and friends in response to their gender and/or sexual identities. They are also at increased risk of violence, abuse, and exploitation compared with their heterosexual peers. Transgender individuals are at particular risk for violence and often have difficulty finding shelters that accept and respect them.

It is well documented that sexual and gender minorities are disproportionately represented among homeless youth. While there is increasing knowledge about sexual and gender minority youth homelessness, research on the overall sexual and gender minority homeless population is lacking [1]. The limited amount of scientific information currently available about this marginalized group is concerning given their heightened vulnerability and need for targeted, culturally responsive services. This chapter aims to summarize what is known about LGBTQ+ individuals experiencing homelessness, including the challenges they face, and to propose systemic solutions and clinical care guidelines to help address these challenges.

Over the past several decades, the acronym used to reference sexual and gender minorities has grown in parallel with the recognition and acceptance of sexual and gender minorities other than the ones signified by LGB (lesbian, gay, and bisexual). Current categories of sexual and gender minorities include lesbian, gay, bisexual,

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transgender, queer, questioning, intersex, asexual, pansexual, and two-spirit (LGBTQQIAP2-S) [2]. As in other recent publications on this and related topics, for the sake of brevity, the authors use the term *LGBTQ+* as an umbrella term for sexual and gender minorities. When study results or clinical recommendations relate only to a specific gender or sexual minority (e.g., transgender individuals, bisexual males), this distinction is noted.

Prevalence and Risk Factors for Homelessness Among LGBTQ+ Individuals

Prevalence of Homelessness Among LGBTQ+ People

In Ecker's 2019 review of the literature on LGBTQ+ adults experiencing homelessness, the proportion of individuals experiencing homelessness who identify as LGBTQ+ in major cities in the United States and Canada ranged from 5 to 30% [1]. One study's findings indicated that the rate of individuals experiencing homelessness identifying as LGBTQ+ increased more than fivefold when comparing adults over age 25 (5%) to young adults age 24 and under (27%) [3]. The author of this study posits that these are likely low estimates of prevalence because LGBTQ+ identities are typically underreported due to fears regarding the potential consequences of disclosing gender identity or sexual orientation, the context of the study site (e.g., urban vs. rural areas), and the methodology used [4]. The finding of 30% prevalence of LGBTQ+ individuals within the homeless population obtained from survey respondents over the age of 18 in San Francisco is notable given that only 14% of the general population in San Francisco identifies as LGBTQ+ [5]. Of those survey respondents who identified as LGBTQ+, 41% identified as bisexual, 25% gay, 14% lesbian, 11% queer, and 9% transgender.

Although other cities have conducted similar homeless counts, the majority have not included questions about sexual orientation as part of their surveys, which has limited the amount of data on LGBQ+ adults experiencing homelessness [1]. In addition, these counts do not capture the "hidden homeless," including those temporarily staying with friends, relatives, or others and without immediate prospect of permanent housing [6]. Ecker (2019) [4] postulates that the hidden homeless population may include a significant number of LGBTQ+ individuals, since some of them may avoid homeless shelters due to fear of discrimination, harassment, and violence as described later in this chapter.

While there is generally scant research on LGBTQ+ people experiencing homelessness, much of the current literature has focused on LGBTQ+ youth. Estimates of the prevalence of LGBTQ+ individuals among runaway and homeless youth vary from 20 to 40% [7]. According to a national survey by the Williams Institute, which aimed to assess the experiences of homeless youth organizations in providing services to LGBTQ+ youth, approximately 40% of the youth served by these agencies (both homeless and housed) identified as LGBTQ+ [8]. On average, 30% of clients utilizing housing-related programs, including emergency shelter and transitional living programs, identified as LGBT (26% as LGB and 4% as transgender). The overrepresentation of LGBTQ+ youth experiencing homelessness in these estimates is striking considering that only 5 to 7 percent of the general youth population identify as LGBTQ+ [9].

Risk Factors for Homelessness Among LGBTQ+ Communities

While there is no single cause of homelessness among LGBTQ+ individuals, an interplay of factors must be considered, including structural and systemic inequalities (homophobia/transphobia, health disparities, inadequate legal protections, income inequalities, housing insecurity, and discrimination), interpersonal problems (familial and relationship conflict), and intrapersonal challenges (mental illness, substance misuse) [1, 4]. In the Williams Institute report, the top five reasons why LGBTQ+ youth were identified as homeless or at risk of becoming homeless were (1) running away due to family rejection of sexual orientation or gender identity; (2) being forced out of the family home by parents due to sexual orientation or gender identity; (3) physical, emotional, or sexual abuse at home; (4) being aged out of the foster care system; and (5) financial or emotional neglect from family [8].

LGBTQ+ youth have reported running away from home at an earlier age compared with cisgender heterosexual youth [10]. Rejection by one's family during childhood and adolescence due to gender identity and/or sexual orientation has been well established to be a primary cause of homelessness among LGBTQ+ youth and has been associated with health problems in LGBTQ+ young adults [11]. Cochran et al. also found that LGBTQ+ youth left home more often and were more likely to leave as a result of physical abuse and alcohol use in the home when compared to their cisgender heterosexual peers [12]. Conversely, LGBTQ+ youth from families with no or low levels of rejection experience a significantly lower risk for depression, suicidality, illicit substance use, and risky sexual behavior [13], which may contribute to a lower risk for homelessness.

The factors leading to homelessness among LGBTQ+ youth may also apply to LGBTQ+ adults (e.g., rejection by family members). Regardless of how a young person becomes homeless, experiencing homelessness during childhood and adolescence also contributes to elevated risk for homelessness as an adult. Certain adverse childhood experiences are risk factors for adult homelessness, such as the combination of lack of care and either physical or sexual abuse during childhood [14].

Additional factors that, when present during one's adolescence, have been found to be strong predictors of homelessness among young adults include running away from home [15], a troubled family background, school adjustments problems, and experiences of victimization [16]. Further, LGBTQ+ youth have an increased risk of not completing high school while homeless [17]. The impact of this may carry forward into adulthood by way of limiting employment options and earning potential which, in turn, increases the risk for homelessness due to poverty.

While shelters are intended to be a place of refuge and support for individuals experiencing homelessness, they can often be a site of rejection, discrimination, vulnerability, and danger for LGBTQ+ people. Indeed, LGBTQ+ youth often avoid support services and shelters due to actual and anticipated discrimination and violence [18]. Transgender youth in particular face the highest amount of discrimination compared with any other youth group in the shelter system. They are often denied access to shelters due to their gender identity and have historically been excluded from single-gender shelters that lack policies regarding gender diversity. This leads to increased vulnerability to violence, murder, and threats to their safety and well-being, including the possibilities of living on the street, engaging in survival sex [19], or returning to live with family members who have been rejecting, neglectful, or abusive [20]. When transgender and gender diverse individuals are assigned placement in shelters according to their sex assigned at birth, they are at risk for being targets of aggression and sexual assault.

Sexual and gender minorities experience significant disparities in health status, health-related behaviors, and violence and victimization, further contributing to the risk of homelessness. LGBTQ+ individuals are at increased risk for substance misuse [21] and psychiatric distress, including mood and anxiety disorders [22], all of which contribute to increased risks for homelessness [23]. Examination of the behaviors associated with heightened risk for HIV infection, such as higher-risk sexual behavior and injection drug use, among LGBTQ+ runaway youth revealed higher levels of overall risk for contracting HIV [10]. Further, their risk behaviors had an earlier age of onset and reached higher levels for all ages in this population compared with heterosexual runaway youth [10]. Additionally, LGBTQ+ people experiencing homelessness, particularly youth and transgender individuals, face higher levels of sexual assault. Cray et al. found that LGBTQ+ homeless youth had been sexually assaulted or raped more than three times the rate among other homeless youth [24].

For people experiencing homelessness, including members of the LGBTQ+ community, sexual abuse is both a contributor to and consequence of homelessness [25]. As previously noted, sexual abuse at home and in foster care is a key reason why many young people run away from these environments and become homeless. Sexual abuse in turn leads to poor outcomes for LGBTQ+ people experiencing homelessness, including increased risk for substance use and mental health issues [25].

Substantial scientific evidence reveals that homeless youth and young adults engage in *survival sex* or are commercially sexually exploited in order survive on the streets [26]. Walls and Bell (2011) found that gay-, lesbian-, and bisexual-identified homeless youth and young adults were significantly more likely than heterosexual-identified youth to have engaged in survival sex [26]. The previously referenced study by Moon [10] revealed that gay/bisexual males and lesbian/bisexual females reported high levels of exchanging sex for money, drugs, or other needs (46% and 23%, respectively).

Discrimination against members of the LGBTQ+ community in the rental housing market is yet another factor that undermines the ability of LGBTQ+ people to find housing and increases their risk for homelessness. A study by the US Department of Housing and Urban Development found that same-gender couples experience less favorable treatment in the rental market, the primary evidence of which was receiving significantly fewer responses to email inquiries about advertised rentals than heterosexual couples [27]. Interestingly, in jurisdictions with state protections against housing discrimination on the basis of sexual orientation, results showed more adverse treatment of same-gender couples than in jurisdictions without such protections.

Systemic Approaches to Addressing Homelessness Within LGBTQ+ Communities

Given the number of LGBTQ+ individuals experiencing homelessness and the spectrum of factors that contribute to homelessness, reducing the number of LGBTQ+ people experiencing homelessness and improving the care that they receive require a variety of systemic approaches. These approaches are shaped by what is known about the causes of homelessness in the LGBTQ+ population and fall into three broad categories: national, regional, and local.

National Efforts and Interventions

National efforts to address homelessness in the LGBTQ+ community have and will continue to involve the Federal Government and national not-for-profit organizations whose primary mission is to reduce homelessness, such as the National Law Center on Homelessness and Poverty and the National Alliance to End Homelessness. Advocacy organizations like the Human Rights Campaign Fund and the Lambda Legal Defense and Education Fund (LLDEF) also have efforts underway to address LGBTQ+ homelessness such as LLDEF's Youth in Out-of-Home Care Project [28].

Obtaining accurate counts of the number of LGBTQ+ people experiencing homelessness is one of the most important contributions the Federal Government can make in addressing homelessness among members of the LGBTQ+ community. Accurate counts are needed in order to distribute resources equitably, as well as to assess the impact of interventions to reduce the number of individuals experiencing homelessness and to improve their health and well-being. In particular, obtaining demographic information about the homeless LGBTQ+ population will help allocate resources that would benefit various subgroups of LGBTQ+ individuals who are homeless.

Academic institutions and non-profit organizations have conducted helpful studies to approximate the number of LGBTQ+ individual experiencing homelessness; however, federal population studies have been the primary and most reliable source of data about the size and characteristics of the US population, including those who are homeless. These studies include the US Census, which occurs every 10 years, and the American Community Survey (ACS), which samples about three million people annually.

The US Census and ACS currently contain questions about a person's sex, race, ethnicity, and age, but not about their gender identity or sexual orientation. In 2016, four federal agencies (the Department of Justice, the Department of Housing and Urban Development [HUD], the Department of Health and Human Services, and the Environmental Protection Agency) requested that the Census Bureau include questions about gender identity and sexual orientation in the 2020 Census to support the efforts by these agencies to prevent or prosecute hate crimes and reduce discrimination in housing, employment, and lending. Although the Obama Administration initially approved of this request, in March 2017, the Trump Administration ordered the Justice Department to reverse this decision, whose impact will include perpetuating the invisibility of the LGBTQ+ community. In June 2019, the LGBTQ Data Inclusion Act was introduced simultaneously into both chambers of Congress. This act would require federal surveys, including the US Census, to include voluntary, confidential self-report questions on gender identity and sexual orientation. This information is essential for a better understanding of the size, scope, geographic distribution, and needs of the LGBTQ+ community, just as these surveys have provided similarly helpful information in matters involving race. Although support for the LGBTQ Data Inclusion Act has been increasing, whether it will be enacted by Congress is uncertain [29].

Ensuring that all current and future federal laws and policies serve to help reduce homelessness among members of the LGBTQ+ community or, at least, have no potential to undermine efforts to reduce homelessness is another top priority. For example, in May 2019, HUD proposed a new rule that would weaken Obama-era protections for transgender people experiencing homelessness by allowing federally funded shelters to deny people admission on religious grounds or based solely on sex assigned at birth rather than current gender identity [30].

The Obama-era protections are part of the 2012 Equal Access Rule, which HUD published as a final rule in 2016 in the Federal Register under the title "Equal Access in Accordance with an Individual's Gender Identity in Community Planning and Development Programs" [31]. Through this final rule, HUD ensures equal access to individuals, in accordance with their gender identity, in programs and shelters funded under programs administered by HUD's Office of Community Planning and Development (CPD). The final rule outlaws housing discrimination on the basis of sexual orientation or gender identity by denying funding to any recipient who fails to grant equal access to accommodations, services, and other benefits regardless of the individual's gender identity or sexual orientation, and in a manner that allows equal access to the individual's family. A coalition of attorneys general from 16 states recently urged HUD to withdraw this proposal to eliminate the Obama-era protections.

Systematic Approaches on a Regional and Local Level

The causes of homelessness among members of the LGBTQ+ community also provide a basis for regional and local intervention. Efforts that could make a significant difference for the homeless LGBTQ+ population include:

1. *Increasing the amount of money* available through both public and private sources to address the needs of LGBTQ+ individuals experiencing homelessness.
2. *Increasing the number of shelters* which both accept members of the LGBTQ+ community and are well qualified to care for them. In addition to providing training to the staff members of shelters, offering a certification which includes a financial incentive to shelters that do this well would help both individuals experiencing homelessness and those who care for them know which ones are welcoming and could also inspire other shelters to become certified.
3. *Carefully reviewing existing programs and resources* that prepare LGBTQ+ youth for life after foster care. Although a number of resources and programs exist such as the Foster Care Transition Toolkit developed by the US Department of Education [32], the number of LGBTQ+ youth experiencing homelessness suggests that these programs are not optimally effective.
4. *Educational and training programs* for:
    - (a) Healthcare providers and first responders.
    - (b) Family members of LGBTQ+ people and individuals who work in places of worship and schools.
    - (c) Members of the LGBTQ+ community who are homeless or at high risk for becoming homeless focused on addressing some of the root causes of homelessness.
    - (d) Individuals experiencing homelessness, including homeless shelter residents.

The following section expands upon each of these remedies.

Increased Funding

On a systemic level, filling in the gap of government-funded programs specifically designed to meet the needs of sexual and gender minorities who are homeless is paramount for improving services for this population. The Williams Institute survey of organizations serving homeless youth found that lack of funding, particularly government funding, was the primary barrier to improving services related to reducing LGBTQ+ homelessness [8]. State and local funding, rather than federal funding, was identified as the primary facilitator for addressing this. Advocacy organizations and philanthropists have been and should continue to be viewed as allies in addressing the gaps in care and services.

More Homeless Shelters Welcoming of LGBTQ+ Individuals

Most shelters are serving the LGBTQ+ population. According to the Williams Institute survey, nearly all homeless youth organizations (94%) responded that they worked with LGBTQ+ youth in the past year, compared with 82% of these organizations 10 years prior. Additionally, while less than half of respondents in the survey stated that they worked with transgender clients 10 years ago, more than 75% of respondents stated that they worked with transgender youth in the past year [8]. Despite increasing numbers of homeless members of the LGBTQ+ community seeking assistance through homeless shelters, and despite the overrepresentation of LGBTQ+ community members among homeless youth as discussed above, service providers are often underprepared to work with both older and younger members of the LGBTQ+ community. Maccio and Ferguson (2016) observed that current programs for homeless youth are more commonly aimed at heterosexual and cisgender youth [7]. Maccio and Ferguson argue that this leads to a dearth of services meeting the needs of LGBTQ+ individuals, such as private showers.

LGBTQ+ competency and responsiveness training for homeless shelter staff members is needed, including training regarding recognition of the more common physical and mental health problems experienced by individuals experiencing homelessness who identify as a sexual and/or gender minority and how to refer these individuals to the services which can address these problems. As previously noted, LGBTQ+ individuals experiencing homelessness have lived and continue to live in homophobic and transphobic families and communities, are often survivors of one or more types of abuse and neglect, and are living with the common mental health challenges associated with these experiences. Acknowledging and addressing the contribution of homophobia and transphobia to the development and maintenance of psychiatric distress, substance use problems, and risky health behaviors is essential, as the provision of specialized mental healthcare could help reduce the possibility that untreated mental health issues are contributing to or perpetuating homelessness.

In addition, intensive services tailored to LGBTQ+ individuals experiencing homelessness should include efforts to reduce exposure to sexually transmitted infections and diseases, including HIV. For a variety of reasons, members of the LGBTQ+ homeless population are particularly vulnerable to sexually transmitted infections and diseases (STI/STD). Addressing STI/STD transmission risk reduction includes using an incremental *harm reduction model*, which is discussed in more detail in upcoming sections of this chapter. Further, greater levels of STI/STD patient education and testing could result in fewer new infections through the adoption of safer sex practices and earlier detection and treatment [25].

Improved Preparation for Life After Foster Care

There is a need for better programs that prepare LGBTQ+ adolescents for life after they turn 18 and transition out of foster care. Although the federal government has passed a number of laws that have created programs of this kind, the absence of adequate preparation and support for LGBTQ+ individuals who are no longer eligible for foster care is a serious gap in our social programs and healthcare services. Like many of their peers who are not sexual or gender minorities, these individuals are not necessarily ready to live successfully as independent adults. They are often not yet able to earn a living wage; this alone greatly increases their risk of becoming homeless and experiencing the risks and hardships that often accompany homelessness.

Studies show that many youth who exit foster care have difficulties as they transition to adult life. They are more likely than their peers to be homeless or have housing instability, experience health and mental health problems, misuse alcohol and other substances, have encounters with the criminal justice system, earn less money, be unemployed, and not have a high school or postsecondary degree [33].

There are a number of federal laws and programs to assist youth who are transitioning out of foster care. Many of these are described in the Foster Care Transition Toolkit [32]. These laws have been repeatedly augmented and improved. For example, the Fostering Connections to Success and Increasing Adoptions Act of 2008 allows states the option to extend the age limit for foster care when youth meet certain education, training, or work requirements and also supports older youth by requiring agencies to engage in planning related to youth's educational stability, healthcare coordination, and transition out of foster care.

Federal law requires child welfare agencies to assist youth in developing a personalized transition plan during the 90-day period before a youth turns 18 or is otherwise scheduled to leave foster care. Federal law specifies that the youth's transition plan must address specific options related to housing, education, employment, health insurance, a healthcare proxy or power of attorney, mentoring, and support services. In addition, the law specifies that the caseworker who is assigned to the adolescent in foster care must work with the youth and other trusted adults who have been chosen by the youth to create this plan.

While the law refers to a 90-day period, most youth will benefit from more time to prepare. FosterClub is a national non-profit organization which maintains a network and provides a variety of resources including a *Transition Toolkit* [34], to help youth plan their next steps, and a bulletin for case workers, *Working With Youth to Develop a Transition Plan* (https://www.childwelfare.gov/pubs/youth-transition/ Accessed online on 12/29/19) [35]. Based on the number of LGBTQ+ youth who were formerly in foster care and are now homeless, these laws, programs, and preparation are not sufficient.

Education and Training Efforts

Homeless Shelter Staff Members, First Responders and Healthcare Providers

Education and training of first responders, homeless shelter staff members, and healthcare providers across all clinical disciplines is another strategy which will lead to better outcomes for members of the LGBTQ+ community who experience homelessness. Aspects of training homeless shelter staff members were discussed above.

Training of first responders is important so that they can provide optimal support including the use of inclusive language, recognition of signs and symptoms suggestive of one or more forms of abuse or victimization, and referrals to shelters known to be affirming toward sexual and gender minorities. Training programs centered on homelessness in the LGBTQ+ community for physicians, clinical psychologists, physician assistants, advance practice nurses, nurses, and social workers will help with various aspects of this problem including ensuring that the clinical environment is welcoming and affirming.

The training of emergency department (ED) personnel is especially important – among people experiencing homelessness, presentation to the ED is often one of the only opportunities for healthcare providers to intervene and assist with finding the support and resources needed to exit homelessness. For healthcare providers and first responders, their interactions with members of the LGBTQ+ community can serve as an opportunity to build trust and provide education and referrals to potentially helpful services, both of which could improve the health and safety of these individuals.

During these interactions, clinicians and first responders should consider using a *harm reduction model* [36]. The goal of this model is to pursue behavior change that is incremental and decided upon within a collaborative relationship between the provider and the patient. This approach recognizes that risk reduction is helpful and often more likely to be achieved than extinguishing the behavior completely.

For example, helping a patient adhere to safer sex practices 100% of the time may be an unrealistic goal, but obtaining cooperation for STI/STD testing may be a useful and obtainable incremental goal. Alternatively, for someone who is living with HIV, quantification of their T cells might be a valuable incremental step which eventually leads to regular use of antiretroviral therapy. Using the harm reduction approach is discussed again in the Clinical Approaches section of this chapter.

Education for Family Members, Faith Leaders, and Educators

Addressing homophobia and transphobia in various social institutions such as schools, faith communities, and families is a third area where systemic efforts are needed in order to better address the roots of homelessness for LGBTQ+ people. Younger members of the LBGTQ+ community, in particular, often face significant challenges as they explore and process developing sexual and gender identities within the setting of their family, faith community, school, or peer networks. They may face risks including isolation, rejection, and victimization and often do not have any available family, school environment, or sufficient peer networks to support them once homeless [12].

Primary interventions for LGBTQ+ youth should focus on providing services to assist family members, faith leaders, and educators who are struggling to understand and support young members of the LGBTQ+ community. These educational efforts have the potential to increase acceptance and understanding and to improve the home environments of LGBTQ+ youth which, in turn, may reduce the likelihood of initial and recurrent episodes of homelessness. Such community interventions would also help increase the awareness of the contribution of homophobia and transphobia to the development and maintenance of substance use problems, psychiatric distress, and risky health behaviors.

It is important that clinicians and other service providers do not make their initial or primary intervention to reconnect LGBTQ+ youth with their families. For some families, improving family relationships and communication is not possible due to the firmly held homophobic and transphobic beliefs of the family members. For some youth, episodes of homelessness have saved their lives; indeed, some transgender and gender diverse youth have stated they would likely have died by suicide if they had not left their families and become homeless [23].

Homeless Communities

Finally, as suggested by others including Cochrane et al. [12], programs that encourage acceptance of LGBTQ+ individuals within homeless communities in the streets and in shelters may reduce the risk of victimization in these settings. Empowering members of the homeless community to be more comfortable with diversity and better able to take care of each other could also help improve the lives of sexual and gender minority individuals who are homeless by establishing a culture of acceptance and support in homeless shelters. Easily taught and implemented techniques for responding to biased and offensive comments would begin to make shelter environments safer and more welcoming for everyone. Examples of such techniques include something as simple as verbalizing the word “Ouch!” when a shelter resident is overheard speaking in a homophobic or transphobic manner to another shelter resident in order to signal that what was just said was painful. Another relatively easy to learn and use technique is termed *encouraging empathy*. This approach involves having the person who overheard the offensive comment ask the person who spoke it how it would feel if someone said something similar about their group, friend, partner, or child [37].

Clinical Approaches

The section above describes the specific and sometimes unique multisystemic ways in which LGBTQ+ individuals experiencing homelessness are impacted by discrimination and stigma. This section presents the knowledge and skills needed to optimally care for LGBTQ+ identifying patients. Providers across a variety of contexts will be better equipped to address the unique needs of LGBTQ+ individuals experiencing homelessness by cultivating skills that promote an affirming and responsive approach to care.

Assessing Sexual and Gender Identities

Individuals who identify as LGBTQ+ often go unrecognized as such within our systems of care and feel invisible. On a broader scale, this lack of recognition may perpetuate stigma and make it more difficult for providers (and society at large) to contextualize the unique experiences of LGBTQ+ individuals and communities. In the specific context of healthcare, this lack of recognition will undermine the provider's ability to integrate culturally responsive solutions to help individuals who are sexual and gender minorities and experiencing homelessness.

To mitigate the risk of failing to provide culturally responsive services, providers should routinely incorporate an assessment of sexual and gender identity within the initial encounter with individuals seeking services. For many providers, this may be a relatively new and perhaps uncomfortable practice. Assessing sexual and gender identity, however, may facilitate efforts to build trust and establish rapport with all patients and especially for those who identify as LGBTQ+.

One study [38] demonstrated that the majority of participants, including those who identified as cisgender and/or heterosexual, approved of being asked about their sexual and gender identity and would also approve of being asked again at a later visit. A logical, and perhaps more comfortable, moment for the provider to ask about sexual and gender identity is when asking about other intersecting identities:

- *We just (or recently) met, and I don't want to make any assumptions about who you are or how you identify. How would you identify your race or ethnicity? How would you describe your gender identity? What is your sexual orientation?*

These inquiries should be made in a private setting whenever possible and with an open and assertive stance. Asking about sexual and gender identity in a timid and/or assumptive manner can have the opposite effect of what is intended, and it may result in LGBTQ+ individuals feeling unsafe or otherwise uncomfortable [9]. A provider should also explicitly grant a patient permission to decline responding or to disclose their identities at a later time.

In addition to asking about identities, providers can communicate awareness and respect toward LGBTQ+ communities by inquiring about which pronoun(s) a patient uses, recording this information in the clinical record, and using those pronouns whenever addressing the patient [39]. To foster an affirming environment, these inquiries should occur with all individuals seeking services, not just the ones who appear to be (or have already identified as) LGBTQ+. A provider might consider modeling openness and responsiveness by disclosing their own pronouns before asking a patient for theirs:

- *Hello, my name is _______, and I use _______ pronouns. What is your name, and which pronouns do you use?*

Asking about pronouns during an introductory conversation will establish a foundation of validation and responsiveness for patients who identify across the gender spectrum. While discussing pronouns is recommended for all patients, a provider may choose not to assess a patient’s sexual and gender identities during the initial contact due to time constraints, privacy, or safety considerations.

Distinguishing Identity from Behavior

For all patients, one’s sexual orientation may or may not be congruent with their sexual behavior. Given the increased risk for HIV and other sexually transmitted diseases and infections within homeless communities, and especially for LGBTQ+ individuals who are experiencing homelessness, providers should assess sexual behavior as a distinct category from sexual orientation. As with asking about social identities, providers should maintain openness and directness:

- *What gender, or genders, have your sexual partners been? Can you tell me a bit about how you approach preventing STIs, STDs, [and unwanted pregnancies]?*

Promoting an Affirming Environment

Effectively addressing the unique needs of LGBTQ+ individuals experiencing homelessness includes the demonstration of an affirming clinical environment for sexual and gender minorities. Many LGBTQ+ individuals have had negative experiences within healthcare and other systems of care; these experiences can range from naivete or dismissal to outright rejection and hostility [40, 41]. Because of this, many LGBTQ+ individuals might come into the clinical setting with expectations of – and sensitivities to – prejudice, ignorance, or disrespect.

Affirming healthcare providers and systems communicate unconditional and universal acceptance that LGBTQ+ individuals exist as whole people and LGBTQ+ identities are not stereotyped or pathologized. Creating an affirming experience includes using terms which are preferred by LGBTQ+ individuals while also avoiding outdated terms which may be offensive. Within a provider-patient relationship, the safety of LGBTQ+ individuals is prioritized, and the patient’s experiences and perspectives are validated. Affirming healthcare incorporates the explicit expression of positive views toward LGBTQ+ identities, relationships, and community involvement. Table 14.1 lists outdated terms and the newer terms that have replaced them [2]. Inherent to affirming LGBTQ+ healthcare is a recognition of how social and institutional discrimination (e.g., homophobia, transphobia, racism, misogyny, classism, ableism) impacts patients’ lives. Given how common experiences of discrimination are for members of LGBTQ+ communities, providers are encouraged to ask about and, when indicated, to validate these experiences with patients.

Providers should also consider how the physical environment of a clinical setting can communicate (or contradict) an affirming stance toward LGBTQ+ individuals. An “environmental checklist” can help providers assess and alter the clinical

Table 14.1 Outdated terms with suggested alternatives. Adapted from the National LGBT Health Education Center's Glossary of LGBT terms for healthcare teams [2]

Berdache	Two-spirit
Hermaphrodite	Intersex/disorders of sex development
Homosexual	Gay or lesbian
Sexual preference	Sexual orientation or sexual identity
Transgendered/a transgender/tranny	Transgender
Sex change	Gender-affirming surgery or gender-affirming treatment

environment to convey a safe and welcoming atmosphere. Examples of environmental cues denoting LGBTQ+ affirmation include (1) images depicting diverse gender expressions, relationship constellations, and races and ethnicities, (2) wearing a rainbow pin or lanyard, (3) displaying a "Brave Space" decal within an office space, (4) pronoun designations on nametags or email signatures, and (5) access to all-gender restrooms that are explicitly labeled as such.

Intersectional Approaches to Cultural Responsiveness

Affirming and effective social service delivery incorporates a keen understanding of intersecting cultural identities. This is especially relevant for individuals experiencing homelessness, as they experience multiple systemic vulnerabilities. A thoughtful exploration of a patient's multiple identities, including both culturally dominant and historically marginalized identities, can serve as a helpful guide to formulating an individualized and responsive care plan.

Intersectionality theory [42] poses a framework to better understand how identities interact with one another to influence both risk and resilience. Within this framework, multiple identities uniquely intersect with one another, rather than operating additively, to inform one's perspective or lived experience. For example, a patient who identifies as a queer Black woman will navigate intrapersonal, interpersonal, and institutional contexts through the distinct and complex interplay between these identities, rather than through a framework in which the risk and resilience factors associated with queer people, Black people, and women are added together.

Pamela Hays' ADDRESSING framework (Table 14.2) [43, 44] is another helpful tool to examine how multiple intersecting cultural identities inform an individual's lived experiences. In addition to identifying one's dominant and non-dominant identities, this framework helps facilitate exploration of one's worldview and experiences associated with multiple identities. The ADDRESSING model can also be used as a cultural self-assessment tool for providers to cultivate greater self-reflection and cultural humility.

Table 14.2 Pamela Hays' ADDRESSING model. Reprinted with permission from Hays PA. Addressing Cultural Complexities in Practice: Assessment, Diagnosis, and Therapy. 3rd ed. Washington, DC: American Psychological Association; 2016 [44]

Cultural Influences	Dominant Group	Non-dominant/Minority Group
Age and generational influences	Young/middle-aged adults	Children and older adults
Disabilities (**d**evelopmental and acquired)	People without disabilities	People with disabilities (cognitive, sensory, physical, and/or psychiatric)
Religion and spirituality	Christian and secular people	Muslim, Jewish, Hindu, Buddhist, and other people of minority religious faith
Ethnic and racial identity	European Americans and white people	Asian, South Asian, Latino, Pacific Islander, African, Arab, Middle Eastern, and people of color
Socioeconomic status	Upper and middle class	People of lower socioeconomic status by occupation, education, income, or habitat (rural/inner city)
Sexual orientation/identity	Heterosexual people	Sexual minorities (people who identify as lesbian, gay, bisexual, queer, or other sexual minority identities)
Indigenous heritage	European Americans	Native and indigenous people
National origin	US-born Americans	Immigrants, refugees, and international students
Gender	Men and cisgender people	Women and transgender people

Patient-Centered and Trauma-Informed Care

Many social service systems and treatment providers, especially those working with vulnerable populations, have moved toward adopting patient-centered (also referred to as client-centered) approaches to care. Patient-centered care is a model that actively incorporates patients' goals and perspectives in determining systemic and clinical priorities. In doing this, a provider will avoid predetermining the goals of treatment according to a patient's symptoms, diagnosis, or housing status. By explicitly involving a patient in generating their care plan, you communicate that you see them through a more holistic lens, rather than as a sum of problems that need to be addressed. A patient-centered approach to care can be demonstrated by using open-ended questions that extend beyond an assessment of symptoms or other problems.

- *Thinking more broadly, what are your main concerns? What would you like your life to look like in the next one/three/six/twelve month(s)?*
- *What has been going well in your life? How can we help you continue to foster your successes?*

Eliciting a patient's unique perspective on their concerns and goals will help promote empowerment and will mitigate the inherent power differentials in a

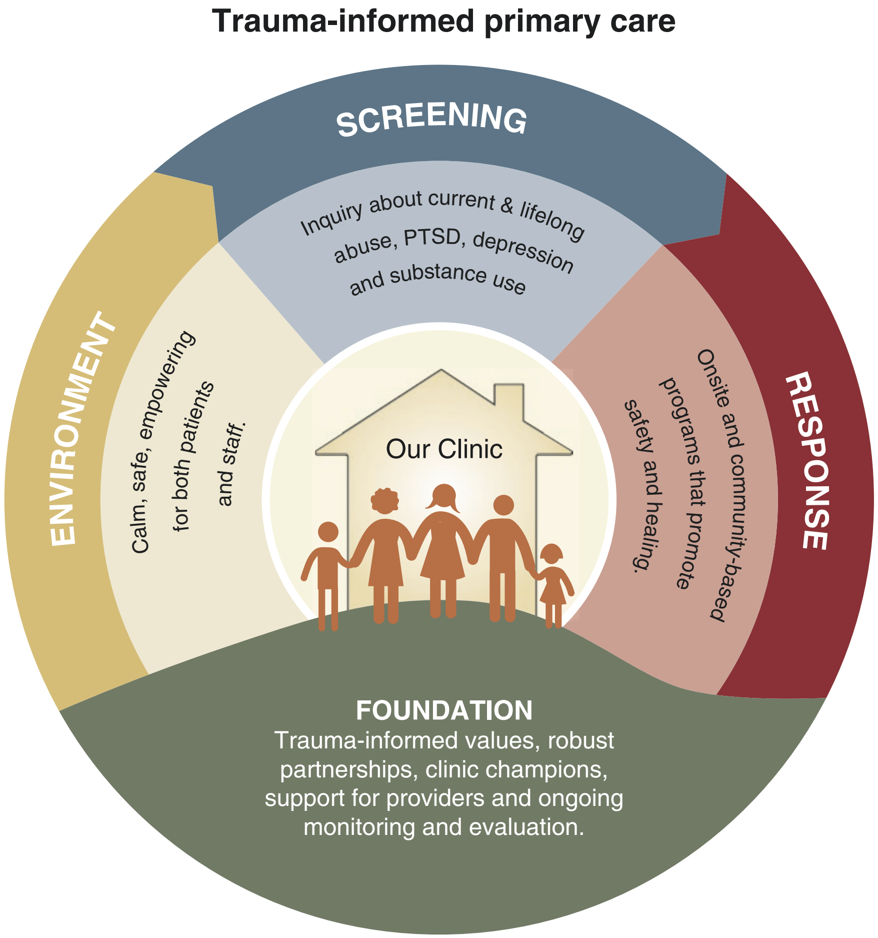

Fig. 14.1 Trauma-informed primary care [45]. (Reprinted from Machtinger et al. [45], © 2015, with permission from Elsevier)

patient-provider relationship. Hence, the collaboratively generated care plan may be more likely to yield desired outcomes due to the patient's increased sense of autonomy and choice.

Given the pervasiveness of trauma exposure among homeless populations, and especially LGBTQ+ individuals experiencing homelessness, integrating a *trauma-informed* approach to care is essential [45, 46]. A trauma-informed lens integrates an awareness and respect for the ways in which trauma can impact a patient's engagement with multiple systems of care and overall ability to effectively navigate multiple life domains. The core tenets of trauma-informed care are described in Fig. 14.1 [45]. Providers working with LGBTQ+ patients are advised to adopt a "universal precautions" approach when considering potential exposure to and sequelae of traumatic experiences. In this vein, *all* frontline staff members who are involved in a patient's care should learn about and adopt a trauma-informed approach.

Given the well-documented and salient impact of trauma exposure on multiple healthcare outcomes, providers should consider how/whether traumatic experiences may be influencing the onset or expression of psychiatric symptoms or problematic behaviors. For many patients, the experience of being homeless is highly traumatic in and of itself. The trauma of homelessness may be compounded by experiences of harassment, overt discrimination, and assault in relation to a patient's social identities (e.g., sexual, gender, racial/ethnic, religious). Trauma exposure can be assessed through implementing standardized screening inquiries [47]:

- *This is something we ask every patient. Have you had any recent experiences where you felt threatened, afraid, or violated? May I ask you a bit more about what happened?*
- *Have you experienced discrimination, harassment, or abuse that you believe was in response to your identifying as _______?*
- *What happens when you and your partner fight? Has your partner ever hit, kicked, or pushed you?*
- *Have you experienced any unwanted sexual attention or sexual contact?*

As with other inquiries, a patient may not feel ready or safe to disclose information about recent or historical trauma. It is important to communicate that the patient is free to decline answering the questions and may decide to answer at a later time. A trauma-informed approach to care prioritizes a patient's safety and autonomy. This includes an awareness of how certain approaches to assessment or intervention might ultimately retraumatize a patient and negatively impact subsequent care. If a patient has a negative reaction to a provider's inquiry, the provider should clearly and compassionately acknowledge awareness of any distress (e.g., "I sense that this is uncomfortable to discuss") and communicate respect for the patient's choices, including the choice not to speak of the trauma at this time.

Integrated Psychosocial Assessments: A Harm Reduction Approach

LGBTQ+ individuals experiencing homelessness face multiple disparities that may or may not be directly related to the immediate reasons for coming into contact with the healthcare system. Within any clinical specialty or occupation, providers should assess for mood, anxiety, and trauma-related symptoms. For members of a multiply marginalized population, other stressors and health behaviors should also be assessed in order to formulate an integrated and responsive care plan. Many of these psychosocial stressors and behaviors mutually affect one another, while each can also uniquely impact a patient's overall wellness and ability to effectively navigate systems of care.

Problematic substance use patterns can emerge as a way to cope with discrimination and harassment, internalized homophobia and/or transphobia, psychiatric symptoms, or trauma-related experiences. As with the inquiries described above, providers should ask about substance use in a direct, open, and non-confrontational way; patients should be asked about which substance(s) they use, how much and how often, and which methods are used (e.g., smoking, injecting).

As described above, sexual risk behaviors should be discussed within a holistic psychosocial assessment. These inquiries should be posed in a straightforward and nonjudgmental manner. Patients should also be asked about whether they engage in survival sex or other forms of sex work and which safety practices they use within that context.

- *Do you ever exchange sex for money, shelter, or other goods? How do you typically connect with your clients (*e.g.*, through the internet, on the street, through word of mouth,* etc.*)? Could you tell me a bit about how you navigate safety when you're working?*

Many LGBTQ+ individuals experience unique stressors in navigating homelessness services, including shelter programs, due to discrimination or exclusion in response to their sexual and/or gender identity. When working with a patient to formulate a care plan, patients should be asked about past experiences in shelter systems and whether there is a particular place they feel safe; it is also important to know which local shelters are known to be affirming of LGBTQ+ communities and which are known to be decidedly unsafe for or discriminatory toward LGBTQ+ patients.

When discussing salient psychosocial stressors that are significantly impacting patients, it is important to maintain an open, nonjudgmental, patient-centered approach to identifying next steps. Using a harm reduction model [36] can help maintain a collaborative partnership between patient and provider. Harm reduction approaches seek to do just that reduce the harm associated with risk behaviors, rather than unilaterally seeking to eliminate the behavior itself altogether.

For example, a cisgender male patient with multiple sexual partners might be completely unwilling to consider condom use at this time. A frank discussion about the spectrum of risk for STI and STD transmission might include noting which sexual practices increase (e.g., being the receptive partner without using a condom or other barrier) or decrease (e.g., engaging in oral sex, being the insertive partner) risk. If a patient has no intention of decreasing their injection drug use, a provider may share information about how to obtain clean injection equipment and reduce risk of infection or transmission of HIV or HCV. For a patient who is ambivalent about leaving an abusive relationship, a harm reduction strategy might include collaboratively devising a safety plan.

Transgender-Specific Care and Resources

For transgender, non-binary, and gender expansive patients, a discussion about desired gender affirmation services should be incorporated into assessment and treatment planning. Transgender healthcare resources vary widely state to state, so it is important to be aware of parameters around Medicaid utilization and resource availability within your province, district, or state. Whether or not there is a transgender care provider/team within your healthcare facility or your region, healthcare professionals have the opportunity to play an important role in healthcare for transgender individuals experiencing homelessness.

Gender affirmation treatment refers to a range of healthcare services that helps transgender, non-binary, and gender expansive individuals achieve greater congruence between their gender identity and assigned sex at birth. Gender affirmation treatment can include hormone therapy, surgeries, and other procedures such as voice therapy or hair removal. It may also include ongoing psychotherapy to help patients navigate the experience of gender dysphoria and/or the coming out process.

Gender affirmation treatment often incorporates social interventions, such as changing one's name and/or pronouns, gender expression (e.g., through clothing or hairstyle), or interpersonal environment. A patient seeking gender affirmation treatment may seek multiple interventions, or they may be seeking only one (or none). A patient's gender affirmation goals may change over time in response to their identity development, changes within their social environments, and/or treatment process.

Mental health professionals can play integral roles in gender affirmation care teams by conducting readiness assessments for patients seeking gender affirmation treatment. A readiness assessment includes a clinical interview, information about a patient's gender identity development and coming out process, and expectations or desires associated with the treatment(s) that the patient is seeking [48]. Mental health professionals have historically been regarded as "gatekeepers" for gender affirmation treatments, and these assessments played a determining role in whether a patient was able to access desired services [48].

In recent years, gender affirming mental healthcare providers have moved toward an "informed consent model" in conducting readiness assessments; within this framework, a provider will work with a patient to explore their expectations, plans for recovery (depending on the procedure/treatment sought), and options for engaging with ongoing supportive resources. Because many insurance plans or healthcare systems still require readiness assessments in order to access certain gender affirmation treatments, the mental health professional should consider writing a letter on the patient's behalf to provide to the treating provider (e.g., an endocrinologist or a surgeon) [48].

Providers who require a support letter from the professional conducting a readiness assessment may be doing so in accordance with the World Professional Association for Transgender Health (WPATH, 2012)'s Standards of Care [49]. WPATH's Standards of Care are put forth as guidelines rather than as standardized regulations, and they can be adapted in accordance with a patient's individual needs or any relevant parameters within a clinic or healthcare system. Some of the standards of care that are relevant for mental health professionals are found in Box 14.1.

Box 14.1 WPATH Standards of Care: Criteria for Gender Affirmation Procedures

For adult patients seeking hormone therapy or breast/chest surgery:

- One assessment or referral is required by a mental health professional, in which the below is described:
  - Diagnosed and documented gender dysphoria.
  - Capacity to make informed decisions and consent to treatment.
  - Age of majority in country where services are provided.
  - Any significant medical or mental health issues are reasonably well controlled.
  - For mastectomy in AFAB patients:
    - Hormone therapy not required prior to surgery.
  - For breast augmentation in AMAB patients:
    - At least 1 year of feminizing hormone therapy is recommended prior to surgery (not required).

For adult patients seeking genital surgery

- Two assessments or referrals are required by separate mental health professionals, in which the below is described:
  - Diagnosed and documented gender dysphoria.
  - Capacity to make informed decisions and consent to treatment.
  - Age of majority in country where services are provided.
  - Any significant medical or mental health issues are reasonably well controlled.
  - For hysterectomy, ovariectomy, or orchiectomy:
    - At least 1 year of hormone therapy in accordance with patient's gender goals (unless the patient is unable or unwilling to do so).
  - For metoidioplasty, phalloplasty, or vaginoplasty:
    - At least 1 year of hormone therapy in accordance with patient's gender goals (unless the patient is unable or unwilling to do so).
    - At least 1 year of living in a gender role that is congruent with patient's gender identity.

Summary

The currently available scientific evidence about homelessness among LGBTQ+ individuals, though relatively scant, is remarkably consistent. LGBTQ+ individuals experiencing homelessness are overrepresented among the homeless population, especially among youth. One recent and dramatic example of this which was highlighted in this chapter came from a study in the City of San Francisco which found that percentage of LGBTQ+ individuals in the homeless population was roughly twice the percentage of self-identifying LGBTQ+ individuals in the overall population of the city (30% versus 14%) [5]. This disparity appears to be even greater when only LGBTQ+ youth are studied.

Another study found that 30% of clients utilizing housing-related programs, including emergency shelter and transitional living programs, identified as LGBT (26% as LGB and 4% as transgender), and yet LGBTQ+ youth are believed to make up only 5 to 7 percent of the general homeless youth population [9]. In addition, it seems likely that research aiming to quantify the numbers of LGBTQ+ individuals experiencing homelessness underestimates the actual number because many surveys of homelessness have not included questions about gender or sexual minority status or, when they have, respondents have not answered honestly due to fears of negative consequences.

Homelessness results from a variety of independent and interlinking factors. Among LGBTQ+ youth, one study identified the following top five factors: (1) running away due to family rejection of sexual orientation or gender identity; (2) being forced out by parents due to sexual orientation or gender identity; (3) physical, emotional, or sexual abuse at home; (4) being aged out of the foster care system; and (5) financial or emotional neglect from family [8]. Although it is not known with certainty whether experiencing homelessness as a young LGBTQ+ person is itself a risk factor for homelessness for LGBTQ+ people during adulthood, a number of researchers [14–16] have found that certain adverse childhood experiences, such as physical or sexual abuse, are risk factors for homelessness in the general adult population. It seems likely that these adverse childhood experiences would impact the LGBTQ+ adult population similarly. In addition to anticipated and actual discrimination and mistreatment in settings such as the rental market and homeless shelters, mental illness and substance use problems occur at higher rates among LGBTQ+ individuals of all ages than among the population as a whole and likely contribute to the increased rate of homelessness for these individuals [23].

Systemic solutions to help reduce homelessness in the LGBTQ+ community include increased funding for more research on the size and characteristics of the population and for more services, including more homeless shelters which welcome members of the LGBTQ+ community, improved preparation for life after foster care, and more education of various groups and individuals including service providers, faith leaders, and family members of those who self-identify as LGBTQ+.

Although LGBTQ+ youth experiencing homelessness are overrepresented in the overall homeless population, service providers are often underprepared to work with this population [7]. While shelters are intended to serve as places that ensure safety and provide support for individuals experiencing homelessness, LGBTQ+ individuals often experience rejection, discrimination, vulnerability, and abuse within these settings. The literature shows that LGBTQ+ youth avoid support services and shelters due to actual and anticipated discrimination and violence [18].

Transgender youth, in particular, face more frequent discrimination than any other youth group in the shelter system, including being denied access due to their gender identity [20]. Recent research has identified a spectrum of deficiencies in the services and resources available to LGBTQ+ individuals experiencing homelessness, ranging from the absence of private showers in shelter facilities to a lack of knowledge and training regarding how best to care for these individuals [7].

Providers across a variety of contexts will be better equipped to address the unique needs of LGBTQ+ individuals experiencing homelessness by promoting an affirming and responsive environment of care. The second half of this chapter presents the knowledge and skills needed to optimally care for LGBTQ+ identifying patients in a variety of settings and includes specific suggested statements and questions that clinicians can use verbatim or modify to more closely reflect the clinician's communication style.

Providing culturally responsive services begins at the very first contact with your patient. Whenever possible, the physical environment should be intentionally welcoming toward LGBTQ+ people and identities. An inclusive environment can be signaled by staff members wearing name badgers that list preferred pronouns as well as images and periodicals that are affirming of sexual and gender minorities. A framed statement of being an inclusive environment, which hangs in the reception area or in each exam room, communicates with optimal clarity that members of the LGBTQ+ community are welcome.

Providers should routinely include an assessment of sexual and gender identity during the initial encounter whenever the setting and circumstances allow this to occur safely and supportively. This practice helps build trust and establish rapport with all patients and especially for those who identify as LGBTQ+. When used regularly, the suggested statements and questions included in this chapter will become second nature.

Other important clinical concepts when caring for LGBTQ+ individuals experiencing homelessness include (1) actively incorporating the patient's goals and perspectives in the treatment planning process through a patient-centered approach to care; (2) using an intersectional approach [41] to consider how a patient's multiple cultural identities shape their worldview and what factors contributing to risk and resilience; (3) employing a trauma-informed lens when working with patients [44, 45]; (4) maintaining an open, nonjudgmental, approach when reviewing potential next steps; and (5) utilizing a harm reduction model, which helps establish a collaborative partnership between patient and provider, creates realistic goals, and leads to a reduction in risk of exacerbating existing problems.

Currently, most of the clinicians with expertise and experience working with transgender individuals are located in major metropolitan areas and often within university-based health systems. Whether or not there is a transgender care provider/team within your healthcare system or region, healthcare professionals are both obliged and, with proper education and training, capable of providing healthcare for transgender individuals experiencing homelessness.

Although mental health providers may be consulted in order to provide readiness assessments for initiation of transitioning, gender affirmation treatment includes much more than this alone. Healthcare providers have the opportunity to help transgender, non-binary, and gender expansive individuals achieve greater gender identity congruence and to help these individuals begin to identify which gender affirmation treatments are preferred.

While discussing possible treatments and procedures, it is important to keep in mind that a transgender individual may consider multiple interventions, only one intervention, or no interventions at all, as well as anticipating the possibility that a patient's gender affirmation goals may change over time in response to their identity development, changes within their social environments, and/or treatment process. Beyond decisions about name and pronoun changes, hormones, and potential surgeries, gender affirmation treatment may also include ongoing psychotherapy to help patients navigate symptoms of gender dysphoria and/or the coming out process.

Although there is much yet to accomplish in order to ensure that members of the LGBTQ+ community who are homeless receive optimal care and support focused on helping them exit homelessness and achieve a higher quality of life, some progress has already been made. The fact that an entire chapter in a volume on homelessness was allotted to working with LGBTQ+ communities is one clear indicator of this progress. Building on the progress that has already been made will require continued advocacy and increased research efforts and more opportunities for education and training on how to provide these marginalized and often invisible individuals with the best care possible. Those who have read this chapter have just taken an important step in the pursuit of this third essential goal.

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Chapter 15
Ethnicity, Mental Illness, and Homelessness

Rita Hargrave

Demographics

African Americans

Homelessness does not affect all racial and ethnic groups equally [1]. There are profound differences in the rates of homelessness among ethnnic/racial minority communities. African Americans, Latinos, American Indians and Alaskan Natives are overrepresented among homeless individuals. According to the 2018 Annual Homeless Assessment Report (AHAR) [2], 47.1% people experiencing homelessness were African Americans eventhough they only represent 13% of the U.S. population.

Latino Americans

Latinos represent 22% of the homeless population but they only represent 18% of the U.S. population [2]. Although African Americans and Latinos share many of the same socioeconomic challenges, Latinos experience significantly lower rates of homelessness [2]. Several factors may contribute to their lower than expected rate of homelessness. Studies of homeless individuals may have under represented Latinos in their population samples [3]. Some authors suggest that Latinos compared to other ethnic/racial groups may be more likely to share housing with family or friends ("doubling up") to avoid homelessness [4].

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Asian Americans

Though homelessness among Asian Americans is quite rare [5, 6], the 2018 Department of Housing and Urban Development (HUD) analysis [2] found that their rates of homelessness have been rising dramatically. Their study indicates that Asian Americans are the fasting growing segment of the homelessness population [4]. Accurate assessment of the prevalence of homelessness among Asian Americans and Latinos is difficult to calculate. Members of both groups may share lodging with friends or live in multigenerational family environments. Individuals from these populations may be reluctant to respond to governmental surveys due to concerns about their immigration status and potential involvement with law enforcement [4].

American Indians/Alaskan Natives

American Indian/Alasakan Natives represent 4.2% of the homelessness population [2]. Few studies [7, 8] have systematically examined the precipitating/perpetuating factors leading to homelessness, prevalence of mental health disorders, or disparities in access to medical and mental healthcare for this population.

Precipitating/Perpetuating Factors

There is limited data on the prevalence and prognosis of homelessness among individuals with mental health disorders [9, 10]. A variety of psychosocial factors contribute to the higher rates of homelessness and mental health issues among ethnic/racial minority populations. But culturally relevant social determinants of health (e.g. employment opportunities, educational opportunities, access to health care, social support, and social attitudes) have been largely ignored by policy-makers who develop strategies to prevent and end homelessness [11]. In 2016, the Center for Social Innovation initiated a program entitled Supporting Partnerships for Anti-Racist Communities (SPARC) [1]. SPARC conducted research which extensively examined the intersection of ethnicity and homelessness. Results from the SPARC team and other studies suggest that factors which contribute to increased rates of homelessness among ethnic/racial minorities include lower socio-economic status, criminal justice history, racial discrimination, substance use disorder, and barriers to culturally informed mental health care.

Socioeconomic Factors

The family and social networks of people of color often have limited economic reserves. African Americans compared to Caucasians are twice as likely to live below the poverty line [12]. Some authors suggest that socioeconomic vulnerabilities (e.g. limited family wealth, lower educational and employment opportunities) contribute to the higher rates of homelessness among African Americans [13].

Criminal Justice History

Ethnic/racial minority compared to Caucasian homeless individuals more often have a history of incarceration or arrest [14]. Increased involvement with the criminal justice system can create obstacles to obtaining employment or housing. A history of conviction for a felony can legally prohibit an individual's ability to qualify for and obtain public housing [15]. One study noted that Latino compared to non-Latino homeless veterans were more likely to have a history of arrest and incarceration [14].

Racial Discrimination

Racial discrimination in housing, education, and employment adversely affects the physical and mental health of ethnic/racial minorities [16]. Members of ethnic/racial minority communities compared to Caucasian homeless individuals is more likely to face racial discrimination [17], language barriers, and limited knowledge of social services. They are also more likely to have reduced access to physical and mental healthcare treatment options which are tailored to meet their cultural and spiritual needs [18, 19].

Substance Use Disorders

The prevalence and nature of substance use disorders in homeless populations varies depending on ethnicity. Kasprow et. al. reported that Caucasian, Asian American, and Native American male veterans were more likely to report family and personal histories of alcohol use disorders [7]. African American compared to Caucasian homeless veterans were more likely to report problematic use of illicit drugs than alcohol.

The majority of research on the interrelationship of substance abuse, ethnicity, and homelessness has focused on African Americans and Latinos. Few authors have explored the substance use disorders and treatment needs of homeless Asian Americans [20]. Though epidemiological research suggests that Asian Americans have significant psychiatric and substance abuse problems [21, 22], few, if any, nationally based studies of homeless populations have directly compared rates of substance use disorders in Asian Americans with other ethnic/racial groups [22]. Lim et al. [5] reported that Asian American homeless veterans compared to other veterans were less likely to present with alcohol use disorders. Asian American veterans were less likely than African American or Latino veterans to report drug use or to be given a diagnosis of a substance use disorder by VA clinicians [5]. Lim et al. suggest that the lower rates of alcohol abuse among Asian American veterans may contribute to their lower risk of homelessness [5].

Accurate assessment of substance use disorders and other mental health issues among Asian Americans homeless populations is hampered by culturally mediated attitudes and beliefs. Mental illness carries an intense stigma in most Asian cultures, and Asian families may try to shelter and hide their mentally ill family members from the larger society [23].

Barriers to Culturally Informed Mental Healthcare

Ethnic/racial minority homeless individuals with mental illness face unique life challenges compared to their Caucasian counterparts. They may face racial bias in mental health access, diagnosis, and treatment [17]. Additional challenges include language barriers, limited knowledge about available social services, and legal constraints related to their immigration status or history of arrest or incarceration [18, 19, 23]. Ethnic/racial minority individuals may underutilize behavioral health services due to stigma about mental illness and negative attitudes about treatment [24].

Research on disparities in access to behavioral health treatment among homeless ethnic/racial minority individuals is limited and reveals conflicting results. African American compared to Caucasian homeless adults with severe mental illness participate in fewer psychiatric outpatient and case management visits [24]. Other authors have reported that Latino compared to Caucasian adults demonstrated higher rates of participation in case management [25]. But earlier studies reported no ethnic/racial differences in utilization of outpatient psychiatric services [26, 27].

Strategies to Improve Culturally Sensitive Mental Health Care

Strategies to improve access to culturally sensitive mental healthcare for ethnic/racial minority homeless individuals should focus on (A) modifying healthcare provider attitudes and behaviors and (B) identifying and addressing the homeless individual's needs and preferences.

Healthcare Providers

Several authors recommend the development of training modules for healthcare staff designed to improve communication and increase effective collaboration with ethnic/racial minority homeless individuals [28]. Corrigan et. al. described the impact of providing peer navigators with culturally informed training and guidelines for working with African American clients. The authors reported that this intervention resulted in improved attendance at scheduled appointments and greater treatment engagement by African American homeless individuals [28].

The development and implementation of multidisciplinary training workshops for health care providers about the impact of race and ethnicity on homeless individuals could improve communication and engagment with clients. Ethnic and racial tensions or perceptions can surface between staff members and homeless clients in a variety of treatment settings (e.g. emergency rooms, inpatient and outpatient treatment settings, shelters). If these conflicts are not addressed, they could negatively affect effective management of mental health issues in these populations [29].

The authors encourage education and discussion among care providers about the race-based social stressors (e.g., prejudice, stigma, lack of opportunities) in addition to the other economic and environment challenges that ethnic/racial minority homeless individuals may face [29].

The authors recommend mental health trainers utilize case discussions which encourage care providers to identify and discuss practical approaches = which address the racial based stress that homeless clients face [29].

Homeless Individuals

Peer navigators could be used to assist homeless individuals in developing practical strategies to access care in complex medical systems [28]. Peer navigators who have experienced homelessness may be perceived by clients as being more empathic and supportive especially if they are from ethnic/racial minority communities.

Homeless racial/ethnic minority clients may benefit from increased education about the daily management of chronic illnesses (e.g., hypertension, obesity, diabetes, depression) [28].

Homeless individuals could be encouraged to become advocates for dialogue and communication between homeless populations, community leaders, health care administrators, and social service agencies [28].

Limitations

Mental health issues in ethnic/racial minority and Caucasian homeless populations represent complex, multidimensional processes which need increased research and program development. Several authors [7] note that the current studies suffer from numerous methodological flaws including small convenience samples, and selection based on identification by either social service agencies or the courts of individuals who need mental health or substance use disorder treatment.

Homelessness is a locale specific phenomenon varying with the unique exigencies of the community, city, and state in which it occurs. Research methodologies need to be revised to determine how service use and resources are organized in different communities across the country. Future studies should recruit larger samples of ethnically diverse individuals who are homeless [28]. Health services research should be designed using the community participatory model, an approach that underscores that research on any group can only be valid when investigators make partnerships with members of the group being studied [28]. Future research in ethnic/racial minority homeless populations should be designed to:

- Identify and address racial bias in mental health diagnosis, treatment, and access to services.
- Identify and address the causes of ethnic/racial disparities in service utilization.
- Identify and implement strategies to reduce mental health stigma.
- Develop strategies to reduce barriers to care (e.g., English language fluency, immigration status, criminal justice history).
- Develop and disseminate education to patients, providers, and the community concerning the unique mental health challenges facing ethnic/racial minority individuals who are homeless.

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Part III
Other Issues

Chapter 16
Sex Trafficking

Nubia G. Lluberes Rincon

Introduction

On August 28, 2020 the national televisions and social media shared news of an amazing development in the fight against human trafficking; a group of 39 children believed to be victims of sex trafficking were recovered in Georgia [1]. This accomplishment was the result of a collaborative effort among multiple agencies (both federal and state) in a raid that was called "Operation Not Forgotten." Only 4 days prior to that, in a separate event, 36 individuals were convicted as part of an international sex trafficking organization that victimized women from Thailand [2]. Every day, a new development in the fight against human trafficking or trafficking in persons is achieved, and yet so little is known about the clinical management of the victims and the role of the mental health practitioners in preventing, attending to the needs, and assisting in the recovery process of individuals affected by these crimes.

Sex trafficking, an organized crime endeavor, is a global enterprise with local ramifications. The activities at a local scale tend to concentrate in urban locations affected by social disorganization [3] frequently targeting socially disadvantaged populations especially the homeless. In general, trafficking tends to flow from poor countries to affluent ones, or countries that are perceived as relatively affluent; however, traveling is not necessary for the activity to be defined as trafficking [4].

According to Raymond and colleagues, sex trafficking activities are likely to be found near military bases and urban and suburban areas of large cities. The infrastructure consists of local business of all sorts with slight variations according to the culture of the region. Some of them have legitimate fronts like health clubs,

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massage parlors, hotels, or rented homes, while other businesses are clearly known as dwellings for prostitution [5].

Homelessness is an important risk factor for trafficking victimization. A study by Estes in 2001 [6] shows that of the 900,000 missing persons per year reported by the Federal Bureau of Investigation, 80% are under 18 years of age. The study estimated that a third of runway or throwaway youth are recruited into prostitution within 2 days of leaving their homes.

It is important to note that commercial sexual exploitation (CSEC) of children includes prostitution, sex tourism, mail-order-bride trade, early marriage, pornography, stripping, and performing in sexual venues [4]. When these actions occur in US territory and the victims are children who are US citizens or legal residents, it is called domestic minor sex trafficking (DMST). Survival sex (engaging in sex acts in exchange for money, shelter, or other basic necessities) although considered a form of CSEC is not sex trafficking per se but in many instances serves as a gateway to the encounter with handlers involved in what some call modern-day slavery.

This chapter contains an overview of the current understanding of these problematic and recent developments in legislature and advocacy efforts as well as some recommendations for the mental health professionals who serve at-risk individuals.

The Problem

Statistics

Human trafficking is a global security and health problem that affects all countries in varying degrees of severity. The number of human trafficking cases reported globally and in the United States may include different forms of trafficking (sex, labor, organ, debt bondage), and the number of sex trafficking cases may vary from one source to the other due to difficulties gathering the information that are intrinsic to this population.

The Global Report on Trafficking in Persons published by the United Nations Office on Drugs and Crime (UNODC) in 2009 [7] utilized data from 111 countries reporting victims identified in 2006. Only 65 of those countries reported the age and gender of the victims. Among those victims, they estimated that 66% of the victims were women, 16% girls, 12% men, and 9% boys. They also point out that sexual exploitation is by far the most commonly identified form of human trafficking (79%), followed by forced labor (18%).

In 2015, the National Human Trafficking Resource Center (NHTRC) responded to over 5500 cases of human trafficking. Of those cases, 75 percent involved sex trafficking. In 2019, the National Human Trafficking Hotline calculate that they had reported 63,380 cases since the year 2007 [8]. According to the US State Department [9], trafficked US citizens are more likely to be involved in sex trafficking than in labor trafficking, and foreign victims are found in labor trafficking more than in sex trafficking.

The Department of Justice (DOJ), the Department of Homeland Security (DHS), and the Department of State (DOS) are the primary investigating agencies for federal trafficking offenses. During the fiscal year 2018, the DOJ secured convictions against 526 traffickers, an increase from 499 convictions in 2017. During 2018, the DOJ provided $31.2 million for victim service providers offering comprehensive and specialized services across the United States [10].

Calculating the prevalence of sex trafficking has proven to be a difficult task. The difficulties range from collecting the data (i.e., failure to report cases, victims avoiding self-identification, and other gaps in identification, inaccuracies, duplications of data), comparing it across the system (i.e., lack of standardization regarding what needs to be measured, mixed population, differences in technology), and understanding the implications of the data collected [4].

The state of Texas has confronted great challenges related to the number of human trafficking cases reported in the state. Almost 1731 phone contacts of the 5500 contacts reported by the National Human Trafficking Resource Center (NHTRC) in 2015 were from Texas. Of those calls, 433 were identified as potential cases, and the vast majority of those cases were sex trafficking cases (77.8%). The estimated number of human trafficking victims in Texas in 2016 was 313,000, and approximately 79,000 of them were minor and youth victims [11].

A study published in 2019 by Anderson et al. [12] found 484 known victims in a sample from state and local agencies who collected data in Ohio from 2014 to 2016. The study found that counting potential victims and at-risk individuals is a crucial first step for an accurate prevalence estimate and advocates for the creation of a database that utilizes validated assessment tools to identify individuals according to the risk factors, one that can support integration across agencies.

Advances in Legislation

At a global scale, the United Nations initiated the “Palermo Convention” on November 15, 2000 during the 55th session of the General Assembly of the United Nations at the Palazzi di Giustizia in Palermo, Italy [13], and 2 years later, the “Brussels Declaration” took place during the European Conference on Preventing and Combating Trafficking in Human Beings [14]. The Palermo Protocol and the Brussels Declaration increased the international awareness, and as of 2016, over 150 countries had developed criminal laws for human trafficking [15].

Drawing from increased global awareness, many immigration, trading, terrorism, and victim protection laws converge in the provision of safeguards to prevent human trafficking. For example, although not specific to sex trafficking, the Civil Asset Forfeiture Reform Act (CAFRA) promulgated in the year 2000 provides notice to property owners whose properties have been identified as being used to facilitate smuggling or harboring of aliens. Similarly, the Intelligence Reform and Terrorism Prevention Act of 2004 enhances the responsiveness to issues related to alien smuggling and trafficking. Another example is the Customs Facilitation and

Trade Enforcement Reauthorization Act of 2009 that “prohibits the importation of goods to the United States made by benefit of human trafficking or forced labor” [16].

In 2016, President Barack Obama proclaimed January 2017 as the National Slavery and Human Trafficking Prevention Month [17]. This proclamation is sustained by numerous laws and regulations that have been developing in the United States since the early 1900s.

The Mann Act of 1910 is the first law targeting human trafficking, and it is still in effect with the addition of multiple amendments over the years. According to this law, it is a felony to knowingly persuade, induce, entice, or coerce an individual to travel across state lines to engage in prostitution or attempt to do so. It was welcomed as a tool to deter from trafficking; however, some believe that it was largely misused to target people who were not involved in trafficking Schemes [18].

Modern legislature specific to the issue of human trafficking utilizes a definition similar to the one used in the Palermo Convention [see Table 1]. In the United States, the first comprehensive federal law to address trafficking in persons was the “Victims of Trafficking and Violence Protection Act” also known as the “Trafficking Victims Protection Act” (TVPA). It was enacted on October 28, 2000 by the US Congress (22 USC 7101) requiring victims to cooperate with the prosecution of traffickers [19], strengthening the prosecutions and punishment of trafficker, and authorizing appropriations. The law also provides authority to permit the “continued presence of the victim in the US soil to assist with the investigation and prosecution of the traffickers” [20]. It acknowledges that victims of severe forms of trafficking should benefit from governmental custody with specific protections including (A) not to be detained in facilities inappropriate to their status as crime victims; (B) to receive necessary medical care and other assistance; and (C) to be provided protection if the victim’s safety is at risk or if there is danger of additional harm by recapture of the victim by a trafficker. The law has been ratified several times (2003, 2006, 2008, 2018, 2019) [21, 22].

After the TVPA, the Senate enacted the Prosecutorial Remedies and Other Tools to End the Exploitation of Children Today Act of 2003 also known as the PROTECT Act. It encompasses seven titles (titles I–VII) with prosecutorial remedies and other tools. The PROTECT Act strengthens the penalties against kidnapping and sex tourism [23] with a clear delineation between the sanctions and the different types of sexual offenses, ranging from parental kidnapping to sex tourism, pornography, sexual abuse, sexual torture, and murder, among other related crimes. It also defines sources for public outreach including the national AMBER alert system that was created in 1996 [24] and the creation of a cyber tip line.

In 2015, the enactment of the Survivors of Human Trafficking Empowerment Act (Section 115 of the Justice for Victims of Trafficking Act of 2015 [25] created the domestic trafficking victim’s fund and increased of the compensation and restitution of the victims with the use of both forfeited and non-forfeited assets.

In parallel to these developments, many laws were enacted with the purpose to identify, monitor, and sanction sex offenders [see graph 2]. Some worth mentioning include the Jacob Wetterling Act (1994), Megan’s Law (1996), Jacob Wetterling Improvement Act (1997), Protection of Children Act (1998), Campus Sex Crimes

Prevention (2000), Adam Walsh Act and Sex Offender Registration and Notification Act or SORNA (2006), and Keeping the Internet Devoid of Sexual Predators Act or KIDS Act (2008). The description of these laws is beyond the scope of this chapter.

The US Department of State (DOS) has created the Trafficking in Persons Report or the "TIP Report". The first edition was released in the year 2000. This report is a compilation of facts and developments in the fight against human trafficking. The Department of State uses the report to publish the placement of each country onto one of four categories or tiers based on the extent of their government's efforts to meet the standards of the TVPA [9, 10]. The United States is currently ranked in the Tier 1 category which is the highest ranking. The US Department of State makes it clear that being ranked Tier 1 does not mean that a country has no human trafficking problem or that it is doing enough to address the problem. Rather, a Tier 1 ranking indicates that a government has made efforts to address the problem that meets the TVPA's minimum standards [10]. Countries ranked in Tier 2 and Tier 3 "watch list" are considered to be noncompliant with the standards but showing efforts to change. On the other hand, countries on Tier 3 are considered to lack both in meeting the minimum standards and the efforts to improve. Tier 3 countries may face certain restrictions on assistance from the international community [9, 10].

At a national level, all US states and US territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) have laws prohibiting trafficking of persons for the purpose of commercial sexual activity, but specific local efforts in the fight against sex trafficking vary from state to state. A list of state-specific statutes can be found at https://www.childwelfare.gov [26]. For example, Massachusetts enacted a law, effective February 2012, establishing that any youth charged with prostitution is a victim of sex trafficking, which is defined as a form of child abuse [27]. In Texas, the criminal code of procedures Chapter 57D section 01 and section 02 provides safeguards for victims' confidentiality allowing the use of a pseudonym (initials or fictitious name) and the confidentiality of the records [28].

In the United States, there are several potential immigration protections and remedies available for victims of crimes and trafficking, including special types of visas and asylum claims: the U visa for victims of domestic violence and the T visa for persons who have suffered severe forms of human trafficking and who "have assisted in the investigation or prosecution of traffickers, and who would suffer extreme hardship upon being forced to leave the United States" [29]. Asylum claims based on LGBT status may be successful if they are based on a well-founded fear of persecution in the country of origin on account of sexual orientation or gender identity (real or perceived) [30].

Advocacy

Organizational advocacy has a ripple effect that can yield significant gains for individuals, communities, and entire organizations [31]. The advocacy against sex trafficking at the organizational level promotes accountability with a focus on the victim's best interest. However, a google search for advocacy groups against human trafficking produced 30,300,000 results in 1.03 seconds. Finding the right organization to join or volunteer in these advocacy efforts can be a daunting task.

Some well-known international advocacy groups listed by Saad [32] in a social media article include:

1. "The Global Alliance Against Traffic in Women" (GAATW) that includes 80 non-governmental organizations from around the world including Africa, Asia, Europe, Latin American and the Caribbean, and North America.
2. "Stop the Traffik," an organization that advocates through education and technological initiatives like the creations of an app to report human trafficking.
3. "The Sex Workers Project," a group that concentrates in legal advocacy and therapeutic support.
4. "The Freedom Network USA," a group created by survivors, also provides legal services.
5. "FAIR Girls," a group dedicated to providing housing, trauma-informed services, and education for female victims.
6. "Love146" is an international anti-child trafficking group based in the United States that coordinates preventive education modules in many countries around the world.

Two international resources specifically for LGBT victims of sex trafficking are the United Nations Global Initiative to Fight Human Trafficking (UN GIFT) and the Global Forum on MSM and HIV (MSMGF) [29].

At a national level, the US government launched the "Blue Campaign." This is a national public awareness campaign, designed to educate the public, law enforcement, and other industry partners to recognize the indicators of human trafficking and how to appropriately respond to possible cases. Blue Campaign works closely with the Department of Health Services (DHS) to create training and materials to increase detection of human trafficking and to identify victims [33]. Their resources can be found at: https://www.dhs.gov/blue-campaign.

Locally, in the state of Texas, Children at Risk (C@R) is a nonprofit, non-partisan research and advocacy organization created in 1989 in response to the absence of strong public policy in Texas at that time. At this point, the organization has grown to have statewide impact in many causes related to vulnerable children including trafficking. Many of the educational activities take place in Houston, Dallas, and Fort Worth. The group also coordinates a program called "Cities Empowered Against Sexual Exploitation" (CEASE) in charge of developing strategies to reduce the demand for commercial sex. In Houston, with the collaborations of the Harris County Attorney's Office and private law firms, CHILDREN AT RISK established Project AWESOME (Attorneys Working to End Sexually Oriented Massage Establishments) which allows civil attorneys to file suits against these establishments on behalf of the county [34].

Another Texas initiative for preventive advocacy is the Texas Court Appointed Special Advocate (CASA) [35]. It works by providing a judge-appointed volunteer to advocate for the best interest of children moving from abusive homes and into the welfare system. The volunteer is called a "Court Appointed Special Advocate" or "CASA" (home in Spanish). These advocates also participate in the State's legislative sessions to support and promote policy changes.

Victimization Risk Factors

Many characteristics have been identified as potential risk factors for victimization in sex trafficking schemes. Some of these characteristics pertain to the individual and others to the society. The socially based risk factors include factors that promote the organized crime activities; those related to the society at large – poverty, social disadvantage/inequality, and social disorganization (the inability of a community structure to realize the common values of its residents and maintain effective social controls) [3]; and those related to the community the individual belongs to: levels of violence, corruption, natural disasters, and other social determinants of health. On the other hand, the factors intrinsic to the individual are believed to increase the person's vulnerability to exploitation. Among them, the most commonly cited is homelessness, followed by a history of abuse or neglect, deficits in education, and substance use [36] (see Table 2).

A recent example of the impact of natural disaster occurred during Hurricane Harvey. According to data posted during the weeks of May 29, 2017 and September 11, 2017, there was a surge of trafficking cases to level even higher than the ones estimated during the weeks prior to the storm. The factors potentially implicated in this surge are the loss of housing/income or other means to survive, the trafficker's attempts to recuperate revenue lost during the storm, and/or the traffickers anticipation of an influx of male workers during the recuperation phase [11].

Identifying the Victim

Victims' Characteristics

Typically, female victims are easier to identify because the majority of information published regarding sex trafficking cases involves girls and women; however, commercial sexual exploitation can also involve males [4] and LGBT individuals [29, 36]. Males have been identified (with the known limitations to gather accurate numbers) as a smaller proportion compared to females. However, statistics on LGBT victims are more difficult to find. The lower report rate and issues with self-identification may stem from the stigma that surrounds same-sex prostitution [29].

The analysis of a small sample of female victims done by Muftic et al. utilizing a semi-structured qualitative interview found that American female domestic victims were significantly older, more likely to be non-white, and better educated than international victims and non-trafficked sex workers. These domestic cases came from urban areas and were more likely to have experienced physical and/or sexual trauma in their childhood [37].

Although first responders are in the best position for identifying the victims of sex trafficking, this task can be difficult. Law enforcement, for example, has opportunities to identify victims by means of their daily interactions with persons who are homeless, runaway youth, and policing gang-active areas or responding to domestic violence calls [3], but oftentimes the victims hide important clues for many different reasons. The training of the officers is paramount in allowing them to see those interactions and to recognize the actors for whom they truly are.

Some screening tools have been created to assist in the identification of victims and people at risk. The "WestCoast's Commercial Sexual Exploitation-Identification Tool" (CSE-IT, pronounced "see it") was designed for early identification of children who are commercially sexually exploited [38]. According to the developer, the CSE-IT is appropriate for use by any provider serving youth, including child welfare workers, probation officers, mental health clinicians, and first responders. CSE-IT has been validated with data from a 15-month pilot to ensure that it accurately identifies youth who have clear indicators of exploitation. It is a copyrighted open domain tool for use in service delivery systems.

Other tools designed to identify trauma-related symptoms, although not specific to sex trafficking, can be useful in this population. Some of these tools include [39]:

1. The Screen for Child Anxiety Related Emotional Disorders (SCARED) consists of 41 items for adolescents up to the age of 18. It assesses symptoms associated with general anxiety, panic disorder, separation anxiety, social phobia, and school avoidance.
2. The therapist-Administered PTSD Scale for Children and Adolescents (CAPS-CA) is a 33-item scale for youth 8–18 that can effectively assess symptoms associated with the experience of trauma.
3. The Achenbach System of Empirically Based Assessment (ASEBA) that identifies anxiety, depression, social problems, somatic complaints, attention difficulties, and behavioral problems (including rules breaking and aggressive behavior).

Perpetrators' Characteristics

The identification of potential perpetrators (e.g., pimps, recruiters, traffickers, buyers) is also important. They are key part of the equation and may be the clue to identifying a victim who doesn't want to be identified. The buyers of commercial sex appear to be a heterogeneous group, coming from a wide range of ages and socioeconomic classes. The study by Raymond and Hughes [5] showed that the majority of men were married. They also gathered that 20 percent of the international female victims and 28 percent of the domestic female victims had intimate relationships with the men who pimped them.

In some instances, victimized youth become offenders themselves. They have a history of sexual, physical, and emotional abuse and more exposure to pornographic material. In this group of young people that are sexually offended, the levels of criminal history and antisocial association appear to be lower than for those offenders who have other forms of criminal behavior [40].

Some of the tools developed to assess juvenile sex offenders listed by O'Reilly [40] include:

1. Juvenile Sex Offender Assessment Protocol-II
2. Juvenile Sexual Offence Recidivism Risk Tool-II
3. Juvenile Risk Assessment Scale (J-RAS)
4. Structured Assessment of Violence Risk in Youth (SAVRY)
5. Psychopathy Checklist: Youth Version

In a study that included 117 offenders and 179 victims in cases involving the sex trafficking of juveniles that were adjudicated from 1990 to 2011, the researchers found that individuals who engage in sex trafficking of juveniles (STJ) have a motivation that is in alignment with the increased prevalence of psychopathy in such offenders, making their incentive more instrumental or predatory in nature [41]. In this study, STJ offenders were initially classified into four types:

1. Charismatic/Manipulative Type #1A (Non-violent Type)
2. Charismatic/Manipulative Type #1B (Violent Type)
3. Aggressive/Antisocial Type with Minor Charismatic/Manipulative Traits Type #2A (Violent Type)
4. Aggressive/Antisocial Type with No Charismatic/Manipulative Traits Type #2B (Violent Type)

Their results suggest that the Type 1B (Charismatic/Manipulative-Violent) STJ offenders poses the greatest danger to society [41].

Challenges in Engaging the Victim

After recognizing a victim, the next step in the road to protect them is to engage them where they are. According to Zimmerman [42], there are five stages of trafficking: pre-departure, travel and transit, destination stage, detention/deportation/criminal evidence, and integration/reintegration. Each one of them presents different challenges for the engagement of the victims.

Understanding the victim's initial motivation to engage in activities that led, directly or indirectly, to becoming a victim of commercial sexual exploitation can open the door to the engagement. For example, in international cases, the pre-departure phase may align with cultural traditions that incentivize migration, promoting it as a solution for reducing the national deficit and/or family survival, by means of remittances. In other cases, like countries with high levels of violence, the conditions are set forth to accept an association with the predator in order to run away from violence. At a local level, pre-departure is incentivized by romanticized stories of achieving prosperity and wealth, or romantic relationships with the lure of a charming boyfriend. Yet, others are seduced into the world of exploitation through promises of drugs and excitement [4].

The victims' state of mind can range from hopeful and future oriented during the pre-departure to anxious, ashamed, and with an increased sense of dependence on the trafficker during the travel, destination, and detention phase. During the integration phase, shame will still be present along with emotional distancing and other trauma-related states of mind. Therefore, a trauma-informed approach must be at the forefront of dialogue.

Resources to equip the community agencies with trauma-informed programs depend largely on governmental support. The design and implementation of such program requires the collaboration community stakeholders (law enforcement, social services, legal, medical) and the administrative support within the specific agency or institution.

Health Effects and Healthcare

To help victims recover from this experience and to assist in a steady healing process, it is important to understand the health implications of sex trafficking.

In the study aimed to identify the relationship between the risk factor and the health outcomes of women victims of sex exploitation [37], Muftic and Finn compared domestic sex-trafficked women, international sex-trafficked women, and female sex worker. In general, the study showed that domestic trafficking victims displayed poorer health outcomes compared to international trafficking victims. In terms of physical health, half of the women reported at least one physical problem.

Another study [5] found similar results, showing that 80% of domestic sex trafficking victims sustained bruises, 53% oral/dental injuries, 47% head injuries, and 35% a broken bone. Other reports on physical health show that back pain, memory difficulty, stomach pain, pelvic pain, gynecological infection, and headaches and fatigue were also very common [42].

Looking at a different aspect of their general health, a study in 2018 [43] recruited a small group of women (18–25 years old) and asked the participants to complete a questionnaire and to get testing for HIV and other STIs (syphilis, gonorrhea, and chlamydia) at baseline. They found that one fourth of the participants were sex trafficked when they were younger than 18 years. Among those who experienced child sex trafficking, the majority had their first pregnancy (54.3%), marriage (60.2%), and sexual violence experience (55.2%) before they were aged 16 years.

Muftic and Finn [37] found that 42.1 percent of the women with history of sexual exploitation in their sample contemplated suicide. They point out that suicidal ideation was greatest among women who were sexually exploited by an abusive pimp or trafficked for sex domestically.

In terms of substance use disorder, the same study found that there were significantly fewer international trafficking victims (33.3%) who were addicted to drugs and/or alcohol compared to 94.4% of domestic trafficking victims and 75% of non-trafficked sex workers.

Community Reintegration

Victims of sexual trafficking often lack familial support, adequate housing, and socioeconomic stability. In many cases, the difficulties to attain basic needs is what put them at risk in the first place. When the community finds a way to overcome the logistical and financial constraints of delivering interventions within the healthcare system, the reintegration is feasible.

At an individual level, informational posters, videos, and social media resources can be utilized to guide the victims and reduce the anticipatory anxiety. Many examples of autobiographical success stories of reintegration can be found in social media.

Knowing that more time in trafficking was associated with higher levels of depression and anxiety [44], the system should be prepared to offer different levels of care according to the victim's needs. A group from the Netherlands conducted an interview of 14 sex trafficking victims who were staying in a system of 3 shelters. They noted that the participants exhibited signs of working towards a better future. During the interviews, the participants identified that learning the language was seen as a prerequisite for many important aspects of integration (finding a job, getting an education, and establishing a family and a social network). The participants also pointed out that other important tools are important for integration to the community, including skills training (self-defense, vocational skills) and opportunities to volunteer [45].

Many victims are identified after being charged with a sexual offense (i.e., prostitution), and in those cases, integration may be accompanied with court stipulations. Schmidt [46] recommends that initial outpatient contact with parents or caregivers of "Adolescents with Illegal Sexual Behavior" (AISB) should emphasize the establishment and reinforcement of supervision standards within the home, community, and school. He explains that evolving models of AISB treatment include greater treatment participation by parents, alternate caregivers, and siblings; less focus on the sexual offense; and increased focus on general behavior and decision-making and on developing specific social, behavioral, and interpersonal competencies.

Other general recommendations include avoiding the propensity to withhold support in exchange for specific behavior, avoiding actions that reinforce shame or trigger trauma-related response, understanding that there will be a tendency to repeat destructive patterns, avoiding the tendency to blaming the victim, and avoiding power struggles. Above all, promoting a sense of belonging is the most important target in the process of reintegration.

Barriers and Proposed Solutions

A fragmented healthcare system and a criminal justice system plagued with bias against minorities are huge barriers in the advancement of the fight against sex trafficking. Many communities also face limitations to provide services due to lack of investment from their local government in short-term housing and other social services. Therefore, possibility of identifying and providing services for victims of sex trafficking within the confines of limited community resources relies in the efforts put forth by the stakeholders.

The education of potential targets and at-risk population for the purpose of prevention paired with the commitment in investing resources to promote comprehensive service delivery, policy changes, and measures for deterrence is the basis for the needed change.

The development of the legislature at a state or federal level has already proven helpful in uncovering organized crime groups and punishing them. It goes without saying that being as it is, a lucrative criminal business, finding ways to progressively reduce the demand from buyers and abolish the appeal for the handlers, needs to be part of the discussion towards ending trafficking once and for all. However, the need for the development of values that support a future without sex trafficking, or any type of human trafficking for that matter, is a challenge that our communities need to assume with responsibility. After all, if people comply with the law only in response to coercive power, they will be less likely to obey the law in the future because acting in response to external pressures diminishes internal motivations to change in behavior [47]. Therefore, a movement towards the improvement of the social organizations of the individual communities and a more cohesive structure is an important piece in this puzzle.

Conclusion

In the last 20 years, the world has witness exciting developments in the fight against human trafficking. However, the work is not complete. There is a great need for more awareness, more support, and better understanding of the dynamics that perpetuate crimes against the very essence of our humanity. The work with homeless populations will undoubtedly intersect with those who have been trafficked and with the perpetrators. It is important for medical and mental health providers to always be alert to the signs of trauma and the red flags that point in the direction of victimization and abuse. It is also essential that we continue to advocate for the support of community and governmental partners in developing a comprehensive network that provides the preventive, supportive, and recovery-oriented structure that our communities need.

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Chapter 17
More Than Hunger: Nutrition and Food Issues

Anne Utech, Christine Going, and Nipa Kamdar

Introduction

Food, like shelter, is a basic human need. It is also a major determinant of health [1]. Individuals who consume unhealthy diets, such as those that contain high levels of sodium, highly processed foods, and sugar-sweetened beverages along with low intake of fruits and vegetables, have increased risk for cardiometabolic morbidity and mortality [2], a leading cause of death in the United States [3]. Diet-related illnesses such as diabetes and hypertension affect those who are homeless similar to those with stable housing [4]. However, unlike many with stable housing, individuals who are homeless may have an added challenge of accessing healthy food to support disease prevention and management. In fact, more than half may go an entire day without eating [5].

Homeless populations face a multitude of challenges including access to safe, nutritious, and adequate food [6–10]. Many individuals who are without stable shelter consume diets that are high in saturated fat and low in fruit and vegetable intake [11]. They also have numerous micronutrient deficiencies [11]. Malnutrition from

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the lack of access to healthy foods, coupled with other comorbidities (such as alcoholism, substance abuse, and mental health conditions) and poor environmental conditions, contributes to the health inequities found among those who are homeless [11, 12].

Individuals who struggle to access food also have increased use of emergency rooms and hospitalizations [5, 13]. Clinicians and other members of the healthcare team who provide services to this highly vulnerable population need to be aware of potential limitations to food access. They also need to consider these limitations when developing their treatment and management plans in effort to reduce the morbidity and mortality affecting this highly vulnerable group.

This chapter focuses on nutrition and food issues that need to be considered when caring for individuals who have unstable housing. The objectives for this chapter begin with a review of food insecurity as a social determinant of health. It will also describe nutrition screening and nutrition assessment. It will detail the Nutrition Care Process. This chapter will share current social safety net programs to help those who need food assistance and will discuss the interdisciplinary approach needed to address this complex problem of food hardships among those who lack stable housing. Finally, this chapter weaves a case study throughout to better connect didactic knowledge with a clinical example.

Case Study: Introduction

David is a 44-year-old single African-American male who is obese and has type 2 diabetes, hypertension, and early stage chronic kidney disease and hypertension.

David lives in Detroit, Michigan, and is homeless. After losing his janitorial job 3 months ago, he was unable to pay the rent for his apartment. He now lives in his car.

Review of Social Determinants of Health

Food insecurity is a social determinant of health along with homelessness. Research has shown that 40 percent of factors contributing to health are social or economic, compared to 20 percent that are related to medical care [14]. The link between food insecurity and health issues is strong and needs to be part of any population health strategy. Wang et al. [15] confirms the relationship between food insecurity and the poor management of hypertension, diabetes, HIV disease, and depression, which demonstrates that this is a problem. Understanding the behavioral, social, and environmental significance of social determinants of health is a major contributor to keeping people healthy. The factors influencing health are also factors associated with food insecurity, making the connection between healthcare issues and food insecurity strong. A review of socioeconomic factors is needed with clients, because all have effects on overall health: inability to afford food, physical environmental factors including lack of access to a grocery store, clinical care factors like the high cost of healthcare resulting in difficult trade-offs, or the lack of access to care. The average percentage of food-insecure households in the United States as of 2018 was 11.7%. Overall there has been little change, only a decrease of 0.5% to the national number from 2008 when it was 12.2% [16]. The cycle of food insecurity and chronic disease management is most prominent in low-income populations. As a person becomes sicker, the likelihood of missing work, increased healthcare costs, and the financial burden leading to difficult trade-offs fuels the continuation of the food insecurity cycle [14]. In the absence of good nutrition, chronic diseases can worsen, often leading to increased usage of the healthcare system [14]. Wang et al. [15] supports the idea that food insecurity alone will result in poor outcomes. Additionally, Gurvey et al. [17] found a relationship between the availability of appropriate nutrition, medical nutrition therapy, and its direct role on healthcare costs. The provision of health education, specifically on healthy eating, can impact the relationship between food insecurity and poor nutritional practices [18]. When left unsolved, the cycle of food insecurity and chronic disease will continue, resulting in a significant public health issue.

Case Study: Social Determinants of Health

David had basic health insurance with his janitorial job. He had a primary care provider who he saw every 3 months for his diabetes and hypertension management. His co-pays were high, but he understood its importance and paid $60 per visit. Sometimes he would have to choose between getting his prescriptions and getting groceries. He tried to stretch his medications by taking them every other day. He could not afford his blood sugar test strips so he only checked his blood sugar if he felt bad. He also would buy food like rice and beans to keep him full even though he knew they would bump up his blood sugar. David managed to take care of his basic and health needs, but just barely.

One Saturday morning, he slipped on a patch of ice while getting the mail. David could not get up because of pain. His neighbor called an ambulance. David incurred multiple co-pays from the ambulance ride, CT scan (to rule out head injury), MRI for his knee, and cast for a fractured arm. Even when he returned to work, he was not able to perform at the previous level. Eventually, he was terminated. David had little in savings. Without his job, he could not afford rent and was evicted. He also lost his health insurance. David could not get steady work. It's now summer and living in his car is taking a toll on David. He focuses his days getting food and staying safe on the streets. David's last full meal was a day ago. This morning he ate a doughnut he found in the trash behind a bakery.

Defining Food Insecurity

The terms *food security* and *food insecurity* are often used interchangeably. Both refer to access to healthy food. Per the US Department of Agriculture (USDA), food security means access to enough food for an active, healthy life at all times [19]. At a minimum, individuals who are food secure have ready access to nutritionally adequate and safe foods. They also acquire these foods in socially acceptable ways (i.e., without resorting to emergency food supplies, scavenging, stealing, or other coping strategies) [19]. Conversely, food insecurity is an economic and social condition of limited or uncertain access to adequate food [20].

The most accepted measure for food security is the 18-item Household Food Security Survey Module (HFSSM), or its various shorter forms [21]. This tool is used in several national population health surveillance surveys such as the Current Population Survey and the National Health and Nutrition Examination Survey. The 18-item HFSSM measures food security at the household, adult, and child food security. A slightly shorter 10-item HFSSM omits the eight child-focused questions and is used to measure adult food security [22]. The 6-item HFSSM [23] is the short form of the 18-item survey module. The 6-item HFSSM takes less time to administer and has demonstrated reliability and validity [24]. However, the 6-item HFSSM is less precise and somewhat less reliable compared to 18-item HFSSM [24]. It also does not measure the most severe levels of food insecurity that can be associated with hunger. All versions of this survey are readily available through the USDA's web page: https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/ [25].

Each survey includes details on how to administer and score the instrument. The numerical score is a sum of the affirmative responses to the questions in the instrument. Each instrument has a unique range of scores dependent on the number of questions asked. However, in all three versions of the HFSSM, higher scores indicate increasing food insecurity.

Using the tabulated scores, survey respondents can be categorized into four levels of food security [26]: high, marginal, low, and very low food security [27]. As the name indicates, those with high food security report no problems or limitations accessing food. Those with marginal food security may experience concerns or anxiety regarding food shortage or sufficiency but have had to make little or no changes to their diets or food intake. In contrast, individuals with low food security (previously labeled “food insecurity without hunger”) [27] report reduced quality, variety, or desirability of the foods they consume. The most extreme level of food insecurity is very low food security (previously labeled “food insecurity with hunger”] [27]. Those with very low food security have disrupted eating patterns and reduced food intake. They have cut the size of their meal or skipped meals, ate less than they felt they should, were hungry but did not eat, lost weight, and/or did not eat the whole day [28].

Every year, the USDA Economic Research Service shares a report for the prevalence of food insecurity across the nation. However, this report does not include individuals who are homeless [29]. The number of studies reporting on prevalence of food insecurity in the homeless population is limited. However, several small studies suggest that between 40% and 60% of those who are homeless have high prevalence of food insecurity [30, 31].

Please note that that all versions of the HFSSM (18-, 10-, or 6-item) ask respondents if they had "enough" food and were able to afford "balanced" meals. Both "enough" and "balanced" are subjectively defined by the respondent. How much food is "enough," and what constitutes a "balanced" meal may have different meanings depending on a person's knowledge of nutritional needs. Individuals living with chronic food insecurity may have developed a different meaning for both "enough" food and "balanced" meal [9].

In busy clinics where time is critical, an 18-item or even 6-item food security survey may not be practical. However, screening for food insecurity as part of a holistic approach to care is important. The American Hospital Association and Feeding America recommend using the validated 2-item Hunger Vital Sign™ to quickly screen for food insecurity [14, 32]. The two questions in the Hunger Vital Sign™ are: "Within the past 12 months we worried whether our food would run out before we got money to buy more" and "Within the past 12 months the food we bought just didn't last and we didn't have money to get more." To further help healthcare providers, Feeding America has designed a useful toolkit that outlines a process to screen and address food insecurity in almost any clinic setting [32].

The Veterans Health Administration (VHA), the largest healthcare organization in the United States, demonstrated leadership by implementing screening for food insecurity among Veterans seen in their primary care clinics beginning in October 2017 [33]. The VHA uses a 1-item screener question: "In the past three months, did you ever run out of food and you were not able access to more food or have the money to buy more food?" This screener is located with other clinical reminders in the VHA's electronic health record, so it is automatically prompted for completion during routine clinical encounters. Clinic staff are to ask this question during intake after they ask the housing stability screener. Positive responses prompt a social work, dietitian, nursing, or provider consultation. Hopefully as awareness of the relationship between social determinants (such as food insecurity) and health expands, more healthcare institutions and systems will adopt screening for and addressing food insecurity.

Quantifying Food Insecurity

Food insecurity is a social determinant of health [34]. Individuals struggling with food insecurity often cope with the limited finances by consuming low-cost, filling foods [35, 36]. However, these foods are also often high in calories and lack essential nutrients [37]. Individuals experiencing food insecurity also may have higher levels of stress due to economic instability. The low-quality diet coupled with increased stress places individuals living in food insecurity at greater risk for poor health outcomes such as obesity, diabetes, cardiovascular disease, and depression. For these reasons, food insecurity contributes to health inequality.

Those who are struggling to avoid hunger have little, if any, choice over the foods that are available for them to consume [10]. Individuals who are homeless may engage in harmful strategies to access food. For example, they may consume food foraged through dumpsters or trash cans. This food is not safe for consumption and could place the individual at risk for foodborne illness and infections. If panhandling or loitering outside stores and restaurants, this can place the individual at odds with ordinances or law enforcement. Even safer sources of food (such as food pantries, community kitchens, or family/friends) may not offer foods that meet the nutritional needs of the individual.

For example, community kitchens (a.k.a. "soup kitchens") may or may not offer meals that fit the recommended dietary requirements for individuals who have diabetes, cardiovascular disease, celiac disease, or other illnesses with dietary restrictions. Therefore, it may be challenging for individuals who are homeless (or even those who have homes but limited income) to consume foods that adhere to their diet, thus worsening their health condition.

Case Study: Vital Intake

David arrives to the emergency department complaining of dizziness. His vital signs indicate heart rate of 85 beats per minute, 9 respirations per minute, blood pressure of 155/92, capillary blood sugar 58 mg/dL, pain score 0 out of 10, and body mass index 38 kg/m^2. The emergency department (ED) also recently adopted the Hunger Vital Sign^{TM} [38] *as part of its patient intake. On review of the chart, you notice that he has responded yes to both questions on this screener. Immediately you enter a consultation to social work to help him get access to food. You also see that this is David's fourth ED visit in 8 months. Each time he has come, it was for issues that could have been addressed in primary care. He was admitted once for additional workup but has otherwise been discharged the same day.*

As you get set to interview David, he asks you if he can get something to eat, like a sandwich or anything. He tells you that his last meal was last night and that he has been hungry since he woke up. He has not taken his diabetes medication, or any medication, because he was worried about not having any food to go with it. David tells you that normally he can get food from the community kitchen near the park where he keeps his car. They make some of the best mashed potatoes he has ever eaten. He knows that eating the potatoes will spike his blood sugar level, but he said that the other option is to be hungry.

At this point, you also consult the dietitian as you know that David is in a precarious situation. Not only is he homeless, he also lacks sufficient access to food that meets his dietary requirements. Knowing that he has diabetes with early stage kidney disease, he already has a complicated diet to which he must adhere. However, acknowledging that he may not always be able to control what foods he has access to means that David is at high risk for additional complications. You also wonder if David has had trouble accessing food in the past and if so to what extent could that have contributed to his diabetes-related complications with kidney disease.

Prevention and Nutrition Screening

The first step in treatment of a condition is prevention of the condition. This is true for homelessness as well as associated nutrition concerns such as hunger, food insecurity, nutrient deficiencies related to poor nutritional intake, and malnutrition. Homelessness and food insecurity are ultimately preventable conditions at the individual and community level. Preventive efforts of the healthcare team are vital to provide their clients a voice and advocacy in the context of their own communities, professional organizations, and institutions or hospitals. These efforts include raising awareness and opening conversations about homelessness and food insecurity through:

- Poster presentations at professional organization or institutional meetings/conferences
- Case studies presentations with other healthcare teams or hospital leadership
- Hosting journal clubs
- Publishing research
- Collecting data and participating in quality improvement projects
- Advocacy at local, state, or federal legislative levels
- Serving as field subject matter experts for local, state, or federal representatives
- Serving as a voice of healthcare professionals who work with the homeless and/or food insecure

Additionally, healthcare providers and teams have meaningful opportunities to intervene at the individual level, at times in a family's or individual's life when they are at risk of becoming homeless or losing basic needs such as food or shelter. This is done by performing their particular discipline's role with a whole-person approach, that is, ensuring a Social Needs Assessment in developing their treatment plan. Healthcare providers must understand a client's housing and food access situation to appropriately prescribe treatment:

- Where do they currently sleep?
- Do they have access to toilets, soap, and potable running water? How convenient is this access?
- Where are they getting their meals?
- Do they have access to heat sources to prepare meals (i.e., hot plate, stove, microwave)?
- Do they have refrigeration and/or safe food storage capacity?

For example, if a client does not have food or shelter, it is unlikely any treatment plan prescribed can be followed before those needs are being addressed. If healthcare teams know their clients' social factors, not only can they more effectively help clients with their actual needs during a visit, but their treatment efforts will not be in vain. Clients' social factors and risk change over time, so it is important to seize any opportunity when a client is transitioning or recently has transitioned into homelessness or food insecurity.

A powerful tool in both prevention and treatment is screening, because identifying the problem is necessary to begin clinical treatment. Nutrition screening is different than prevention, but it should be used in preventive efforts for the population to identify and offer the food-insecure treatment/intervention. Routine nutrition screening also monitors changing risk and transitions in a client's life over time. A client may screen negative at one visit but lose a job, relapse in substance use disorder, or be kicked out of the house by an angry partner by the next visit. Nutrition screening is used to identify clients with a nutrition-related condition but can be used to identify those at risk of food insecurity; thus it has a role in prevention too.

Nutrition screening is used to identify a wide range of nutrition-related concerns:

- Food insecurity
- Malnutrition
- Overweight/obesity
- Food intolerances or intake problems (nausea, vomiting, diarrhea, dysphagia, mastication)
- Disordered eating behaviors (binging, purging, other restrictive or excessive intake patterns)
- Others

Some nutrition screening is required by the Joint Commission [39] (CTS.02.01.11):

1. The organization screens all individuals served to identify those for whom a nutritional assessment is indicated. At a minimum, the screening includes questions about the following:
    - Food allergies
    - Weight loss or gain of ten pounds or more in the last 3 months
    - Decrease in food intake and/or appetite
    - Dental problems
    - Eating habits or behaviors that may be indicators of an eating disorder, such as bingeing or inducing vomiting
2. Individuals for whom a nutritional assessment is indicated are either assessed and treated by the organization or referred for assessment or treatment.
3. For organizations that assess nutritional status, the assessment identifies those individuals who may be at moderate or high nutritional risk" [39].

Some nutrition screenings are unvalidated but rather developed locally by hospitals or programs as a means to gather data and/or food preferences and generate internal referrals to Registered Dietitian Nutritionist (RDN), Dietetics Technician Registered, diet technicians, or other team members. These include body mass index (BMI) screens for over- or underweight, food intolerance or intake problems, or other local screening. However, there are validated nutrition screenings for malnutrition and food insecurity. Validated nutrition screening should be used instead of locally developed screening to identify nutrition risk (Table 17.1).

Table 17.1 Nutrition screening tools [14, 21, 31, 40–43]

Tool	Purpose	Assessor	Additional information/links
Mini Nutritional Assessment – Short Form (MNA-SF®)	Malnutrition and malnutrition risk for clients >/= 65 years	Any healthcare worker	https://www.mna-elderly.com/forms/mna_guide_english_sf.pdf
Malnutrition Screening Tool (MST)	Malnutrition risk for adults in the residential/inpatient/outpatient hospital setting	Any healthcare worker	http://static.abbottnutrition.com/cms-prod/malnutrition.com/img/Alliance_Malnutrition_Screening_Tool_2014_v1.pdf
Subjective Global Assessment	Protein-calorie malnutrition	Trained personnel	Basic intake and weight questions with a physical exam that focuses on areas of subcutaneous fat, muscle wasting, edema, and ascites
Malnutrition Universal Screening Tool (MUST)	Nutrition risk for adult clients	Any healthcare worker	https://www.bapen.org.uk/screening-and-must/must/introducing-must
Household Food Security Survey Module (HFSSM)	Has 18-, 10-, and 6-item versions for population screening of household, adult, and child food security	Any healthcare worker	https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/
Hunger Vital Sign™	2-question validated screen	Any healthcare worker	"Within the past 12 months we worried whether our food would run out before we got money to buy more" and "Within the past 12 months the food we bought just didn't last and we didn't have money to get more."
VHA Food Security Clinical Reminder	1-question screener used in the Veterans Health Administration electronic health record	Any healthcare worker	"In the past 3 months, did you ever run out of food and you were not able access to more food or have the money to buy more food?"

As listed above, nutrition screenings look like a question, or very brief series of questions, that can be administered by anyone on the healthcare team. Nutrition screening is not designed to be completed by a Registered Dietitian Nutritionist (RDN), but rather should be part of an institution's clinical flow and practices. For example, nutrition screening may be completed with every inpatient admission intake. It can easily be added to other screenings during this process, such as Nursing Admission Screening or Behavioral Health Admission process. Nutrition screening should be part of an institution's outpatient care too, because nutrition is a key tenet of overall health and a basic need for survival. Therefore, addressing it through screening at every new visit or admission does not seem excessive. An institution can add nutrition screening questions to admission or clinic documentation [44].

Screening for food insecurity is a sensitive endeavor. The topic has significant negative stigma associated with it. The stigma may impact many induvial and families in need, to seek resources or ask questions about resources that are available. Healthcare providers represent knowledge, resources, and in most cases trusted confidants to their patients. This relationship makes them perfectly suited to screen for social determinants of health like food insecurity and to provide education on resources and medical therapies that may be impacted by a positive screen [14]. The healthcare team, including the nurse, social worker, dietitian, and provider, each provide an important vantage point to educate and assist the food-insecure patient. The nurse is usually the clinician who will conduct the screening. When a positive screen occurs, the nurse is perfectly positioned to provide education regarding the impact that the client's current medications have to their disease and how certain medicines and food affect well-being. Of particular concern are patients with diabetes who are on medication to manage their blood glucose. Diabetes in this population is more difficult to manage. If a food-insecure patient skips a meal but takes their medication, their risk of experiencing a hypoglycemic event is high. Seligman et al. [45] observed a statistically significant relationship between patients with food insecurity and poor diabetes management, which led to chronic emergency department visits for hypoglycemic events. Additionally, the evidence highlights the work of O'Toole et al. [46], who found the effects of food insecurity were higher than expected for hypoglycemic episodes in patients with diabetes, indicating the strong relationship seen with this specific disease. Connecting the client to the social worker as soon as the positive screen is obtained allows for the provision of resources more expeditiously. Ideally, the plan is to facilitate the client at the time of a positive screen, so that he or she leaves with useable information and a plan to obtain food that day.

When the client meets with the dietitian, the exchange of information should focus on the following topics:

- What type of access do you have to prepare food?
- Do you have a microwave, a hot plate, a full kitchen, etc.?
- If the patient is in receipt of Supplemental Nutrition Assistance Program (SNAP) benefits, then a discussion on how to stretch SNAP benefits.
- How to increase healthy choices, especially if using a food pantry to supplement the food supply.

The healthcare team provider is responsible for assessing the impact that food insecurity may have on the different diseases the patient has. To start, a review of the medication list is important to assess the need for food to be present when the medication is taken, or the impact the medication will have if unpredictable ingestion of food is occurring. The healthcare team collectively needs to educate and support the food-insecure patient to reduce the risk of any drug-nutrient interactions or significant side effects.

Nutrition Care Process

Screening leads to treatment of a condition, and nutrition screening must be connected to follow up action to be meaningful. For example, if a patient responds affirmatively to a malnutrition screening question, this should trigger a nutrition consult or referral to a Registered Dietitian Nutritionist for a full nutrition assessment. In the case of food insecurity screening, this consult or referral may be to a social worker, RDN, or the patient's designated nurse, case manager, or care manager.

When a patient is referred to a Registered Dietitian Nutritionist for a nutrition assessment, this begins the Nutrition Care Process. The Nutrition Care Process (NCP) is a standardized way that all RDNs provide evidence-based care and documentation [47]. It is problem(s)-focused and provides consistency in nutrition interventions for identified nutrition problems. It consists of five distinct components collectively referred to as "ADIME": Assessment, Nutrition Diagnosis, Intervention, Monitoring, and Evaluation [47].

"Assessment" is most synonymous with the familiar "SOAP" notes' documentation (Subjective, Objective, Assessment, Plan) used by providers and other healthcare professions. In ADIME, Assessment includes roughly the "SOA" data. It is when the RDN gathers data from:

- Interviewing the client, caregiver, and other healthcare team members
- Nutrition-Focused Physical Exam
- Medical chart/history
- Laboratory results
- Anthropometrics such as weight trends
- Medications
- Many other pertinent pieces of information that tell the client's story

A nutrition assessment begins with a handshake. This builds rapport, especially important when interviewing homeless populations, because it shows respect for persons and extends human kindness to those who may be physically rejected or avoided by others in their daily lives. The handshake also begins the Nutrition-Focused Physical Exam (NFPE) [48]. The NFPE is performed by a RDN or provider who has been trained in NFPE. It includes both inspection (visual) and palpation (physical) examination of the client. Upon handshake, the RDN can begin to assess handgrip and any muscle wasting of the interosseous muscle between the thumb and index finger. The NFPE proceeds with permission of the patient to review head-to-toe areas that are affected by nutritional intake: muscle, fat stores, hair, nails, skin, mucous membranes, gums, and lips. The RDN (or specially trained clinician) inspects and/or palpates:

- Hollowing of the temporal area of the head for muscle wasting
- Visual inspection of orbital fat pads under the eyes for subcutaneous fat loss (may be masked by edema/fluid retention)
- Visual inspection of anterior lower ribs for fat stores (lower ribs should not be visually evident)
- Subcutaneous fat: arms at a 90-degree angle and lightly pinching biceps and triceps
- Edema/hydration status: dimpling the skin with two fingers above the ankle, edema at the sacrum, ascites in the abdomen, pinching the skin on back of the hand, and mucous membranes
- Bilateral muscle wasting (presents in the upper body first): shoulders (acromion processes), trapezius muscles (scapula), deltoids, triceps, biceps, thigh, above the knee, calf, clavicle, and interosseous muscle
- Trained inspection for micronutrient deficiencies: nails, hair, skin, and gums

Findings in a NFPE can be validated by another clinician and laboratory values to confirm the extent of the nutritional deficiency and inform the clinician on any micronutrient repletion needs. Note that micronutrient (vitamins and minerals) repletion is specific to the nutrient deficiency and will need further evaluation to determine repletion regimen. It is not appropriate to treat micronutrient deficiencies with a multivitamin/multi-mineral supplement.

Assessment often includes a 24-hour recall with the client, which entails a multiple pass method of interviewing [49]. The client is asked to "walk through a typical day" with the RDN, relaying all food and fluid intake. The multiple passes in a 24-hour recall allow the RDN to walk through a typical day with the client in five steps to catch details not included in the previous passes (e.g., "I had a sandwich for lunch" on Pass 1 turns into the following by Pass 3: "I had a ham sandwich with 4 slices of honey baked ham, two slices each of lettuce and tomato, 1 tablespoon regular mayonnaise on 2 regular pieces of white bread with a 'big grab' bag of barbeque potato chips and a 24 ounce diet soda, but 3-4 times a week I go to the fast food restaurant at the corner of Miller and 5th and get the 'Number 5' special with a 12 ounce vanilla shake.") The multiple pass 24-hour recall is a preferred method to gather intake data. If done with sensitivity and understanding, it builds more rapport and can initiate trust in the client-RDN relationship. The 24-hour recall can also elucidate stark nutrition findings, such as food access problems (financial or geographical), transportation challenges, work and family influences, food attitudes, social isolation or interactions, exploring disordered eating behaviors, and even suicidal ideations not previously disclosed. The lifestyle around food is poignant; RDNs learn so much from clients through the assessment component of the NCP, and this allows them to more precisely move to the next component of NCP to identify the nutrition diagnosis.

Nutrition Diagnosis

Registered Dietitian Nutritionists use codified electronic Nutrition Care Process Terminology (eNCPT) in documenting the Nutrition Care Process [50]. Use of the standardized eNCPT also allows for standardization in identifying and defining nutrition diagnoses. Nutrition diagnoses are different from ICD-10 medical diagnoses, and RDNs assign them to clients based on standardized etiologies and signs/symptoms. Providers should enter ICD-10 code Z59.4 "lack of adequate food and safe drinking water" as the ICD-10 medical diagnosis, because proper documentation and coding of the medical encounter is important. Nutrition diagnoses are identified by the RDN and are written in documentation in the form of "PES" statements (Problem/Diagnosis, Etiology, Signs/Symptoms). For example, a provider may see the following 1–3 PES's in a RDN's progress note [50]:

- Limited access to food (nutrition diagnosis) related to lack of financial resources (etiology) as evidenced by client's report of skipping two to three meals 3 or more days a week (signs/symptoms)
- Intake of unsafe food (nutrition diagnosis) related to lack of proper food storage (etiology) as evidenced by client complaints of nausea and diarrhea and reports of eating foods, including meats and eggs, out of trash cans (signs/symptoms)
- Poor nutrition quality of life (nutrition diagnosis) related to food insecurity (etiology) as related to lack of social and familial support (signs/symptoms)

The eNCPT [50] offers RDNs a complete list of the multiple domains and terminology related to all steps of the NCP for all types of clients and patients. The PES statement tells the provider that the RDN is going to intervene his/her expertise to improve or resolve the nutrition problem/diagnosis(es) by primarily addressing the etiology. This intervention may be provided directly by the RDN, or the RDN may use care coordination/referral to social work or case manager, if more appropriate. The ultimate goal in the NCP is to resolve the nutrition diagnosis.

Nutrition Interventions

The "I" in ADIME is the Intervention [47]. Nutrition Interventions are organized into the following domains to address the etiology and ultimately resolve the nutrition diagnosis:

- Food/nutrient delivery to provide customized approach to nutrition, including basic dietary or intake recommendations, tube feeding, or parenteral nutrition
- Nutrition education to provide didactic information
- Nutrition counseling to support goal setting and behavior change
- Nutrition coordination of care to refer to other team members or resources
- Population-based nutrition action to address needs of a population

These interventions are provided by the RDN or coordinated by him/her in referring to another healthcare team member or community resource.

Nutrition Monitoring/Evaluation

In ADIME, the "ME" Monitoring/Evaluation part of the Nutrition Care Process can be thought of as the follow-up plan. It also establishes the outcomes related to the nutrition diagnosis. When should the client be seen again? What data will be needed at that time to determine progress or resolution of the nutrition diagnosis? The follow-up interval should be determined by the nutrition diagnosis. For example, if the PES statement records "Limited access to food related to lack of financial resources as evidenced by client's report of skipping 2–3 meals 3 or more days a week," the follow-up interval would be something sufficient to show progress in this diagnosis such as the time required to connect with the local food pantry or enroll in emergency food assistance. The goal of Monitoring/Evaluation is to follow up with the client to determine if outcomes are being achieved to resolve the nutrition diagnosis(es). It is also an opportunity to reassess with new data and the Nutrition Care Process cycle to identify emerging nutrition diagnoses. The ultimate goal of the Nutrition Care Process is that nutrition diagnoses are resolved.

Case Study: Dietitian Consultation

The dietitian meets with David. She shakes his hand warmly and states her role in his care, asking if he has any particular concerns today. He says not really but knows he has diabetes and hasn't been eating well lately, which has given him low blood sugar. The dietitian asks if David can walk through a typical day for her (for a 24-hour recall) and if she could perform a Nutrition-Focused Physical Exam to "make sure he's in good shape." She learns that David feels safest sleeping in his car which he keeps parked at the park. The park also has restrooms. Normally he eats one meal a day at the community kitchen, but he can only go there four times per week. The community kitchen serves one meat with a side of vegetables (green beans, corn, or potatoes), a small salad with dressing, and a desert. He tries to skip desert, but if he is still hungry, he will eat it. If he can afford it, he will get a $5 supreme pizza or other burger and fries fast-food meal on the days he cannot go to the community kitchen. He also tries to keep some snacks in his car in case he feels like his sugar is getting low. He has no means of making his own food and no access to refrigeration. David used up his savings (which was not much) long ago. With tears in his eyes, he describes digging through trash and begging for food. His two greatest fears are that he will lose his car or have to always beg for food. His health concerns are secondary to these two daily fears.

The dietitian enters the following Nutrition Assessment Note as part of the medical record:

(A)ssesment
44-year-old African-American male; type 2 diabetes, hypertension, renal insufficiency referred from ED 2/2 s/s hypoglycemia. Lives in car × 8 months

Intake 1 noon meal/day at community kitchen

- 4 oz. beef
- 1 cup mashed potatoes
- Tossed salad with ranch
- 1/8 pumpkin pie
- 72 oz. water/day
- Other intake: trash cans (donuts) or begging

NFPE obese (8% weight loss × 6 months), mild bilateral muscle wasting (biceps, triceps, clavicle), 1+ LE edema

Nutrition (D)iagnosis Limited access to food related to lack of financial resources as evidenced by client's report of skipping two to three meals 3 or more days a week

(I)nterventions
Nutrition Coordination of Care: Referred patient to ABC Food Pantry and provided list of available foods at no cost. Completed Supplemental Nutrition Assistance Program (SNAP) online application with patient, including Emergency SNAP Benefits Request. Referred patient to facility Homeless Case Manager for follow-up housing needs (appointment tomorrow morning).

Nutrition Education: Discussed role of SNAP Emergency and regular benefits and strategies to follow consistent carbohydrate intake using foods available at ABC Food Pantry and provided sample SNAP shopping list to maximize benefits. Reviewed food safety principles and dangerous foods to consume out of temperature and time.

(M)onitoring/(E)valuation: Follow-up with Homeless Case Manager tomorrow 9:30 AM. Follow-up dietitian × 2 weeks or per request. Phone number provided.

Discharge Planning

Ideally a hospital or healthcare system has resources such as social workers, dietitians, and case managers to address the multitude of complex needs to address complex issues such as homelessness and food insecurity. However, there are some basic social needs that should be addressed if a client cannot meet with a social worker at the time of their visit.

Recommendations:

1. Assessing client literacy level to help determine the best way to deliver discharge plans.
2. Assessing social support assets: family or friends who may be able to assist. They may need help contacting the family or friends or need someone who is willing to ask for them.

3. Asking about where the individual usually sleeps (in a shelter or on the streets). Then help them locate community kitchens, food pantries, or places of safe refuge near these areas.

Individuals who are homeless are not only struggling to meet basic needs like food; they often have co-existing health conditions that add to their daily struggles and complex management. For example, they may have substance abuse, alcoholism, mental health issues, and chronic diseases. O'Toole and other researchers found that connecting homeless individuals with primary care that offers wraparound services helps reduce unnecessary emergency department visits and better meets their health needs [5, 13, 51, 52]. Connecting individuals who are homeless with primary care services designed to help meet their physical, mental, and social support needs may be the most critical element of their discharge planning.

Case Study: Social Work and Case Management

Unfortunately, the social worker will not be able to see David today. He is overloaded with cases. However, the Homeless Case Manager will step in and see how she may assist tomorrow morning. Her goal is to reduce David's re-visits.

David, unlike many who are homeless, does not smoke or have substance abuse disorder or mental health condition. He understands his illnesses are severe and he tries to do what his doctors tell him he needs to do. However, as he explains to the case manager, he must make choices on what he can afford: medications, healthy food, or gas. Housing is a far-off goal for now. When he feels desperate or scared, he knows that the emergency department (ED) will take care of him.

David has a sister and a son who live in the area. His sister is also struggling to make ends meet and cannot offer David much financial support. His sister's live-in boyfriend does not want David to live with them even temporarily. David's son is 20 years old and is trying to "get his life going." David has not told his son about his living situation yet.

David had never applied for social assistance like the Supplemental Nutrition Assistance Program (SNAP) because he was "sure he would not qualify." He has tried to look for work, but when most employers see his appearance and lack of hygiene, he is quickly denied the position. He finds some odd jobs here and there, but it is never stable.

David does not see a primary care physician because he has no insurance. He gets about 2 weeks' worth of medications from the ED and stretches them out. He has never told anyone in the ED about his living situation because "no one has ever asked."

Resources and Social Interventions

Currently, most approaches to managing social determinants of health, like food insecurity, have focused on population-level approaches and policy-level work. There is great opportunity to impact change at the healthcare system level [53]. This work starts with the screening for food insecurity at a variety of levels of care. The opportunities for screening can occur in traditional outpatient clinic settings, as part of an acute care hospitalization or when receiving urgent care through an emergency department. Approximately 30% of patients with frequent hospital admission are food insecure [54]. Once screening data are available to a healthcare system, the information can be used to impact medical risk and treatment decisions while informing interventions that can increase the outcomes of vulnerable patient populations [53]. As more healthcare and non-healthcare agencies collect information on social determinants of health, the potential to integrate these data sets creates an opportunity to impact the current medical home model in favor of a healthy neighborhood. The idea of whole healthcare, or care that improves the patients' total health and well-being, is an alternative to the traditional disease-driven practice of the traditional healthcare system [55]. Personalized, proactive, patient-driven healthcare are the core principles of this approach. As the model is developed, the implementation of the proactive principle includes the provider and the patient utilizing strategies that are considered less traditional medical therapies and more likely considered generally healthy living principles. These strategies include mind-body approaches and nutritional strategies. The intent is to explore these concepts prior to traditional strategies like surgery or chemotherapy [55]. The framework being utilized for this approach is called Complementary and Alternative Medicine (CAM); this framework aligns with the core concept that the patient is at the center of his/her healthcare and encourages and empowers him/her to make choices to support individual well-being. The idea of a "circle of health" has been used to outline the basic tenants of this framework. The primary categories include working your body, surroundings, personal development, food and drink, recharge, family, friends and coworkers, spirit and soul, and power of mind. The connection of food to well-being is clear and strong. This approach is reminiscent of Hippocrates, who said "Let food be thy medicine, and let medicine be thy food."

The capturing of data both from the screening tool and through medical coding can provide invaluable data. The team must be aware of the importance of connecting the patient with resources at the time they are identified as food insecure. This may be the only chance to educate the patient on their options and the impact food insecurity has on their disease management. The social worker and RDN are best poised to develop a local list of resources available for the team to provide to a patient. The resource list should include the national resources like SNAP and Women, Infants, and Children (WIC) Program, as well as local resources, for example, soup kitchens, food banks, faith-based organizations, and any volunteer or non-profit organizations that support food security.

Interdisciplinary Teamwork and Summary

The healthcare team has a number of opportunities to assess the patient for their current food security status. In addition to the outpatient screen, acute care admissions can provide excellent access to evaluate social factors for the patient. The healthcare team together provides the best opportunity to impact the coordinated care described as whole health at the time of the discharge plan. The discharge plan must include the food security status, which is ideally identified during initial screening. This allows the nurse, the dietitian, the social worker, and the physician to collectively develop the plan of care with this information in mind. The personalized education will include the same components as they do in the outpatient setting; however, the inpatient admission allows for multiple visits by the healthcare team members, increasing the opportunity for greater compliance to the healthcare plan by the patient upon discharge. A complete assessment of the patient's food sources is critical. An accurate account includes determining if food is coming from soup kitchens, food banks, or dumpsters. The dietitian needs to have informed conversations focusing on food safety. For example, the patient needs to understand the risk of eating any type of meat that is found in a dumpster. Foodborne illnesses are a real threat, and the danger needs to be highlighted in a sensitive and thoughtful manner.

Case Study: Discharge Planning

As your shift comes close to its end, you want to make sure that David is set for discharge. You see that he has spoken with the dietitian who has offered some suggestions on how to make food choices given his tough circumstances. You also see that case management has tried to address some of his needs by providing him with a list of resources. David has seen this list before, but he does not know what to do with it.

You referred David to the new homeless clinic outreach program. He can receive primary care services, some hygiene material, dry foods, and a bagged meal at his visit tomorrow morning. He will also be able to connect with social work and a housing authority representative at his first visit. You make David's follow-up appointment at the new clinic and provide him with a bus pass so that he can get there. You know that realistically the ED can only provide David with a limited amount of care and resources. The wrap-around services at the clinic are what David really needs to help him meet his basic and health needs. You emphasize this in your discharge instructions, and David verbalizes that he will go to the clinic.

He thanks you and leaves through the sliding door, opposite to the revolving door through which he came.

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Chapter 18
Efforts to Reduce Justice Reinvolvement: Jail Diversion, Justice Outreach, and Justice Reentry

Nubia G. Lluberes Rincon

Introduction

Mentally ill persons have populated jails and prisons for centuries. The medieval interpretation of certain unusual behaviors as demonic possession or witchcraft caused the legal punishment of people who were presumably mentally ill. Despite this tendency, the efforts to prevent their incarceration can be traced back to common law in the seventeenth century in England. It has been described that the courts in the seventeenth and eighteenth centuries maintained a doctrine to avoid the judgment of people who were deaf and mute. The reasoning evolved and later extended to those with mental illness to describe that a defendant who was "mad" should not be arraigned due to lacking the ability to enter a plea. This doctrine is cited as the origins of American contemporary laws for competency to stand trial [1].

Newer modalities for the treatment of inmates were established in 1790 by the Walnut Street Prison in Philadelphia, Pennsylvania, and in 1817 by the Auburn State Prison in New York. These jail systems relied on some form of isolation to control criminal behavior. The "Pennsylvania system" used solitary confinement as a tool to force the inmate to "reflect and repent," while the "Auburn system" isolated inmates only at night and relied on group meals and hard labor but still used severe punishment for talking or interacting with other inmates [2].

The conditions of confinement in both systems were very poor, and advocates for a needed change mobilized, requesting a humane treatment for the incarcerated individuals. Among these advocates, Dorothea Dix was arguably the most influential to get people out of these facilities and into hospitals. In her letter to the

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Massachusetts legislature in 1849, she described with horror the conditions that she called “legalized barbarity” [3]. She lobbied drawing attention to the precarities and poor living conditions that the incarcerated population endured at the time. The culmination of her work was the bill for the benefit of the indigent insane which set aside federal land for the establishment of mental hospitals [4]. The first psychiatric hospital for the criminally insane was opened next to Auburn State Prison in 1855 [2].

The hospitals or “asylums” were meant to provide a humanistic approach to the treatment of the insane in a hospital setting as part of the so-called “moral treatment” movement that was dominant in America during the 1820s and until the 1850s [5]. However, these patients went from the jails to the asylums to also encounter poor living conditions.

A new approach was devised attempting to release patient from the precarious environment of the asylums and into their communities. The deinstitutionalization of the mentally ill in the United States started in the 1950s with the hope that their community could provide the services needed for these patients to remain outside of institutions of confinement.

According to Hudson [6], the population rate of those in public institutions in the United States declined by 96% between 1950 and 2010. Many argue that the movement to the communities was poorly planned. The optimism for this approach started to fade due to the realization that communities either lacked the resources or failed to prioritize the investment in mental health in order to provide the care these individuals needed. At the end, the transition to the community did not translate in a better situation for the mentally ill. Instead, the deinstitutionalization of the mentally ill has been associated with income inequality, racial and ethnic diversity (overrepresentation of minority groups), changes in the psychiatric commitment laws, and high incarceration rates, among other conditions [6].

The high incarceration rate associated to deinstitutionalization also known as transinstitutionalization is one of the most deleterious consequences of deinstitutionalization of the mentally ill, given that it not only places the mentally ill back in the jails but also increases the stigma that already surrounds these disorders.

Background/Discussion of Problem

Important Definitions

The criminal justice system is responsible for controlling crime by maintaining processes as mandated by the laws of their jurisdiction. Each jurisdiction has a slightly different approach, with a more or less cohesive interaction among the different parts of that system, to enforce the laws and to manage the different processes in place.

In general, the criminal justice system is comprised of law enforcement agencies (e.g., police, sheriff department), the courts and court personnel (e.g., judges, lawyers), correctional facilities (e.g., jails, prisons, detention centers, holding cells, or lockups), and other allied professionals (e.g., mental health providers, probation officers). Although mental health providers were conceptualized for many years as "a guest in the house of corrections," given the new realities of the overrepresentation of the mentally ill, mental health professionals are now considered an intrinsic part of corrections [7].

At the state level, the criminal justice system has the responsibility to identify and process crimes committed within the state lines. At the federal level, the system is responsible for crimes that go beyond state lines, involve federal property, or involve more than one state.

The correctional system is the part of the criminal justice system that refers to those agencies and programs (at the local, state, and federal levels) interfacing with individuals who have been either accused of crimes (detention) or convicted of them (correction) [8]. The correctional system is bidirectionally related to the other three components of the criminal justice system: police, prosecutors, and courts (see Fig. 18.1).

Jails and prisons function under the classic theories of punishment that have been utilized by different societies to punish their citizens for their wrongdoing [9]. Modern societies advocate for rehabilitation but still invoke retribution, deterrence, incapacitation, or a combination of them as the rationale for incarceration. All these theories have failed to reduce criminal behavior and recidivism [8]. Moreover, the system has failed to look for other explanations to prevent the unwanted behavior and produce prosocial behaviors in frequent offenders.

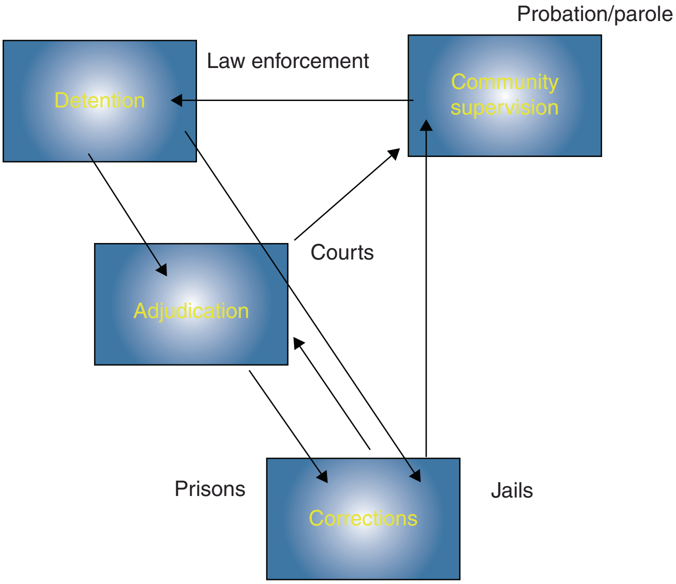

Fig. 18.1 Criminal justice system at a glance

Despite their many similarities, jails and prisons are, however, two different worlds. They differ in the characteristics of the population, duration of stay, funding sources, and the challenges encountered to serve the population.

Jails are facilities designed for the confinement of persons before their cases are adjudicated or those who have been adjudicated and have a short sentence. They are also utilized to secure persons who have violated their probation, parole, and bail/bond or those who are accused of absconding. In some cases, the jails are used to detain witnesses who, according to the Rules of Criminal Proceedings, are considered material to a criminal case [10] and to detain persons facing immigration-related penalties. This explains a very heterogeneous population and adds to the challenges in coordinating care.

Jails are managed by local authorities. The US Census Bureau classifies local governments into five major types: county, municipality, township, independent school district, and special districts [11]. Sheriffs' departments are part of the local government (county) and provide police protection, judicial, and correctional services including the management of the local jails. The formulation, approval, and execution of the jail budget are based on guidelines set forth by the city administrator or governing authority, while the allocation of funds for the jails and correctional programming is typically prioritized by the sheriff's department which often has the administrative responsibility for the jails.

An important challenge in jails is directly related to the prevalence of substance use and mental health problems. The individuals entering the jails have a rapid turnover and are more likely to be under the influence of drugs or alcohol [12] or to be suffering from withdrawal symptoms from illicit substances and alcohol [13] or prescribed medications that they were unable to continue since the time of arrest. It is also important to note that the risk of suicide is elevated in the jail setting. Suicide was the leading cause of death on jails in 2009 and 2010 with higher risk among those with a history of serious mental illness and those housed in a single cell [14].

The prisons, on the other hand, are long-term confinement facilities holding offenders who have been adjudicated and are carrying sentences longer than 1 year. The prisoners are criminal offenders convicted of felonies, which makes the population less heterogeneous than the population encountered in jails. Each state has a department of corrections in charge of managing however many prisons exists in the particular state.

The federal prison system is managed by the Federal Bureau of Prisons and is supported by federal funds. According to statistics from December 2019, the Federal Bureau of Prisons (BOP) has custody over 176,322 federal inmates, 17,208 of whom are housed in privately managed facilities [15]. In previous years, private contractors held over 20,000 inmates in secure beds for adult offenders [16]. This numbers have been decreasing likely due to concerns and criticism about the utilization of private agencies for a public health endeavor. This controversy is beyond the scope of this chapter.

A very important difference between jail and prison inmates is that prison inmates tend to have less acute problems because they transition from the jail setting where presumably some of those problems have been addressed. The turnover in prison is slower because they are serving longer sentences. Therefore, the prolonged length of stay shifts the medical need from acute conditions to chronic conditions and the management of an aging population. Contrary to jails, the risk of suicide in prisons is lower upon admission but does increase over time.

Jails and prisons may hold mentally ill persons accused of a crime that may or may not be directly related to their mental illness. In terms of mental health needs, the correctional system deals with four major population's subtypes (see Fig. 18.2):

1. Persons with criminal behavior without mental illness (pure criminal).
2. Persons with criminal behavior with co-occurring mental illness not related to the crime (mentally ill criminal). These can be further categorized in:
    (a) Persons with no active symptoms
    (b) Persons with active symptoms not related to the crime
3. Persons with pre-existing mental illness and symptoms related to the behavior that caused the crime (insane criminal).

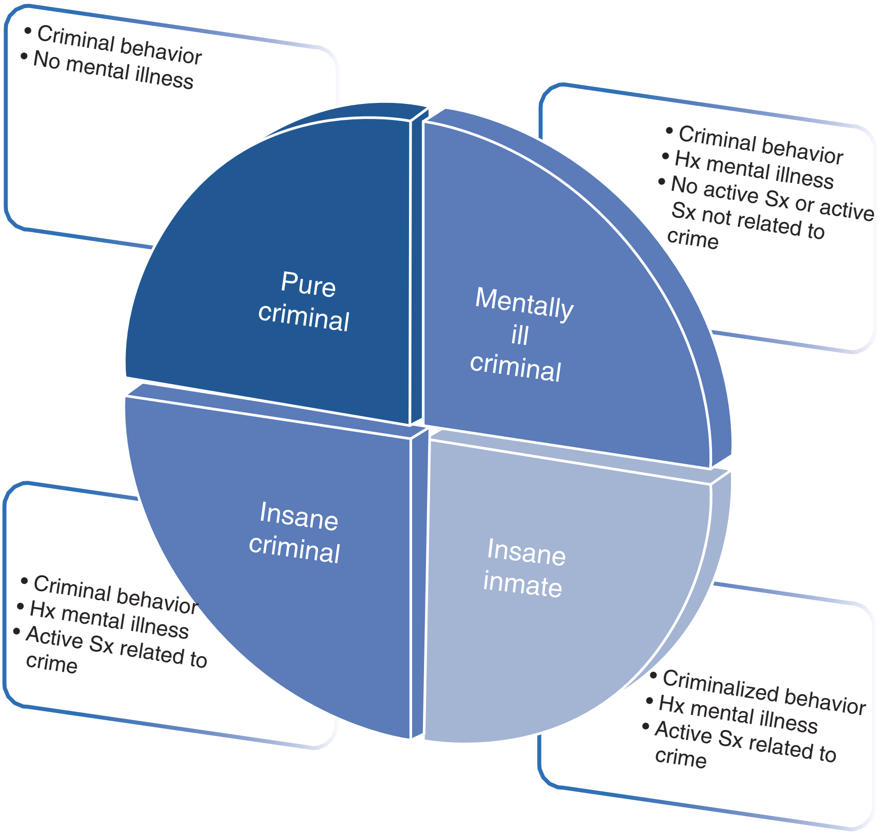

Fig. 18.2 Correctional population categories from a mental health perspective

4. Persons with pre-existing mental illness with symptoms related to a behavior (s) that has been criminalized (insane inmate). These are non-violent offenders with petty crimes.

Two other groups can be added: those who express a mental illness or develop symptoms of distress-depression, anxiety, or psychosis after being incarcerated (distressed criminal) and those who feign such symptoms (malingerers). These groups are not self-exclusionary; for example, person feigning symptoms may still have a bona fide history of mental illness, and a person with no history of mental illness could have a predisposition to mental illness that surged to the surfaced in the context of the stress of incarceration.

Although not all socially unacceptable behavior derives from mental illness, while incarcerated, all offenders will require mental health assessment, and a good number of them will require treatment.

The system encounters an added layer of complexity in evaluating and managing groups with special needs: intellectually disabled [17], terminally ill [18], personality-disordered persons [19], LGBT [20], juveniles charged as adults [21], women [22], and people with severe mental illness (SMI) [23] with and without treatment-resistant conditions.

Statistics

Incarceration By the Numbers

The total correctional population consists of all offenders under the supervision of the correctional system; this includes individuals in jails and prisons and those under supervised conditions in the community (e.g., probation or parole). These numbers started to grow in the late 1960s and have caused great concern about what is now known as “mass incarceration” trends in the United States.

In 1969, President Richard Nixon declared “the war on drugs” and promoted changes to the federal laws as well as the creation of the Comprehensive Drug Abuse Prevention and Control Act in 1970. The criminalization of substance use disorders filled the jails and prisons with a population vastly different from the habitual inmate they encountered until then, and this is believed to be one of the factors contributing to the overcrowding [24].

During the 1980s and early 1990s, the jail population continue growing. The Department of Justice Bureau of Justice Statistics (BJS) calculated the growth at an average of 7.5% annually in the 1983–1993 period. BJS reported that the reasons for the jail population increase during 1980s decade included a growth in adult arrests, an increase in drug offense arrests, and a rise in the number of felons sentenced to serve time in local jails because of state or federal prison crowding. The nation’s jails were operating at 97% capacity despite increasing the number of beds since 1983 to almost double. The population continued to grow at a slightly slower pace during the 12 months preceding June 30, 1994 (6.7%) [25].

In 2005, the nation's prison and jail population grew at an average of 2.6% (reaching 2,186,230 inmates). During this period, slightly more inmates (33,539) than beds (33,398) were added to local jail capacity nationwide. Therefore, the slower growth rate did not translate into improvements to the overcrowding problem. The jail facilities were operating at 95 percent of their capacity [26].

The slowest growth in 27 years, 0.8% for the prison population and 0.7% for the jail population, was recorded in 2008. By June 2008, state and federal correctional authorities had jurisdiction over 1,610,584 prisoners, and 785,556 inmates were held in local jails. However, state and federal prisoners in private facilities increased 6.8%, reaching 126,249 at midyear 2008 [27].

Despite the slower growth of incarceration in the preceding years, by the end of 2012, approximately 6.94 million people were supervised by the US adult correctional systems, which was the equivalent to about 1 in 35 US adults (or 2.9% of the adult resident population) [28]. A decline of the correctional population was noted for the first time in 2017, when jails reported 10.6 million admissions, a 19% decline from 2007 [29], and prisons reported a population of 1,489,363 which constituted a 1.2% decline [30].

Based on data from 2002 to 2004 utilizing DSM-IV diagnostic criteria, the US Department of Justice estimated that more than half (1,264,300) of all prison and jail inmates had a mental health problem and were twice as likely to have been homeless in the year prior to the incarceration. These numbers included 705,600 inmates in state prisons, 78,800 in federal prisons, and 479,900 in local jails [31]. It translated into 56% of state prisoners, 45% of federal prisoners, and 64% of jail inmates versus the prevalence reported in the community in 2004 (25%) which clearly shows an overrepresentation of the mentally ill in the correctional system [32].

According to the data from BJS's 2011–2012 National Inmate Survey, 26% of jail inmates and 14% of prison inmates met the threshold for serious psychological distress (SPD) in the 30 days prior to the survey. Among those jail inmates who had pre-existing diagnosis of a mental disorder before the incarceration, 30% reported they had a major depressive disorder, 54% reported symptoms of mania, and 24% met criteria for psychosis [31].

As of 2019, the four largest jails in the nation include Los Angeles County Jail in California (inmate population of 19,836); Rikers Island in New York (13,849 inmates); Harris County Jail in Texas (10,000 inmates); and Cook County Jail in Chicago (9900 inmates). Applying the percentages found in 2004, this means that each jail had to provide services to roughly 6000 patients or more at any given time.

In 2018, the Harris County Sheriff's Office estimated that the Harris County Jail provided 189,906 mental health contacts. The number of patients who received psychotropic medication treatment that year was close to 29,818, and a total of 7636 patients presented as crisis, with 1917 patients admitted to the mental health inpatient units inside the jail and 124 patients transferred to the state hospital beds for competency restoration [33].

Incarcerated homeless persons charged with non-violent offences (e.g., public intoxication, sleeping in public, trespassing, urinating in public, loitering) are more likely to become super-utilizers of the system with an average of three to five incarcerations with a length of stay of 3 or more years for each one [34].

The estimated average time in jail for the total US jail population in 2017 was 26 days [29]. However, those with mental illness tend to serve more days of their sentences compared to other inmates and stay incarcerated for longer periods [35].

Homeless patients in correctional settings present an array of needs that are uniquely related to the lack of housing, insurance, and social supports. Frequently, these individuals present as "new house" (newly admitted to a correctional facility) with malnutrition, vitamin deficiencies that are causing memory deficits, skin problems, severe complications of medical illnesses that have been running their natural course without treatment, infections, and parasite infestations. Many of them are deficient in their immunizations, thus becoming a weak link in the outbreaks of contagious disease within the institution.

The lack of social support and financial scarcity causes them to be at a loss in term of commissary acquisition. Those who are frail or naïve will miss opportunities to receive supplies or snacks, while those who are more "street savvy" or even predatory will negotiate, steal, or get into altercations to gain control of those goods. If a homeless person is estranged from their families and has no other social supports, the treatment team access to collateral information will be limited to what the system is able to receive from community hospitals or prior incarceration documents. Also, if the patient is confused, catatonic, or incapacitated in any way, the necessary consent prior to start medications may be greatly delayed and their stay inside the correctional facility prolonged.

Mortality in Corrections

According to Noonan [36], the suicide rates in jails dropped each year between 2001 and 2006 (from 49 to 36 deaths per 100,000 inmates), before increasing every year since 2009. In 2011, the jail mortality rate was 122 deaths per 100,000 inmates. Suicide (35%) and heart disease (26%) continued to be the leading causes of death in local jails during 2011. The mortality rate for state prisoners increased from 245 deaths per 100,000 prison inmates in 2010 to 254 per 100,000 in 2011. The majority (89%) of deaths in state prisons in 2011 were natural deaths with cancer as the leading cause and heart disease as the second leading cause.

Recently, correctional institutions were identified as a high-risk setting for exposure and adverse outcomes due to COVID-19. In August 2020, the Bureau of Prisons (BOP) reported a total of 128,290 federal inmates housed in BOP-managed institutions and 13,670 in community-based facilities with an estimated staff number of 36,000. There were 1326 federal inmates and 580 BOP staff confirmed to have positive test results for COVID-19 nationwide. Currently, *9500* inmates and *763* staff have recovered. There have been *111* federal inmate deaths and *1* BOP staff member death attributed to COVID-19 disease [37].

The COVID-19 statistics at the state level vary from state to state with some jurisdictions performing better than others given that jails, prisons, and juvenile correctional facilities reflect the same realities of the communities they are embedded in. The assessment of the risk for each type of correctional facility varies according to their population, their resources, and many other factors.

Costs

A study from the Center for Economic and Policy Research [38] calculated that the average cost for non-violent offenders is $25,500 to $26,000 per offender per year. In 2008, the US federal, state, and local governments spent nearly $75 billion on corrections [38]. By 2016 and despite effort to reduce mass incarceration, the expenditure increased to more than $80 billion annually [39].

Standards of Care in Correctional Facilities

The precarious conditions of confinement in jails and prisons paired with a renewed desire to take action and the increase in the number of civil litigation cases ignited the changes that have been occurring in the last 40 years. These changes include the development of a series of standards of care and oversight by multiple agencies.

The Supreme Court addressed the issue of overcrowding in several cases in the last four decades (i.e., Bell v. Wolfish 1979 [40], Rhodes v. Chapman in 1981 [41], and Brown v. Plata in 2011 [42]). Brown v. Plata was the conclusion of decades of litigation that originated in California with the cases of Coleman v. Brown in 1990 and Plata v. Brown in 2001. The three-judge panel in Brown v. Plata determined that overcrowding was the primary cause of the inmates' inadequate medical and mental healthcare [43].

Since then, the overrepresentation of vulnerable groups has been a topic of interest due to the poor outcomes encountered by frail and/or disenfranchised individuals. In the case of Plata & Coleman v. Schwarzenegger 2009 [44], the overrepresentation of the mentally ill and the inadequate treatment they received was the center point of this class-action lawsuit. The plaintiffs alleged that the failure to provide services to inmates with mental disabilities in the California prison system violated their rights under the Eighth Amendment, the Fourteenth Amendment, and the Rehabilitation Act [45].

The use of class action litigation for jail and prison reform proved to be an effective approach to draw attention to the need for changes in the correctional system and induced changes in policies and procedures that have made jails and prisons more humane and safer for both the prisoners and the staff [46].

Added to the difficulties caused by overcrowding, good quality and diverse medical and mental health services were nil in the 1970s. The unsanitary conditions and non-standardized practices prompted the creation of national standards by the National Advisory Commission on Criminal Justice Standards and Goals (NACCJSG) in 1973. Since then, other agencies have contributed to the refinement of such practices [47].

Some of the regulatory agencies for the correctional system include the Department of Justice (DoJ), the National Commission on Correctional Health Care (NCCHC), and the American Correctional Association (ACA). States can have their own agencies with authority to oversee the standards and operations. For example, the Texas Commission on Jail Standards (TCJS), created by legislature in 1975, enforces the application of the minimum standards in the management of local jails. Local advocacy and disability rights groups have also made themselves present in jails and prison in an effort to improve the conditions of confinement.

“Access to care” is the first essential standard delineated by the NCCHC. It establishes that inmates have access to care for their serious medical, dental, and mental health needs in a timely manner and by a qualified healthcare professional. The standard is based on a US Supreme Court landmark case from 1976, Estelle v. Gamble [48], and emphasizes that unreasonable barriers to access services should be avoided.

Despite the improved understanding of the standards of care, the delivery of such practices in correctional institutions vary depending on the size of the institution, the agency providing services, staffing limitations, budgetary constraints, and other cultural and socioeconomic factors.

In 1980, the Civil Rights of Institutionalized Persons Act (CRIPA) was passed as federal law for the protection of persons living in mental health facilities, nursing homes, and correctional institutions. It allowed the US Attorney General to bring suit in the federal court on behalf of persons institutionalized by the states under unconstitutional conditions [49]. One of the most important aspects of CRIPA for patients with mental illness and their families is the attention to the “Right to Treatment” which articulates that a person in a jail or prison has a right to receive—and should receive—the standard of care delivered in any accredited psychiatric setting [50].

Mental health screening, treatment referral, crisis intervention, and discharge planning have been identified as core standards by many regulatory agencies and professional associations including the NCCHC, the American Psychiatric Association (APA), the American Association of Community Psychiatrists (AACP) [51], and the American Academy of Psychiatry and the Law.

Discharge planning is another NCCHC essential standard, and it requires that the patient be provided with a list of resources and enough medication for short-term continuity of care. It also stipulates that for patients with critical mental health needs, making an appointment with a community provider and exchanging clinically relevant information or arranging for hospitalizations may be necessary [52].

Although many agree that the correctional facilities may not be the appropriate setting for the treatment of the severe mentally ill person [53], the existence of regulations mandating screening of mental illness and treatment of these conditions positions the correctional system as the best resource available in many communities to get homeless patients off the streets and connected with the mental health delivery system in the community.

The primary clinical duties of the correctional mental health professional have been delineated over years of legal review and oversight in regard to deliberate indifference, involuntary medications, suicide prevention, conditions of confinement, segregation and isolation, use of restraints, and management of the developmentally disabled populations [54]. The role of the psychiatrist goes beyond the activities related to direct patient care and extends to leadership pursuits including role modeling for other professionals in the team, education of allied staff (e.g., technicians and correctional officers), and advocacy.

Diversion Programs

The creation of programs to divert persons with mental illness from jails and prisons in the 1990s derived from the programs created in the 1970s to divert persons suffering from substance use disorder. In both cases, these programs are conceptualized as an alternative to incarceration and require the identification of the predetermined eligibility criteria for the particular program [55]. They are typically reserved for non-violent offenders.

Diversion can occur at any time during the involvement with the criminal justice system (see Fig. 18.3). When the diversion occurs before the person is formally

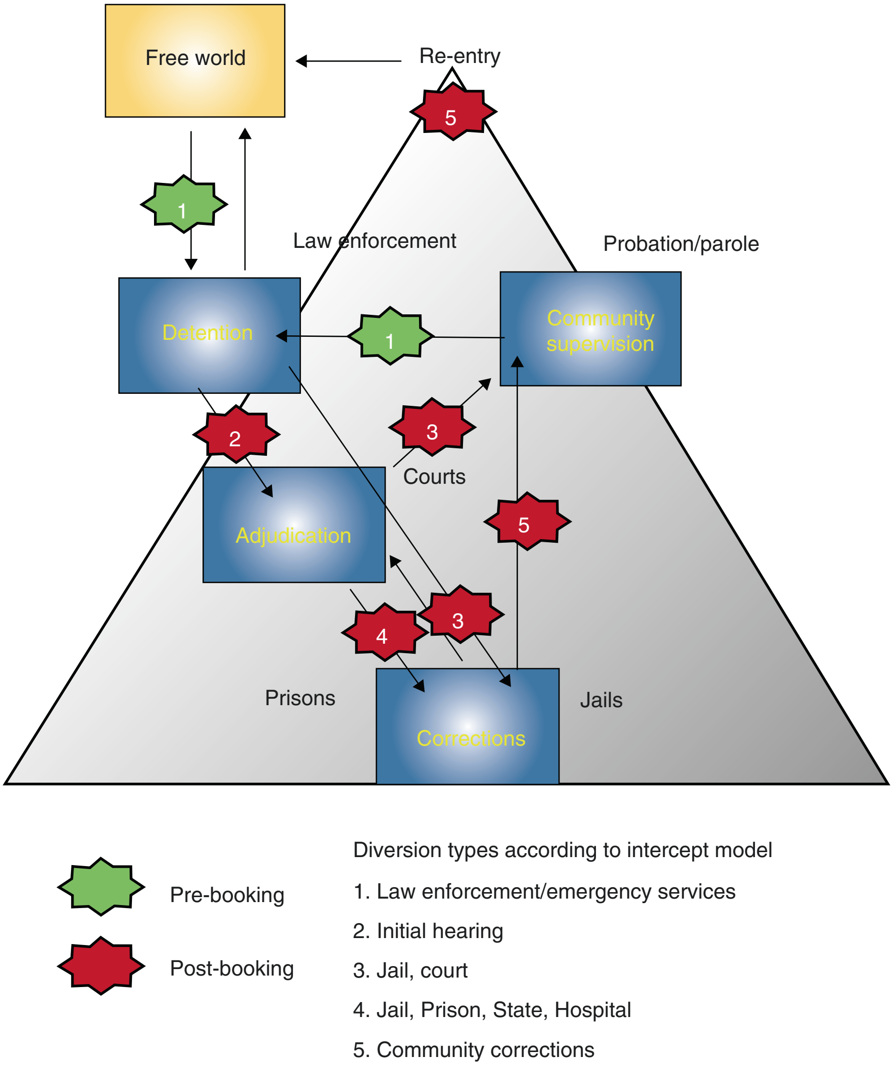

Fig. 18.3 Opportunities for diversion

charged, it is called pre-booking, and when the diversion occurs after the person is charged, it is called post-booking.

According to surveys conducted nationally in 1994 and 2010, the number of diversion program grew from 50 [56] to 298 [57]. This last number did not include Mental Health Courts (MHC) and Crisis Intervention Teams (CIT) which are considered to be other variants of diversion efforts.

Some of the diversion goals include the reduction of recidivism, increasing street-level safety, reduction of the expenses in the criminal justice system, and maximization of the available resources to pursue serious cases. To do so, multiple efforts are often tied together as service bundles. These include medication management, case management, and housing and employment assistance, among other.

Traditionally, jail diversion participants spent some time in jail before they are connected to community services and released. There is an increased interest in creating programs for pre-booking diversion in which the participants will not be required to remain in custody for any length of time. An observational study from 2014 supported this notion by suggesting that the diversion participants who spent some time in jail before being diverted functioned poorly in comparison to those who did not spend time in jail [58].

In September 2018, Harris County in Houston, TX, opened a pre-booking diversion center for homeless offenders with trespassing charges that started at the time of the initial encounter with the police. The center opened with 29 beds and allowed trained officers to consult with the district attorney's office and decided about the possibility of transporting the individual to the center without filing charges. According to the office of District Attorney Kim Ogg, "[T]he program successfully reduced the number of mentally ill people languishing in our county jail for low-level offenses by more than 1,000 people, saving taxpayer dollars in the process" [59].

The success of diversion programs targeting the homeless population may rely heavily on the quality of the engagement. Rivas-Vazquez and colleagues [60] reviewed retrospective data for 229 individuals in Miami Dade County from 2002 to 2006 and proposed a "relationship-based" model (based on empathy, respect, and connectedness) produced good outcomes. However, patient's satisfaction, or provider satisfaction for that matter, were not studied.

Diversion programs are designed to have voluntary admission, but a study conducted with 905 diversion participants showed that a third of the participants reported some level of perceived coercion [61], situation that is likely to directly impact the subjective perception of satisfaction.

One example of successful pre-booking programs includes Project Link in New York where studies showed that the individuals spent less time in jail and less time in the hospital and exhibited a higher level of functioning [62].

Post-booking programs include conditional suspension of the charges with court-mandated stipulations or reduction of the charges and its associated penalties. The release must be accepted by the prosecutor. The Nebraska Mental Health Diversion Program in Douglas County is a post-booking program with reentry capabilities.

The cost of diversion programs may vary widely given the variety of approaches and services. Cost studies in the 1990s and early 2000s have shown contradicting results about the ability to lower the expenses in the correctional system [63, 64]. A more recent study by Cowell and colleagues showed that the estimated cost to start up a diversion program during the period 2001–2003 was $556,638.69 [65].

In Texas, the Bexar County Jail Diversion Program based in San Antonio received the American Psychiatric Association's Gold Achievement Award in 2006. This program includes pre-booking and post-booking efforts combined. It is described as an integrated goal-oriented system that links first responders, crisis centers, correctional institution, courts, and community services. It makes use of crisis centers, step-down residential centers, peer navigators, and involuntary commitment programs. Despite the complex structure, it has been estimated that from 2003 to 2006, the program saved an estimated $3.8 million to $5.0 million in avoided costs within the county's criminal justice system [66].

Detractors of the diversion approach argue that these programs may keep individuals with minor offenses from getting a short sentence and early release due to the complexity of the diversion process and thereby maintaining them involved with the criminal justice system for a time longer than what could be expected for the charge. On the other hand, diversion programs connect with reentry program to ensure a smooth transition to the community, a needed step in the recovery process.

Law Enforcement Training

Police officers play a primary role in the pre-booking diversion efforts due to their position as first responders. The primary model for the pre-booking diversion model is called the Crisis Intervention Team (CIT) or Crisis Intervention Response Team (CIRT) model. Another model of trained police force or specialized policing responses (SPRs) is the Deputy Mobile Outreach (DMOT) program. This model pairs a mental health professional with a trained law enforcement officer. Because the intervention of these trained officers is geared and frequently results in arrest avoidance, they are a special form of diversion program.

The CIT model was developed in Memphis, TN, in 1988 [55], and DMOT or co-responder program model was developed in California around the same time frame. The programs have proliferated in many states and internationally [67]. They are based on three pillars: education, de-escalation skills, and avoidance of the use of force. Although there is no universal curriculum per se, or uniform approach to training officers the training of officer, most programs have developed by mirroring a pre-existing program that likely derived itself from one of the two initial programs mentioned above.

In most cases, the training is entirely voluntary in some jurisdictions, while others offer incentives to motivate young recruits to volunteer. The training time allotted is typically 40 hours, and the depth of the content also varies per jurisdiction.

Harris County Jail (HCJ) has an in-house CIT, and the trained officers are distinguished from the non-trained officers by a “soft uniform” which consists in khaki pants and a dark polo shirt (in contradistinction to the official Sheriff’s Office dark uniform). The HCJ patients have learned to differentiate between the two uniforms and not only respond well to the presence of the soft-uniform officers but also seek their assistance in times of crisis.

In an attempt to investigate how the staff in a correctional facility reconciled ethical challenges in the course of treating SMI individuals, a study led by Segal showed that correctional officers had a desire for more training [23]. There is a wealth of literature that corroborates the belief that the Memphis CIT model is effective in reducing arrests and injuries, as well as increasing officer’s perceived self-efficacy and frequency of linkage to community services [68].

Specialized Courts

In the late 1980s, the drug courts were developed based on the concept of therapeutic jurisprudence, which was introduced in 1987 [69], Years later, the mental health court were introduced following the same concept. Contrary to regular courts, these courts have follow a problem-solving and treatment oriented model. Other specialized courts have followed including veteran’s court, prostitution court, and domestic violence court. The overarching goal of these courts is to reduce recidivism [55].

These courts are also considered diversion programs for they often result in alternative to incarceration. Traditionally, they have designated staff, including a judge and prosecutors that take care of all the cases and become very familiar with the patients who are considered to be super-utilizers. Some judges get to know the affected individual so well as to develop a sense of their baseline level of functioning. They also develop an understanding of the attitudes of the community at large and the criminal justice system in their jurisdiction. For the court, the idea incarceration is not a primary option, and the sanctions are more lenient.

Despite the ingenious approach, the studies regarding the outcomes of MHCs have shown contradicting results. Some suggests that MHCs do not have an impact on crime outcomes [70]. For more information, the National GAINS Center has compiled databases of all adult and juvenile mental health treatment courts [71].

Reentry

The term “reentry” refers to the transition from a correctional facility to the community. Reentry programs rely on bidirectional communication with resources in the community to make accurate assessments and match the patient’s needs to the best of their ability. These programs are especially important for the homeless.

Patient who have been homeless lack the social support that is needed to succeed in the community after an incarceration. If they have a comorbid substance use disorder, they will have an increased risk for relapse and overdose after being released from a correctional facility. The difficulties in finding employment, housing, and transportation to meet the treatment recommendations become obstacles for recovery unless the system can offer assistance. Additionally, the lack of community corrections programs and/or the limited connection between the correctional system and the community services in some jurisdictions prevents the success of reentry efforts.

The participants of jail and prison reentry programs typically start some form of education and treatment while incarcerated. These modules differ depending on the design of the program. Some of the most frequently used modules include "Reasoning and Rehabilitation," "Aggression Replacement Training," "Cognitive Intervention," "Risk-Need-Responsivity Model," and "STARTNOW" among other cognitive behavioral interventions [72, 73].

Reentry program may be designed to address the needs of a heterogeneous population or may be devoted to provide services to a specific population. The Harris County Jail in Houston, TX, offers separate housing for the participants of four different diversion programs, each one targeting a different special group (veterans, mothers, victims of sexual abuse/prostitution, and substance use disorders), but they don't differentiate between homeless or not until it's time to connect with the community.

Outreach Programs

The correctional justice system counterpart of the well-known "Assertive Community Treatment" (ACT) programs is the Forensic Assertive Community Treatment (FACT or ForACT) program.

FACT programs combine the essential elements of ACT model with one of the forensic rehabilitation models (Risk-Need-Responsivity and Good Lives) [74]. Available literature supports the knowledge that FACT programs are associated with decreased substance use and improved global functioning and financial independence [75].

Sequential Intercept

The Sequential Intercept Model (SIM) was created as a conceptual tool to interrupt the involvement in the correctional system and offer community alternatives based on two premises: (1) the overrepresentation of the severely mentally ill in the correctional system and (2) the recognition that people with mental illness who commit crimes with criminal intent should be held accountable for their actions [75].

The origins of the model are traced back to 1999. According to the developers of this tool [76], it was born from the interest in reducing the overrepresentation of

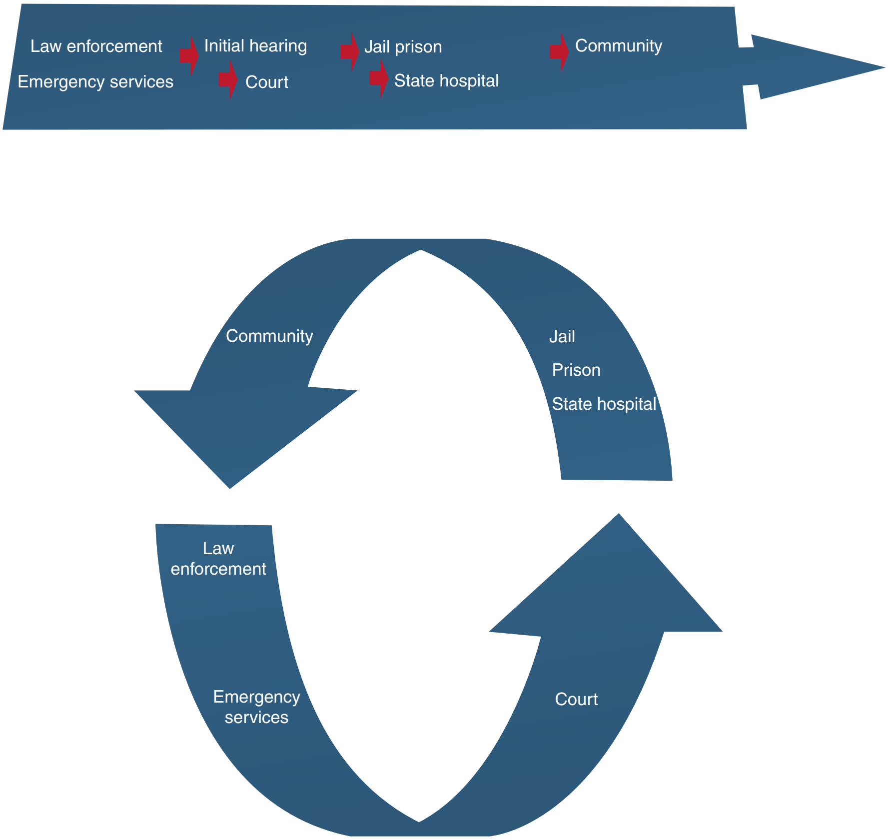

Fig. 18.4 Sequential Intercept Model interpretation [75]. (Adapted from Heilbrun et al. [75] with permission from Oxford Publishing Ltd. through PLSclear)

mentally ill individuals the criminal justice system. The development was a collaboration between the National GAINS Center for People with Co-occurring Disorders in the Justice System and the county officials in Summit County, Ohio. Together, they produced a flowchart and a resource directory to support the goal of the project.

The SIM divides the transition within the criminal justice system in five (5) areas or intercepts. Among those who are applying the SIM, some conceptualize the movement through the system as linear and others as circular (see Fig. 18.4). Regardless of the view (circular or linear), the five intercepts are equally defined:

- Intercept 1: Law enforcement/emergency services/pre-arrest diversion programs
- Intercept 2: Initial hearing/detention/post-arrest diversion programs
- Intercept 3: Jails, courts, forensic evaluations, and hospitalization
- Intercept 4: Reentry from local jails, prison, or state hospital
- Intercept 5: Community corrections

The creators advocate for the SIM to be expanded to all communities. They encourage agencies and communities to utilize the SIM to identify gaps and opportunities, and to promote planning.

The Future

The correctional system has been changing and paying more attention to the problems related to overcrowding, recidivism, and constitutional rights. Yet, there is still a lot of work to do. The accreditation to private, nongovernmental agencies like NCCHC and ACA and the observance of standards promulgated by medical organizations have emphasized the need for mental health screening and evaluations performed by qualified professionals which in turn allows the system to achieve important public health objectives [77].

The system can learn from every situation that presents. In the last 3 years, much has been learned about natural disasters in corrections. Hurricane Harvey in 2017 and the COVID-19 pandemic in 2020 have pushed the system criminal justice system to rethink the attitudes towards incarceration. However, without systematic data collection and continuous quality improvement, it would be hard to make sense of the avalanche of information that is generated.

In the specific case of the homeless person, trapped in a revolving door within the criminal justice system, the proposed solutions must include partnerships with the community resources and the allocation of funds to assist those who have nothing. Oftentimes, these individuals purposely find their way to the jails and prisons in search for the healthcare, food, and shelter they cannot find anywhere else.

The solutions to reduce justice involvement are not solely in the hands of the mental health professional community and are not only a matter of financial investment. The community at large will need to engage in a sustained collaboration to ensure the steady change of the current practices towards a more just, equitable, and sustainable justice system.

The future of correctional psychiatry is bright. At this time, more and more young professionals, well trained and eager to be part of the transformation, are joining the force. By becoming interested in this area of expertise, they bring fresh ideas. The use of technology for data gathering and processing, for the provision of services, risk assessment, and overall improvement of the quality of care, is already starting.

Conclusion

At a system's level, the needs of homeless individuals require to be address within the entire system, especially in respect to community resources and support. It is clear that when the criminal justice system is well equipped and in good disposition to address the needs of those who are incarcerated, or under some form of legal monitoring, the immediate need for stabilization can be achieved, but it is only with the additional help of the community that the reinvolvement can be prevented.

Lawmakers, legal scholars, and political leaders need to further their understanding of how the patterns of decision-making that derive form current laws have an effect in the health system at large and how some of the unintended consequences greatly alter the course of public health initiatives.

At an individual level, the effort to reduce recidivism relies on each one of the actors. Physicians, other mental health professionals, judges, lawyers, correctional officers, and any other person involved in a case can provide input regarding the need for someone to receive treatment, extra support, and guidance until the legal case is resolved and the appropriate safeguards are in place to prevent a relapse.

It is important to keep in mind that chronic and severe mentally ill individuals will have cognitive limitation and poor or limited insight regarding the nature of their illness. The help provided will need to find a balance between acknowledging this reality and the need to support the autonomy and respect for the person in every decision that is made.

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Part IV
Best Practices

Chapter 19
Housing First

Danielle P. Latimore and Lisa Pape

Introduction

Homelessness is one of the most pressing public health concerns in the United States. It is also one of the more visible consequences of the nexus of unemployment, poverty, and a lack of affordable housing [1]. Homelessness is merely one phase in a cycle of extreme poverty. A decrease in income or increase in expenses places persons living below the poverty level at high risk of becoming homeless. Not surprisingly, surges in the poverty rate are mirrored by increasing numbers of persons experiencing homelessness.

While the numbers of those experiencing homelessness have generally been decreasing since 2010, in 2019 alone, more than half a million people in the United States were staying in shelters or places not intended for human habitation on a single night [2]. On a single night in 2019, roughly 568,000 people were experiencing homelessness in the United States: about two-thirds (65%) were staying in sheltered locations—emergency shelters or transitional housing programs—and about one-third (35%) were in unsheltered locations such as on the street, in abandoned buildings, or other places not suitable for human habitation. Many more people experience homelessness over longer periods, such as 1 year or more [3].

Homelessness almost always involves people facing desperate situations and extreme hardship—the daily challenge of securing a safe place to sleep and a place to take care of basic daily hygiene coupled with the inability to access regular

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healthcare and nutrition *is* desperate. People experiencing homelessness must make choices among very limited options, often in the context of extreme duress that includes substance use disorders, untreated mental illness, or unintended consequences from societal policies and practices. Through the years, homelessness has become an issue of national concern, with numerous federal agencies, nonprofit organizations, and the philanthropic community working to develop and implement programs that address this critical political-economic and public policy challenge [4].

Homelessness in many respects is timeless, and the needs of persons who are homeless continually mirror those of the most economically and socially disadvantaged. While subtle changes in the characteristics of the homeless population have occurred over time, the ceaseless tide of people who end up without a place to call home continues to persist. In 1904, Robert Hunter asserted that no fewer than 10 million Americans, 12 percent of the population, were living in poverty. These people were unable "to obtain those necessaries which will permit them to maintain a state of physical efficiency"; they were "underclothed, underfed, and miserably housed" [5]. It is imperative to take note of this fact as it suggests that there are structural flaws in our systemic approach to intervening with those who find themselves homeless [6].

Homelessness in the United States has been part of the country's fabric for centuries. Throughout American history, people and policies have assumed that the homeless are "lazy and irresponsible," a deviant group, not willing to help themselves, and maybe even incorrigible but, in any case, outside the boundaries of mainstream society. There is much evidence, however, that these views are fundamentally biased. Negative stereotypes about the homeless have often functioned to justify persistent class or racial inequalities in the American society [7].

Homelessness: A National Issue

It is believed that the origin of homelessness is traced back to colonial America. As early as 1640, the English "vagrants" were listed as outcast individuals and experienced continual police interaction. People who were homeless were regarded as "sturdy beggars," and by the early mid-eighteenth century, homeless people were found in every colonial town [7].

Homelessness surfaced as a national issue in the 1870s and at the time thousands of people who were homeless suffered in urban cities across the country [8] and then grew significantly when urbanization and industrial development began to flourish [7]. In emerging urban centers, the people who were homeless increased as migration from rural areas to cities began to take hold. It was during and following the depression of the 1870s that poverty became a distinct social problem. During these same decades, "tramps" and "hoboes" were identified and assumed their symbolic position in the literature on poverty [9].

While homelessness has ebbed and flowed through the years, it is safe to say that, from colonial times forward, there has been no period of American history free of homelessness, with the following waves of homelessness identified [10]:

- Colonial Period
- Urbanization/pre-industrial
- Industrialization/post-Civil War
- The Great Depression
- The Contemporary Period

During the post-Civil War decades, some homeless moved around in search of work while others gravitated to the cities. There was considerable overlap between the two groups, but those who traveled in search of work were generally younger than those who remained in one locale. After the Great Depression, there was an extreme increase in homelessness in the United States which generated nearly two million people migrating across the country.

Known as the worst economic decline in history, the Great Depression, which lasted from 1929 to 1939, severely affected industrialized industries. This period had a huge impact on the crash of the stock market in 1929, and by 1933, the Great Depression hit bottom, where approximately 15 million Americans were unemployed and financial institutions were wiped out [11]. The impact of the Great Depression forced many Americans to purchase items on credit, which in turn produced debt, foreclosures, and homelessness [12].

After 1945, homelessness started to look different. The population was aging, and those finding themselves without a place to call home became confined to areas identified for this destitute population. Homelessness, which in the 1930s had reemerged as an important national issue, now reverted to what it had been before the Civil War—a mostly urban problem. Even in the cities, persons who were homeless became largely invisible to all but the police [7].

The Community Mental Health Act of 1963 was a predisposing factor in setting the stage for homelessness in the United States [13]. Long-term psychiatric patients were released from state hospitals into single-room occupancy (SRO) housing. Post-release, patients were to be sent to community mental health centers for treatment and follow-up, but that system did not emerge as planned. Community mental health centers mostly did not materialize, and this population largely was soon found living on the streets with no sustainable support system [14]. The lack of concern for this impoverished group made the skid rows ripe for urban renewal, and in the 1960s and 1970s, most of the old lodging house districts in American cities were demolished [7].

What Does It Mean to Be "Homeless"?

Homelessness takes many forms, and people who are homeless or at risk of homelessness can be found in many types of unstable living arrangements. The most visible face of homelessness is those that are unsheltered. It is the person living on the street, camped outdoors, or staying in cars or abandoned buildings. Some people who experience homelessness, including some people who are fleeing domestic violence, stay in emergency shelters or transitional housing; this group is referred to as sheltered. Not everybody who is experiencing a form of homelessness lives on the streets or in shelters. Some people experience housing crises because of an inability to pay rent so they end up being evicted, foreclosed on, and involuntarily moving out where they are residing. Many people who experience this kind of housing crisis and perhaps unable to find a place to live because of economic hardship turn to family or friends who can provide a place to stay, at least temporarily. Those in this situation are generally referred to as doubled-up. Some of these arrangements can be relatively stable, but sometimes families, youth, or other persons may be "couch surfing" from one place to another, unable to stay anywhere for more than a few days at a time. Some families with children are living in motels, hotels, or other places that are severely overcrowded and not safe, permanent homes. These are all forms of being homeless, and they are all tragic [15].

Not surprisingly, there are many ways to define and describe "homelessness." The most basic definition found in the Merriam-Webster Dictionary is simply: Having no home or permanent place of residence [16]. This basic definition, it seems, would encompass a gamut of possibilities including people who sleep on sidewalks, outdoors, in homeless shelters or abandoned buildings, or other places not meant for humans to live in, as well as people experiencing a housing crisis with no permanent residence. Though even in its simplicity, there are complexities that make it challenging to define homelessness. Does living in a motel with weekly rent constitute being homeless? Does sleeping on a family member's couch for several weeks until rent payment is saved up constitute homelessness? How long has the person been in these situations, is the current situation habitable for human existence and/or has the person been in and out of unstable living situations on a regular basis are additional considerations when trying to define homelessness. There are several different definitions of homelessness within federal statutes and programs that states and communities use to serve the homeless population and to garner resources for services. These differentiated definitions allow service providers to recognize meaningful distinctions among the individuals and families experiencing housing needs and crises, making it possible to more effectively tailor responses to the person in need, use resources most efficiently, and engage larger systems and services to address current and future needs [17].

The Department of Housing and Urban Development's (HUD) definition of homelessness is the most widely used and recognized definition in the United States. As the cabinet-level agency that oversees federal programs designed to help Americans with housing needs, HUD serves over 1 million people through emergency, transitional, and permanent housing programs each year [18]. This definition determines who is eligible for HUD-funded homeless assistance programs and subsequently affects the decisions that communities and programs make when determining who is considered "homeless" for services.

The HEARTH Act, passed in May 2009, amended the McKinney-Vento Homeless Assistance Act and included a definition of homeless that applied to

HUD's Homeless Assistance Programs. There are four federally defined categories under which individuals and families might qualify as homeless [19]:

1. *Literally homeless*: People who are living in a place not meant for human habitation, in emergency shelter, and in transitional housing or are exiting an institution where they temporarily resided if they were in shelter or a place not meant for human habitation before entering the institution.
2. *Imminent risk of homelessness*: People who are losing their primary nighttime residence, which may include a motel or hotel or a doubled-up situation, within 14 days and lack resources or support networks to remain in housing. HUD had previously allowed people who were being displaced within 7 days to be considered homeless.
3. *Homeless under other federal statutes*: Families with children or unaccompanied youth who are unstably housed and likely to continue in that state. This category of homelessness applies to families with children or unaccompanied youth (up to age 24) who have not had a lease or ownership interest in a housing unit in the last 60 or more days, who have had two or more moves in the last 60 days, and who are likely to continue to be unstably housed because of disability or multiple barriers to employment.
4. *Fleeing/attempting to flee domestic violence*: People who are fleeing or attempting to flee domestic violence, dating violence, sexual assault, stalking, or other dangerous or life-threatening situations related to violence, have no other residence, and lack the resources or support networks to obtain other permanent housing.

    Finally, it is important to define what it means to regularly cycle in and out of homeless. This group is called the chronically homeless. Chronic homelessness is used to describe people who have experienced homelessness for at least a year—or repeatedly—while struggling with a disabling condition such as a serious mental illness, substance use disorder, or physical disability. This vulnerable population of people with disabilities is composed primarily of adults living on their own, who either experience homelessness for prolonged periods or have repeat episodes of homelessness. Chronic homelessness, in addition to being extremely debilitating to those who experience it, can be very expensive to society as a whole, homeless and public systems, including healthcare and criminal justice [20].

Who Are the Homeless?

People who are homeless reflect the nation's diversity, and their special characteristics and needs must be identified, respected, and addressed. In addition to responding to basic needs for shelter, food, clothing, and medical care, the unique needs of each subgroup of persons experiencing homeless should be sensitively addressed. Regardless of their other difficulties, practitioners must address their basic tangible needs for housing, food, warmth, and other material resources. Although providers must help facilitate people who are homeless access to basic resources, they also should advocate for increasing the overall pool of resources. Healthcare and social service providers are often in a position to be powerful advocates [21].

Many of us have an idea of who is homeless and even a basic understanding of why they are homeless. These notions come from a variety of places, personal experience, media, and television and just seeing homeless people on the streets. However, there is no “typical” homeless person. The homeless population is diverse and individualized. HUDs Annual Homeless Assessment Report to Congress (AHAR, 2019) [2] reported that in 2019, approximately 568,000 people were experiencing homelessness on any given night. Of these, about two-thirds stayed in shelters and the other one-third reported, sleeping in unsheltered locations. About 96,000 individuals had chronic patterns of homelessness, with 37,000 identified as Veterans. Just over 17,000 people were in families with children with a head of household under the age of 25, and about 35,000 people under the age of 25 were unaccompanied youth (not homeless as part of a family). The AHAR also notes that 275, 907 persons experiencing homelessness were male, 115,635 were female, and 3188 self-identified as transgender and 1315 as gender non-conforming [2].

Viewpoints on the Causes of Homelessness

There are many, complex causes of homelessness. At a basic level, people become homeless when their wages and income are not enough to cover rent or a mortgage and other necessities like food, medicine, healthcare, transportation, and child care. Circumstances and life-altering events that cause a person to become homeless include:

- Low-paying jobs
- Layoffs
- Serious illnesses or accident
- Lack of income
- Loss of a loved one or divorce
- Lack of support networks
- Evictions
- Foreclosures
- Poverty
- Natural disasters (i.e., hurricanes, floods, and fires)

Economic forces, policy decisions, budget priorities, societal trends, and attitudes about public assistance all contribute to the causes of homelessness. For many who are homeless, physical and mental health challenges, physical disabilities, substance use, as well as experiences of domestic violence and trauma can make it difficult to earn a living wage and maintain or regain housing stability. When someone does not have access to affordable health and mental healthcare, as well as education and job training opportunities, these challenges are exacerbated.

The causes of homelessness are complex and reflect a fluidity between structural factors, systems failures, and individual circumstances. Homelessness is usually the result of the cumulative impact of several factors, rather than a single cause. Experiencing homelessness can also either be caused by or be the effect of various factors or circumstances [21]. The pathways that individuals fall into and out of homelessness are neither linear nor standardized—each experience is unique to the person experiencing homelessness.

The Canadian Observatory on Homelessness describes the structural factors of homelessness as those economic and societal issues that affect opportunities and social environments for individuals, for example, the lack of adequate income and access to affordable housing and health supports and/or the experience of discrimination. Low wages, wage inequality, racial inequities, and a severe shortage of affordable rental homes leave too many vulnerable people unable to afford their housing [22].

Lack of Affordable Housing

The US rental housing needs have worsened considerably over the past 30 years as seen through a nationwide lack of affordable housing. According to HUD's 2017 Worst Case Housing Needs Report (based on data for 2015), worst case needs for housing assistance persisted at high levels across demographic groups, household types, and regions. In 2015, there was a 7.5% increase (8.3 million in 2015, up from 7.7 million in 2013) in renter households with incomes below 50 percent of area median income who do not have housing assistance and are living in severely inadequate housing, paying more than half of their income for housing costs, or both. Substantial unmet needs for affordable rental housing remain even as incomes are improving. The unmet need for decent, safe, and affordable rental housing continues to outpace the ability of federal, state, and local governments to supply housing assistance and facilitate affordable housing production. The increase in worst case needs between 2013 and 2015 reflects both a larger population of susceptible very low-income renters and a higher prevalence of severe housing problems among that population. The data suggest that the nation's ongoing economic recovery is continuing to have some beneficial effects on the incomes of very low-income renters, but growing competition for a limited supply of affordable units, a rising population of renter households and a declining population of homeowners, a widening rental assistance gap, and rising rents continue to drive severe housing problems among this vulnerable population [23].

Data from the National Low Income Housing Coalition's 2019 Out of Reach report states that only 4 million rental homes are affordable and available to the nation's 11 million extremely low-income renter households whose incomes are less than the poverty rate or 30% of their area median income (AMI), leaving a shortage of 7 million rental homes [24]. A family of four with poverty-level income in most areas of the United States earns no more than $25,750 annually, sufficient to afford a monthly rent of no more than $644. Many extremely low-income families can afford far less. Individuals relying on Supplemental Security Income can afford a monthly rent of only $231. Meanwhile, in 2020, the average monthly fair market rent for a two-bedroom or one-bedroom rental home is $1246 or $1017, respectively [25].

Additionally, 2019 Out of Reach report notes in the late 1980s that housing assistance reached only one in three eligible households. Today, housing assistance reaches fewer than one in four and has lost more than 2.5 million low-cost rental units since 1990. Furthermore, this report highlights the worsened wage inequality between black and white workers at all wage levels, exacerbating the racial housing inequities that have long plagued the United States [23, 24].

Research shows that the lack of stable housing can result in the loss of employment [26], interrupt student learning, and decrease academic achievement [27]. Without housing options, persons face housing instability or loss which can lead to homelessness.

Low or Unstable Income and Poverty

Persons can become homeless because they simply do not make enough money to pay for housing. Individuals with low incomes are typically unemployed or underemployed due to several factors, such as a challenging labor market; limited education; a gap in work history; a criminal record; unreliable transportation or unstable housing; poor health; or a disability. For those who are low-income but employed, wages have been stagnant and have not kept pace with increasing housing costs. Some who experience homelessness are unable to work due to a disability or are not able to quickly earn the money they need for rent. For others, sometimes work is not an option. Insufficient income combined with the lack of affordable housing leaves many at risk of becoming homeless [28].

As evidenced in the NLIHC report, low wages, wage inequality, racial inequities, and a severe shortage of affordable rentals leave too many individuals vulnerable and unable to afford housing. The structural factors discussed transform individual circumstances such as mental illness, physical disability, substance use, domestic violence, and previous incarceration into vulnerabilities that heighten the risk of homelessness.

Health, Mental Health, and Substance Use Disorder

An acute physical or mental health crisis or any long-term disabling condition may lead to homelessness, and homelessness itself can exacerbate chronic medical conditions. A symbiotic relationship exists between a person's health and their ability to maintain housing. In thinking about the symbiotic relationship between health and homelessness, there are potentially three considerations: (1) some health problems precede and causally contribute to homelessness, (2) others are because of homelessness, and (3) homelessness complicates the treatment [29]. As stated earlier, this relationship is not linear and can manifest in any order.

Housing is key to addressing the health needs of people experiencing homelessness. For instance, for a person who is homeless and dealing with a substance use disorder, having a safe, permanent place to live gives them the opportunity, should they choose to engage in treatment fully without the additional stress of living on the streets. Housing stability is a key contributor to long-term recovery and reduces relapse for people who are homeless. For chronically homeless people, the intervention of permanent supportive housing provides stable housing coupled with supportive services as needed—a cost-effective solution to homelessness for those with the most severe health, mental health, and substance use challenges.

Mental illness is often cited as a major contributor to homelessness. Martin [1] reports that nearly 25 percent of persons who are homeless suffer from some form of mental illness. Persons who are homeless can suffer from a variety of mental health issues, including depression, schizophrenia, and personality disorders [30]. Suffering from a serious mental illness can disrupt a person's ability to perform the basic aspects of daily life (e.g., self-care and household management). It can also prevent individuals from establishing and maintaining stable relationships. This often leads to a breakdown in social relationships (e.g.., caregivers, family, friends) who may be important factors in supporting an individual from becoming homeless. As a result, people experiencing severe mental illness are much more likely to become homeless than the general population [1]. Additionally, individuals who are homeless and suffer from mental illness are more prone to health problems because of the neglect of self-care and the inability to take precautions against disease.

Some individuals suffering from mental illness self-medicate using illegal substances, which can lead to substance use disorders. The combination of mental illness, substance use, and poor physical health makes it difficult to obtain employment and maintain residential stability.

Domestic Violence

Victims of domestic violence (DV) are often forced to choose between staying in abusive relationships and experiencing homelessness if they leave. Research cited in the National Network to End Domestic Violence (NNEDV) 13th Annual Report notes that shelter is crucial for victims facing life-threatening violence, particularly because leaving is one of the most dangerous times for survivors [31]. On a single day in September 2018, 42,494 adult and child victims were housed safely in emergency shelters, transitional housing, or other housing, according to the NNEDV's 13th annual survey. The survey, which provides a snapshot of the number of individuals who sought DV services in a single 24-hour period, tracked data from more than 1600 programs. On the same day, there are more than 9100 unmet requests for services in 1 day, of which 6972 (76%) were for housing.

Survivors face various barriers to accessing housing—economic abuse, discrimination, safety and confidentiality needs, and lack of DV housing options. They may turn to homeless service programs seeking a safe temporary place to stay after fleeing an abusive relationship. Others may turn to homeless service programs primarily because they lack the economic resources to secure or maintain housing after leaving an abusive relationship.

On a single night in 2017, homeless services providers had more than *55,000 beds* (6.2%) of all the beds available year-round in the homeless services system, targeted to survivors of domestic violence (DV). Of the emergency shelter, transitional housing, and safe haven beds for people currently experiencing homelessness, 12.1 percent were targeted to survivors of domestic violence, as were 1.5 percent of all permanent housing beds for people who are formerly homeless. Approximately 13 percent of all DV beds were in permanent housing programs [2, 3].

Homeless Assistance Approaches

Within the continuum of homeless assistance services and programs, individuals and families who are homeless can be sheltered primarily through emergency shelter, transitional housing, and permanent supportive housing. This chapter will focus on permanent supportive housing and Housing First—two complementary approaches to housing individuals. The chapter will not address the financial implications of each housing model on communities and service systems.

Permanent Supportive Housing

Permanent supportive housing combines non-time-limited, affordable housing assistance with wrap-around supportive services for people experiencing homelessness, as well as other people with disabilities, who need support to live independently in communities. Supportive housing links decent, safe, affordable, community-based housing with flexible, voluntary support services designed to help the individual stay housed and integrate into their community. There are no time constraints, and tenants may live in their homes as long as they meet the basic obligations of tenancy. While participation in services is encouraged, it is not a condition of living in the housing. Not only are permanent supportive housing programs available to individuals coming directly from street homelessness or emergency shelters, but these programs are also the next step for homeless individuals who have completed a transitional housing program. Housing affordability is ensured either through a rent subsidy or by setting rents at affordable levels [32].

A permanent supportive housing program may be run either by a behavioral health system or by providers of homelessness services. Whether people live in apartments or other shared housing or instead receive services in their own homes, the intention of all permanent supportive housing is to offer flexible, voluntary supports without regard to their willingness to engage in clinical treatment services. These services can include case management, substance use or mental health counseling, advocacy, and assistance in locating and maintaining employment. Permanent supportive housing is a proven solution for people who have experienced chronic homelessness as well as other people with disabilities, including people leaving institutional and restrictive settings. The approach also calls for assertive, nonjudgmental efforts to engage people in needed services. Programs typically employ service models such as Assertive Community Treatment (ACT) and clinical models such as Motivational Interviewing.

Housing First

Housing First is a low-barrier, supportive housing model that emphasizes permanent supportive housing to end homelessness [33]. Housing First is an established evidence-based clinical care model that centers on providing individuals experiencing homelessness with permanent housing quickly and providing supportive services as needed. By ending the episode of homelessness with permanent, stable housing, individuals can focus on pursuing personal, health, and social goals. The Housing First approach is a systematic orientation and response—not a program.

What differentiates the Housing First approach from other strategies is an immediate and primary focus on helping individuals and families quickly access and sustain permanent housing followed by other supports and services based on individual needs—housing is the foundation for life improvement. This approach is based on the belief that people need the basic necessities of a place to live and access to food before being able to attend to other life needs (e.g., obtaining a job, seeking substance use treatment). The Housing First approach provides housing without prerequisites for abstinence, psychiatric stability, or completion of treatment programs [34]. In contrast to the traditional "stepwise" approach, which requires people to complete treatment before attaining housing, Housing First does not compel participants to accept treatment or stop using substances before mental health, substance use, or other treatment and services are secured [33]. Supportive services are offered to support people with housing stability and individual well-being, but participation is not required as services have been found to be more effective when a person chooses to engage. As noted earlier, other approaches make such requirements for a person to secure and maintain housing.

The five core principles of Housing First [33]:

1. *Immediate access to permanent housing with no housing readiness requirements.*
2. *Clients have choices regarding the location and type of housing received and type/start of services.*
3. *Focus on recovery and range of supports needed to enable the client to nurture and maintain social, recreational, educational, and vocational activities.*
4. *Individuals and participant-driven support.*
5. *Community integration.*

Housing First is a proven method of ending all types of homelessness and is the most effective approach to ending chronic homelessness. Without clinical prerequisites like completion of a course of treatment or evidence of sobriety and with a low threshold for entry, Housing First yields higher housing retention rates, lower returns to homelessness, and significant reductions in the use of crisis service and institutions [32–35]. A Housing First orientation recognizes that people experiencing homelessness—like all people—need the safety and stability of a home in order to best address challenges and pursue opportunities.

Informed by an understanding of the profound impact of housing instability on both the lives of individuals and families and on local and state budgets, communities have increasingly focused on creating strong permanent housing outcomes, ending people's experience of homelessness as quickly and efficiently as possible, and providing them with the appropriate level of tailored services to support their long-term stability in housing.

In reviewing the literature on housing models for individuals, Dennis and colleagues found that when offered the opportunity to live in permanent supportive housing, individuals with severe mental illness experience reductions in shelter use, hospitalizations, length of stay per hospitalization, and time incarcerated. Their paper also summarized the results of permanent housing studies that focused on housing outcomes and service approaches. Of the studies reported, supportive housing approaches, including those that adopted a Housing First approach, tended to report greater housing stability of clients [32]. It should be noted that the identifying risk factors for housing instability of the individual who is homeless (e.g., level of disability, mental illness, or substance use issue) does affect the service approach that is most useful in succeeding in permanent housing. Housing options and services need to be available and adapted to the client.

Implementing Housing First in the Department of Veterans Affairs (VA)

In 2009, the Obama Administration set a decisive and bold goal to end chronic veteran homelessness within 5 years. As a key stakeholder in this movement, the VA launched a comprehensive, evidence-based, data- and outcome-driven strategy supported by significant local and federal partnerships and a considerable financial commitment. This effort included focusing on six components of care that were identified as foundational services for homeless veterans. These foundational services included outreach; provision of treatment for health and mental health conditions; supplementing services with addressing income/employment needs; building partnerships both within the federal government and the broader community; implementing homeless prevention services; and moving people into permanent supportive housing or independent housing.

When it comes to transforming and modernizing the continuum of care and resources for individuals and families experiencing homelessness, VA made an audacious decision to adopt a new way of thinking along with implementing new and, at the time, controversial approaches to helping homeless veterans. Using the federal strategic plan for ending homelessness, "Opening Doors: Federal Strategic Plan to Prevent and End Homelessness" [36] as the framework, VA focused on building and implementing programming and policy centered around the six foundational pillars that instituted new policy and policy changes to how programs would be operationalized. This included adopting the Housing First model as a policy. At the time, approximately one in three homeless people were veterans [37, 38] despite only 12 percent of the population having served in the military. In many communities, homelessness—and specifically veteran homelessness—had become an institutionalized fixture in the urban landscape. With this very public and ambitious cabinet-level policy announcement came focus and time-sensitive urgency, which galvanized thinking, planning, and mobilized resources in an unprecedented manner [39].

VA transformed its service model to be more "person-centered" and focused on solutions—including collaborative community-based treatment and supportive services—to prevent and end veteran homelessness. This approach greatly increased access to healthcare, benefits, employment services, and permanent housing solutions for homeless or at-risk veterans [40].

During early implementation of Housing First, VA's National Center on Homelessness Among Veterans instituted a pilot project on Housing First and then evaluated the approach within the context of VA to advance the implementation and early adoption of the model within VA's supported housing program, Housing Urban Development-VA Supportive Housing (HUD-VASH). VA identified 14 VA Medical Centers (VAMC) to participate in the Housing First Pilot. As participants, these VAMCs received 50–75 additional VASH vouchers as well as enhanced funding to hire additional staff to provide more intensive case management. Medical centers could either use existing or new staff to provide supportive services or contract with a local agency. In addition to these resources, VA partnered with Pathways to Housing—the agency that pioneered the Housing First approach—to provide targeted training and technical assistance through monthly calls, site visits, as well as fidelity assessment reviews to ensure the Housing First model was accurately and appropriately implemented. The Housing First Pilot evaluated three things: (1) time to placement, (2) housing retention, and (3) service utilization prior to and after program admission. Findings from this early implementation initiative demonstrated that Housing First is both a clinically effective and fiscally efficient model of permanent supported housing that could be implemented successfully. This evaluation is most notable in how the Housing First model was associated with reductions in acute hospital utilization while increasing ambulatory-based engagement [41].

The results were impressive. The Housing First initiative successfully reduced waiting time for a lease from 223 to 35 days, housing retention rates were significantly higher among Housing First tenants, and emergency room use declined significantly among the Housing First cohort. Housing First works because veterans are more likely to achieve stability and improved quality of life when the risks, uncertainty, and trauma associated with homelessness are removed. Notably, the average length of stay for a hospitalization decreased from 17 days to 5 days, and the total number of hospital bed days declined by 71% (10,443 to 3043) [40, 41].

Since 2010, VA has assisted more than 600,000 veterans and their family members obtain permanent housing, become rapidly rehoused or prevented them from falling into homelessness. Further, according to the annual Point-in-Time (PIT) count, which reflects a one-night headcount of self-identified homeless veterans, there has been a 50% reduction in homeless veterans since 2010, including a nearly 53% reduction in unsheltered homeless veterans [42]. These findings are particularly notable in that they occurred in the context of a deep recession, high unemployment rates, and a housing crisis marked by record numbers of foreclosures.

There is still much work to do as the system works to implement policy and operational changes to the larger community. There are lessons learned that can help all of us in this fight to end homelessness. O'Toole summarizes key policy changes that impacted VA's ability to make significant progress decreasing homeless veterans: (1) no wrong door approach policy, meaning veterans could access care through multiple channels; (2) shift focus to permanent housing instead of just getting them off the streets; (3) implement Housing First policies that truly house first, and not making housing a contingent on stabilization of mental health or addiction issues, employment, or meeting other key milestones; and (4) emphasize partnerships. No one system can do address all an individual's needs. Systems must bring their strengths to the table and join hands as true partners [43].

Conclusion

It is a travesty that in our modern world, any human being would ever experience not having a place to call home. It is unfathomable that any person would live in a place that is not habitable. As evidenced by HUD's Point-in-Time count data, this happens every night, in every state, in every county, and in almost every city. While much has happened over the last several decades to address this problem, still, some people have no place to lay their heads at night. Improved policies that address the underlying causes of the problem and more effectively serve some of the most vulnerable members of society are needed [43]. The United States continues to strive for advancing methods to address this large-scale public mental health and social problem.

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Chapter 20
VA Clinical Services: The Key to Achieving Stability and Sustainment for Homeless Veterans

Cheryl A. Lowman and Rebecca L. Sheetz

Introduction

The Department of Veterans Affairs Healthcare (VA) system is the nation's largest provider of integrated health services, with an FY19 operating budget of more than 76.5 billion dollars for medical care [1]. Mission driven, its goal is to fulfill President Lincoln's promise "to care for him who shall have borne the battle, and for his widow and his orphan," by serving and honoring the men and women who are America's veterans. Many VA employees are veterans themselves or have a veteran in the family and are personally connected to the mission of the VA.

Services for Homeless Veterans Are a Core Component of the VA Healthcare System

Homelessness among military veterans has been reported back as far as the Civil War. Following this war, Congress established the national home for disabled volunteer soldiers, and by 1900, more than 100,000 Union soldiers had received care in federal institutions [2]. VA's homeless programs, formally initiated in 1987, constitute the largest integrated network of homeless services in the country and are unmatched by private sector programs.

Homeless program and mental health services throughout the VA are defined and regulated by comprehensive guidelines contained in the VHA Homeless Programs Directive (VHA Directive 1501) [3] and the Uniform Mental Health Services Handbook (VHA handbook 1160.01) [4]. These handbooks and directives specify

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the type of services VA hospitals and clinics are required to offer to veterans and their families. The requirements differ depending on the size and type of VA hospital or clinic but apply across the entire VA system.

Veterans who are homeless or at risk of being homeless frequently have concurrent mental health conditions or substance use disorders, so mental health and homeless services at VA are closely coordinated in VA medical centers and clinics. All facilities are required to provide homeless veterans appropriate mental health treatment and referrals to rehabilitation programs as indicated by their assessed symptoms and needs.

VA clinical care is facilitated by an electronic medical record, the VA computerized patient record system (CPRS). This system supports integrated care by allowing different providers within the system and across the country access to a patient's healthcare data and facilitates the sharing of clinical care nationwide. This is a unique strength of the system as veterans receive comprehensive healthcare in accordance with their treatment plans no matter where they travel throughout the United States, allowing them to receive care at any VA Medical Center. To facilitate identification and treatment of homeless veterans, VA policy dictates that every veteran must be screened for homelessness upon entry to the VA, both on a yearly basis and as clinically indicated. Results are entered into the computerized patient record system. Positive results prompt in-depth assessment, and when problems are identified, veterans are referred to the appropriate services.

Due to the multifactorial origins of homelessness, VA cannot succeed alone in resolving homelessness. Therefore, VA partners with state and local governments, the US Department of Housing and Urban Development (HUD), the US Department of Labor, the US Interagency Council on Homelessness (USICH), and community partners in its mission to prevent and end veteran homelessness. The 2014–2020 VA strategic plan established ending veteran homelessness as a key priority through the Eliminate Veteran Homelessness Initiative [5]. This initiative is consistent with federal strategic plans to prevent and end homelessness developed in 2010 and the most recent version entitled “Home, Together: The Federal Strategic Plan to Prevent and End Homelessness” [6].

Presently, the current VA strategic plan for FY 2018–2024 identifies homeless services and mental healthcare as top priorities [7]. Priority areas include ending veteran homelessness, reducing the veteran suicide rate, implementing a housing first model for homeless veterans, and leading the nation in caring for veterans with trauma-related mental health conditions.

Given its national scope, VA leverages its considerable resources to deliver many unique and exceptional treatment models for the care of homeless veterans that are not available in the private sector. Drawing on over 100 years of experience and evidence-based research, VA has developed a multitude of programs available to house and treat homeless veterans, designed to help them live as self-sufficiently and independently as possible. VA programs designed for homeless veterans fall into several categories: (1) programs which specifically focus on providing housing to veterans in the VA and the community via a housing first model, (2) outreach programs, (3) biopsychosocial services, (4) targeted mental health treatment programs, (5) vocational programs, and services for justice system-involved veterans.

Housing First Model

Housing First [8] is an effective approach to ending homelessness for the most vulnerable and chronically homeless individuals by prioritizing housing and then assisting veterans with access to healthcare and other supports that promote stable housing and improved quality of life.

Treatment is not required prior to securing housing. Instead, based on veteran choice, treatment and other support services are wrapped around veterans as they obtain and maintain permanent housing. VA offers programs such as the Grant and Per Diem (GPD) and Housing and Urban Development-Veterans Affairs Supported Housing (HUD-VASH) that collaborate with federal and community agencies to provide housing. Specifically, the GPD program awards grants and makes per diem payments to community-based agencies to create transitional housing programs for veterans. HUD-VASH, a collaboration between US Department of Housing and Urban Development and VA, provides rental assistance vouchers to homeless veterans and ongoing case management by VA homeless program staff.

The Grant and Per Diem Program (GPD) is an important component of residential care for homeless veterans. This program offers transitional housing to homeless veterans in both congregate settings and independent housing units. It features five service models from which veterans can choose. For homeless veterans with mental health and substance abuse treatment needs, GPD offers the Clinical Treatment model in about 3000 beds across the nation, representing about one-fourth of all GPD beds [9].

Services are individualized and lengths of stay may vary. The model offers individual and group counseling/therapy and family support groups/family therapy, delivered by licensed and/or credentialed staff. Psychoeducation is also typically offered, which may be delivered by peer recovery specialists or community members representing recovery groups like Alcoholics Anonymous and Narcotics Anonymous.

While clinical treatment is the focus of a veteran's stay in a GPD Clinical Treatment bed, there is also strong emphasis on planning to obtain permanent housing and attainment of employment. The VA's National Homeless Program office has performance measures with targets related to permanent housing and employment attainment for veterans who choose the Clinical Treatment model: 65 percent of discharges from Clinical Treatment beds should be directly into community-based permanent housing, and 50 percent of discharges should have obtained competitive employment prior to discharge [10]. In fiscal year 2019, the national averages for both targets were surpassed [11].

Outreach Programs

Though veteran homelessness was reduced by about 50 percent between 2009 and 2019 [9], it is estimated that approximately 37,000 veterans were still homeless at the time of the January 2019 Point-in-Time count [12]. This underscores the continuing importance of outreach activities, whether conducted at community-based sites such as soup kitchens or through VA programs providing outreach to the homeless population. VA has a wide range of outreach programs including Healthcare for Homeless Veterans (HCHV), Community Resource and Referral Centers (CRRCs), the National Call Center for Homeless Veterans (NCCHV) hotline, and programs for Justice-Involved Veterans (VJP). Program highlights are discussed below.

The National Call Center for Homeless Veterans is an important outreach tool, available 24 hours a day, 7 days a week, at 877-424-3838. Veterans who are homeless or at risk of homelessness, as well as family members, friends, and supporters, can call or chat online with trained counselors. Carefully monitored referrals to the nearest homeless program staff at VA Medical Centers are an important outcome for veteran callers to the Center. Highly trained homeless program staff then reach out to the veterans, offering same-day services and referrals. The Center executes "warm hand-offs" to the Veterans Crisis Line (VCL) as appropriate. Federal, state, and local partners such as community agencies can also contact the Center to get information on VA homeless programs, healthcare, and other services in their geographic areas.

The Healthcare for Homeless Veterans (HCHV) program provides outreach in the community in order to connect homeless veterans with healthcare and other services as needed. The program provides prevention and support services such as case management and develops contracts with community-based programs for housing. This program is often the first step in connecting homeless veterans to VA programs and services. In addition to this core mission, HCHV contracts with providers for community-based residential treatment for homeless veterans. Many of the veterans served in HCHV may benefit from mental health and medical treatment but would not seek services without the encouragement of outreach workers.

Community Resource and Referral Centers (CRRCs) provide another first step in connecting homeless veterans to VA programs and services. CRRCs are strategically located in the community, in 31 urban centers across the country. They offer access to an array of services in one location on a walk-in basis for homeless veterans and those who are at risk of becoming homeless. At these facilities, veterans can walk in without appointments and see VA staff—primarily social workers—who assess their needs and address them directly or by referral.

At many CRRCs, services such as showers, laundry facilities, phone and internet services, food or meal tickets, and transportation resources are immediately available. Housing, employment, and income-related referrals (such as referrals to the Veterans Benefits Administration or the Social Security Administration) are provided as needed. Some sites offer life skills and recovery groups facilitated by veteran peer specialists or social workers. Staff from community partner agencies may hold office hours in CRRCs, making it possible for veterans to more easily link to non-VA resources without traveling to multiple locations. Some CRRCs house co-located medical teams (H-PACT) comprised of doctors and nurses who have been specially trained to address health concerns of homeless veterans and the social determinants of health.

Justice-Involved Veterans

Over the years, numerous studies have looked at the prevalence and severity of criminal justice system involvement among homeless veterans. Definitions of homelessness and criminal justice system involvement in these studies were varied, making comparisons and conclusions difficult. However, a large national sample of formerly homeless veterans in VA supportive housing found that 68 percent of male veterans ($n = 25,400$ of 39,167) had a history of lifetime incarceration [13]. VA has several programs to provide outreach to veterans who are incarcerated, such as the Veterans Justice Outreach (VJO) program and the Health Care for Re-entry Veterans (HCRV) program, further discussed below.

Veterans Justice Outreach (VJO) Program This program provides services to veterans at the front end of justice system, diverting them into treatment instead of incarceration. In addition to performing outreach at over 1700 jails, Veteran Justice Outreach specialists provide assessment, treatment planning services, and linkages to VA treatment for veterans who participate in Veterans Treatment Courts (VTCs) across the country. VTCs are part of their local jurisdictions' specialty court systems. Eligibility criteria may differ across locations; however, the process remains similar. Veterans facing criminal charges are evaluated for admission and provided the opportunity to comply with individualized treatment programs under the supervision of VTC judges. VA VJO specialists are key members of the interdisciplinary VTC team [14].

In a September 2019 email from the Veterans Justice Program Office, Jessica Blue-Howells, Deputy Director, Veterans Justice Programs, reported that VJO specialists served over 48,000 veterans in fiscal year 2019. A recent study evaluated data on 7931 veterans who entered VTCs from 2011 to 2015. A prior history of incarceration predicted poor outcomes. However, the veterans in this study spent an average of nearly a year in the program, and at exit, 10 percent more were in their own housing and 12 percent more were receiving VA benefits. Outcomes related to recidivism (14 percent) and employment (1 percent more) were less promising, pointing to the need for substance abuse treatment and employment services for VTC participants [15].

Health Care for Re-entry Veterans (HCRV) Program Building upon the previous work of VA outreach teams in the 1990s, the Health Care for Re-entry Veterans

Program has been successful for the past 15 years in partnering with state and federal prisons to outreach to veterans who are nearing release. In fiscal year 2019, over 40 Veterans Re-entry Justice Specialists conducted in-person outreach at almost 1000 prisons and served almost 9000 incarcerated veterans [15]. The specialists provide pre-release assessment services; referrals; linkages to medical, psychiatric, and social services, including housing resources and employment services; and post-release short-term case management assistance [14].

While more research is needed to validate evidence-based psychosocial treatments that may help to deter recidivism, promising practices with previously incarcerated homeless veterans include treatment for substance abuse disorders; mental health treatment including trauma-informed care; Moral Reconation Therapy (MRT); and the Domestic Violence/Intimate Partner Violence (DV/IPV) Program [16].

Biopsychosocial Services

VA homeless programs providing comprehensive biopsychosocial support and medical services include the Homeless Patient-Aligned Care Teams (H-PACT), Community Resource and Referral Centers (discussed previously), and specific Mental Health RRTP and vocational programs. These programs provide a coordinated and holistic approach to treating veteran's medical, mental health, and biopsychosocial needs.

Homeless Patient-Aligned Care Teams (H-PACT)

In 2010, VHA implemented the Patient-Aligned Care Team (PACT), designed to restructure primary care to a team-based, patient-centered model. This model is associated with improved quality of care, increased patient satisfaction, decreased emergency department visits, and decreased costs due to fewer hospital visits and readmissions. Also described as the medical home model, it was expanded in 2012 to include veterans experiencing homelessness, known as H-PACT [17]. It now includes 53 H-PACT teams across the country. H-PACT teams have special expertise in assessing the needs of homeless veterans. In addition to providing primary care, these teams include homeless program staff and other providers who offer case management and referrals to housing assistance and social services.

Medical home primary care models differ from traditional care primary care approaches in several significant ways. The model reduces barriers to care by offering an open-access, care-on-demand model, as well as scheduled appointments. At many sites, the model is co-located with mental health and housing-related services, to create a continuum of care. At VA Medical Centers where H-PACT is located within the CRRCs, veterans may receive primary care and have access to food and clothing assistance, showers, laundry facilities, and other services in one location and during the same visit.

While designed to improve access to care, the H-PACT model also has a critically important mission to address the social determinants of health, by facilitating housing placement for veterans who are homeless or at risk of homelessness. The Centers for Disease Control and Prevention define social determinants of health as "the conditions in the places where people live, learn, work, and play." Unstable housing, low income, unsafe neighborhoods, substandard education, and poor access to nutritious food are examples of social determinants that can negatively impact physical health [18]. By addressing these determinants within the context of primary care, H-PACT staff achieve a synergistic impact beyond what standard primary care delivers when they connect patients to VA and community-based resources that address veterans' needs.

A secondary focus of H-PACT teams is to coordinate primary care with mental health and addictions treatment. Studies have shown that veterans identified more positive healthcare experiences when they received their primary care from an H-PACT team [19]. This may lead veterans who receive warm hand-offs from H-PACT to other VA mental health and addictions services to engage more willingly and consistently. Engaging veterans in their care is deemed an important component of the model.

Numerous program evaluations and studies have shown that the H-PACT model reduces use of the emergency department and hospitalizations; generates higher numbers of primary care visits per year than both homeless and non-homeless veterans who receive primary care from regular PACT teams; increases specialty care visits and more social work support; and achieves better rates of new diagnosis of chronic conditions. In addition to these health benefits, one study showed the average H-PACT-enrolled veteran costs over $9000/year less to care for than a homeless veteran enrolled in a non-homeless general PACT clinic [20].

Residential Rehabilitation Treatment Programs (RRTP)

Mental Health Residential Rehabilitation Treatment Programs (MH RRTP) provide a 24/7 therapeutic setting for veterans with a wide range of problems, illnesses, or rehabilitative care needs. These can include mental health, substance use disorder (SUD), post-traumatic stress disorder (PTSD), homelessness, and co-occurring medical concerns. They are dual-accredited, under the Joint Commission's Behavioral Health Standards Manual as well as the Commission on Accreditation of Rehabilitation Facilities (CARF). They provide rehabilitation, community integration, and evidence-based treatment for mental illness.

During FY 2018, VA operated over 7600 beds with over 2 million bed days of care and over 35,000 admissions. Services are designed to improve veterans' functional status, sustain treatment and rehabilitation gains, assist with community reintegration, and break the cycle of recidivism. Residential care of this magnitude is unique to VA, as this level of care is not offered in the community sector (with the exception of community residential care for substance use disorder). Although these programs have different treatment modalities and eligibility policies, their clinical policies and clinical practices are set nationally and are uniform [21].

MH RRTP programs are open to any homeless veteran who meets the eligibility criteria. Veterans who are unsheltered or in an unsafe living situation are given priority access for admission. Priority access to an RRTP program requires a time frame of 72 hours from screening to admission. VA policy dictates that veterans may not be discharged from an RRTP program to unsheltered homelessness and only to a shelter if there is no other option or the plan is the veterans' preference. All MH RRTP models are considered appropriate for the provision of care to homeless veterans.

However, the following programs are highlighted as providing treatment related to the major risk factors identified in veteran homelessness.

1. Domiciliary Care for Homeless Veterans (DCHV) - DCHVs provide 24/7 structured and supportive residential treatment environment for veterans who are homeless, are at risk of being homeless, lack a stable lifestyle, or are currently in a living arrangement that is not conducive to recovery. Preference for admissions is directed to underserved homeless veterans recently discharged from the military, persons living in shelters and camps, and incarcerated veterans. DCHVs were implemented in 1987, to address the complex needs of the large number of homeless veterans at that time [22]. DCHV programs provide time-limited residential treatment to homeless veterans with significant healthcare and social-vocational deficits. Goals of the program are to improve veterans' health status, employment performance, and access to basic social and financial resources as well as serving co-occurring disorders and the complex biopsychosocial factors that contribute to homelessness.

   Veterans in these programs have access to medical, psychiatric, and SUD treatment in addition to vocational rehabilitation programs such as the Compensated Work Therapy (CWT) and Supported Employment (SE) programs. New admissions are screened for employment and vocational services, and veterans' goals are addressed in the treatment plan. All MH RRTP programs must provide access to an employment and vocational services counselor. If a homeless veteran is able and desires to work, a referral to employment and vocational rehabilitation services is completed. If there are barriers to employment due to mental or physical illness, a consultation to Therapeutic Supported Employment Services or Homeless Veterans Community Employment Services is provided.
2. *Psychosocial Residential Rehabilitation Treatment Programs (PRRTP)* - while all MH RRTPs have the ability to serve veterans diagnosed with a serious mental illness, the PRRTP programs focus on treating veterans with a diagnosis of serious mental illness (SMI) [23]. Treatment is recovery focused, person centered, and focused on improving functioning and community participation. Evidence-

based treatments provided in the PRRTP include programming such as Wellness Recovery Action Planning (WRAP), Illness Management and Recovery, Social Skills Training, and Integrated Dual Diagnosis Treatment. Treatment also includes psychiatric support, family psychoeducation, and pharmacotherapy as indicated. If veterans meet admission criteria for a Psychosocial Rehabilitation and Recovery Center (PRRC) (an intensive outpatient program providing focused services to veterans diagnosed with SMI), they can participate while enrolled in the MH RRTP program. Supported employment services are available to those veterans diagnosed with SMI whose goal is competitive community employment.

3. *Domiciliary SA (Dom SA) or Substance Abuse Residential Rehabilitation Treatment Program (SARRTP)* - while all residential programs must have the capacity to provide SUD treatment, the SARRTP provides an in-depth treatment focus on treating addiction. Over 85 percent of veterans admitted to a MH RRTP have a diagnosis of substance use disorder (SUD) [21]. Veterans who are treated for SUD in VA often have significant complicating features, including psychosocial factors such as homelessness, unemployment, and lack of social support for recovery and comorbid mental health disorders such as depression, PTSD, and serious mental illness. They may also experience comorbid medical disorders related to SUD such as alcoholic hepatitis and/or infectious diseases such as viral hepatitis, human immunodeficiency virus (HIV), and acquired immune deficiency syndrome (AIDS). Mental health RRTP programs must have the capacity to provide treatment or treatment referrals for comorbidities. A minimum of two evidence-based psychosocial interventions, such as cognitive behavioral therapy for SUD, are required to be provided to veterans enrolled in SARRTP programs. Addiction-focused pharmacotherapy for alcohol, opioid, and tobacco use disorders must be provided as well. Lastly, veterans must have access to a variety of mutual help groups both on-site and in this community such as Narcotics Anonymous, Alcoholics Anonymous, etc.

Mental Health Treatment for Homeless Veterans

There is strong evidence in the literature that veterans with mental illness are at significant risk for homelessness. Specifically, research has found that serious mental illness such as schizophrenia, bipolar disorder and substance use disorder are strong predictors for homelessness [24, 25]. Alcohol and drug dependence are the most prevalent psychiatric disorders found among homeless populations [26]. In addition, substance use disorders are one of the most significant risk factors for homelessness and are associated with extensive homeless histories [25].

Homelessness itself has been found to be a risk factor for suicide, suicide attempts, and ideation. A recent study examining the association between suicide attempts and homelessness determined that veterans with homeless histories were

7.8 times more likely to have attempted suicide than veterans with no homeless histories. Furthermore, lifetime homelessness was significantly and independently associated with lifetime suicide attempts [26]. Untreated mental illness impacts veterans' ability to maintain employment, social support, and housing. Therefore, mental health treatment must be a strong component of the clinical services offered to homeless veterans.

Evidence-Based Psychotherapies

VA mental health treatment has increasingly shifted to delivering high-quality, evidence-based treatments for the full range of mental health conditions. VA mental health treatment is guided by scientifically established protocols or clinical practice guidelines as well as by policies delineated in the Uniform Mental Health Services Handbook. Since 1998, VA and Department of Defense (DoD) have partnered together through the Evidence-Based Practice Working Group to develop treatment guidelines.

Clinical practice guidelines (CPG) are based upon a rigorous systematic review of the evidence and explicit processes aligned with the National Academy of Medicine's articulated set of standards. They are designed to optimize patient care by recommending evidence-based practices, create standard guidelines intended to reduce variations in care, and inform delivery of VA care. VA recognizes CPG guidelines as proven standards for clinical practice and policy. Currently, VA/DOD joint guidelines have been developed for a variety of physical health diagnoses and the following mental health diagnoses: PTSD, substance use disorder, major depressive disorder, and suicide prevention [27].

VA is a national leader in the promotion of evidence-based psychotherapy (EBP). EBPs are specific psychological treatments that have been consistently shown in controlled clinical research to be effective for mental or behavioral health conditions. Examples of specific evidence-based psychotherapies available to veterans in homeless programs include dialectical behavior therapy, moral reconation therapy, motivational interviewing, motivational enhancement therapy, cognitive behavioral therapy, integrated dual disorder treatment, harm reduction, and critical time intervention.

Suicide Prevention

In an effort to address the suicide rate among veterans, then VA Secretary Shulkin prioritized suicide prevention as one of his top five priorities in 2017, and it continues to remain a top priority today. VA conducted an analysis of suicide mortality spanning 2001–2014, examining 55 million records from every state [28]. Results concluded that in 2014, an average of 20 veterans died by suicide each day. Six of these 20 veterans were users of VA health services in 2013 or 2014, and the other 14 were not currently enrolled with VA. The trend shows that veterans who receive their healthcare from VA have a significantly lower rate of suicide than veterans who do not receive VA care.

These findings are particularly important considering that veterans with a history of homelessness are five times more likely to attempt suicide than other veterans [29]. A systematic review of major risk factors of veteran homelessness includes similar risk factors identified in completed suicides, such as substance abuse, mental illness, financial distress, and lack of financial support [25, 30, 31]. Based on research linking veteran homelessness and suicide rates, in June 2018, the Deputy Under Secretary for Health Operations and Management (DUSHOM) issued guidance directing VA mental health and homeless programs to collaborate on enhanced care opportunities for veterans identified as being at high risk for suicide.

VA's national scope and range of services are the foundation of its comprehensive approach to suicide prevention. There is no equivalent private sector program in the United States that has the range and depth of coordinated, comprehensive suicide prevention programs that the VA delivers. VA suicide prevention initiatives include yearly screening for suicide risk, coordinated suicide prevention care, the Veterans Crisis Line, and REACH VET, a predictive analytics program. Highlights of programs benefitting homeless veterans are discussed below.

Recovery Engagement and Coordination for Health (Reach Vet) VA's predictive analytics surveillance program, REACH VET, has been in use since November 2016 [32]. The program is designed to identify the veterans at the highest statistical risk, reach out to assess clinical risk, and proactively provide enhanced care if needed. REACH VET uses a multivariate analysis to identify enrolled patients in the highest-risk category (0.1%), who are at risk of suicide, hospitalization, illness, or other adverse events.

Homelessness and substance use disorder in the past 24 months have been identified as significant variables as well as other mental and physical health diagnoses. This population tends to have multiple comorbidities, frequent mental health and primary care contacts, and high rates of polypharmacy. The analysis is run monthly and distributed to the facility REACH VET Coordinator, who is responsible for evaluating the veteran's care and notifying the medical team of the risk assessment. The clinicians are asked to contact the identified veterans and collaboratively review their healthcare diagnoses and mental health conditions and ensure appropriate treatment is offered. Homeless program coordinators are required by VHA policy: (1) to facilitate a monthly workgroup comprised of homeless program staff and the local Suicide Prevention and REACH VET Coordinators; (2) to review veterans currently engaged in homeless programs; and (3) to coordinate treatment planning for those identified as high risk.

Suicide Prevention Teams

Each VA Medical Center is required to have a suicide prevention team, led by a Suicide Prevention Coordinator (SPC). The VHA Handbook specifies that the Suicide Prevention Coordinator has a full-time commitment to suicide prevention activities. Each VA medical center establishes a high risk for suicide list and a process to ensure that patients determined to be at high risk are provided with follow-up for all missed mental health and substance abuse appointments. VA mental health and homeless staff are also required to conduct trainings known as SAVE—Signs, Ask, Validate, Encourage, and Expedite. A homeless program staff at each facility is required to become a SAVE trainer to provide these trainings not only to community partners but to veterans participating in VHA homeless programs.

Veterans Crisis Line

VA's Veterans Crisis Line (VCL) (1-800-273-8255, press 1) was established in 2007. The VCL is available 24/7 and employs trained responders, usually social workers or other mental health professionals, who provide callers with immediate support and refer them to VA mental health services. If the caller is determined to be in imminent danger, the VCL will direct local emergency services to callers. The VCL staff interact regularly with the National Call Center for Homeless Veterans (NCCHV). Currently these two hotlines operate independently but have a warm handoff consultation process to coordinate care for homeless, suicidal callers. In 2018, out of 134,490 total calls to the NCCHV, 923 were transferred to the VCL for assistance [33].

Vocational Services

Mental health disorders have been strongly identified as a major risk factor to veteran homelessness; however, as homelessness is multifactorial, they are not the only risk factors. Low income and associated income-related variables such as low military pay grade, problematic military discharges, and unemployment have also been identified as strong risk factors for homelessness [25]. Matching skills gained in a Military Occupational Specialty (MOS) to the civilian job market may also be a challenge, especially for combat arms MOSs such as infantryman or cannon crewmember. National studies of the general US homeless population have identified low income and unemployment as common precipitating factors for homelessness [24].

Employment may be a preventative factor for veterans at risk of homelessness and may also serve as a key tool to help veterans who are homeless to attain independent housing. At-risk veterans are often coping with stressors such as mental illness, substance abuse disorder, and other disabilities which negatively impact their ability to find and sustain employment. Additional factors such as criminal justice involvement, lack of stable employment history, and poor credit ratings may exacerbate employment-related challenges [34].

Researchers examining homelessness have identified a relationship between unemployment and increased risk for suicide, particularly among men [35, 36]. Suicide risk appears to increase the longer an individual remains unemployed, and research suggests that the risk appears to peak within the first 5 years following job loss [37, 38]. Therefore, no discussion of VA clinical services for the homeless population would be complete without a description of the VA Vocational Rehabilitation and Employment Services available to homeless veterans.

VA vocational rehabilitation services offer a range of programs designed to assist veterans to return to full-time, meaningful employment, enabling each veteran to work and function at their highest potential. These programs provide a variety of recovery-based, therapeutic services integrated into clinical treatment to assist veterans to achieve and maintain meaningful competitive employment. Services are open to veterans living with mental illness, substance use disorders, homelessness, criminal justice involvement, or physical impairment with barriers to employment who want to secure and maintain meaningful community-based competitive employment. Employment plans are individualized and based on veterans' goals, skills, and abilities and are focused on veteran gaining sustainable employment in the community. Each VA Medical Center is required by the Uniform Mental Health Services Handbook to offer vocational rehabilitation services accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF) for veterans experiencing occupational difficulties.

Compensated Work Therapy

Compensated Work Therapy (CWT) offers recovery-oriented, vocational rehabilitation services to support the needs of veterans experiencing employment barriers resulting from mental health and/or physical issues and psychosocial barriers such as homelessness and legal histories. The CWT program offers several vocational rehabilitation models, described in the following paragraphs, to best meet a range of vocational and educational support needs of veterans. This long-standing program began in 1976 when it was authorized by the Veterans Omnibus Healthcare Act (Pub. L 94-581) [39]. Funding was specifically established for the purpose of expanding CWT rehabilitation services, allowing VA to enter into contractual arrangements with private industry or other non-federal sources to provide paid therapeutic work for patients in VA healthcare facilities. The Act was amended in 1990 to allow VA to enter into contractual arrangements with federal agencies and to allow for the development of a CWT transitional residence program (PL 102-54) [40].

All VA work therapy programs provide community-based employment opportunities designed to assist veterans with successful reintegration into the community. Vocational staff match an individual veteran's vocational skills and interests to employment opportunities with local businesses and industry and then provide ongoing support to the veteran as needed for job retention. Veterans have been successfully employed over the years in a variety of positions including healthcare, information technology, manufacturing, warehousing, construction trades, clerical and office support, retail, and delivery.

Compensated Work Therapy-Transitional Work (CWT-TW)

CWT-TW is a pre-employment vocational program that operates in VA medical centers (VAMC) as well as in community business and industry settings. This program enables veteran participants to gain real-world work experience while engaged in a therapeutic rehabilitation treatment program. This program is designed to prepare participants for community employment by helping them build workplace skills and develop behaviors to sustain competitive employment.

Veteran referrals are screened by program staff and matched to a work assignment at the local VA Medical Center or in the community, as clinically appropriate. Participants are supervised by personnel of the sponsoring site, under the same job expectations experienced by non-CWT workers, and receive base pay determined by federal minimum wage laws. Participants actively engage in job searches while in the program, with the goal of securing competitive employment at discharge. CWT-TW programs maintain close ties with state and local employment agency representatives to assist veterans with job searches. In addition, these programs typically develop close ties with local employment resources such as State Department of Labor, vocational rehabilitation, Veterans Benefits Administration, chambers of commerce, and not-for-profit organizations.

CWT-Supported Employment (CWT-SE)

CWT-SE programs are intended to provide services for veterans with significant barriers to employment due to serious mental illness, such as psychosis, and medical conditions, such as polytrauma and spinal cord injury. Similar to the CWT/TW program, this program assists veterans with securing competitive employment in the community, and it provides job development services, job placement services, and job coaching. CWT-SE staff provide veterans with intensive support needs necessary ongoing support to secure and maintain meaningful, paid, competitive employment. There is no time limitation for the services. Enrolled veterans will receive continuous support as they adjust to competitive employment. Veterans are assessed for discharge only if they request to do so or conditions change, making supported employment services no longer therapeutic or practical.

Compensated Work Therapy-Transitional Residence (CWT-TR)

CWT-TR programs provide transitional housing for the veterans participating in the program allowing them to develop skills for independent living as well as employment skills. The CWT-TR program was originally implemented to address veterans diagnosed with severe SUD and homeless veterans diagnosed with mental health concerns who underutilized VA services. It has now expanded its mission to include veterans diagnosed with PTSD, serious mental illness, and homeless women veterans [23]. CWT-TR programs provide homeless veterans with rehabilitative services focused on transitioning to permanent housing, gaining employment, and continuing their engagement in recovery services. The prerequisite for CWT-TR programs requires that veterans must be able to meet the eligibility requirements for the broader Compensated Work Therapy programs [23].

Homeless Veterans Community Employment Services (HVCES)

In addition to the general VHA vocational rehabilitation services previously discussed, in 2014 the VA established Homeless Veterans Community Employment Services (HVCES), as part of the strategy to end homelessness among veterans. The HVCES program is an integral part of the homeless continuum of care in VA medical centers and is intended to complement existing services by functioning as a connection to employment opportunities and community-based resources. Community Employment Coordinator positions are funded at each VA Medical Center, and some HUD-VASH and HCHV programs receive funding for Employment Specialists.

HVCES staff collaborate with vocational rehabilitation programs; Compensated Work Therapy programs; community, state, and federal partners; and employers to assist homeless veterans in finding and sustaining employment. As a result of these efforts, employment rates for veterans in transitional programs and HUD-VASH have been trending upwards. Over a 5-month period in 2018, HVCES assisted veterans engaged in or exiting VA homeless programs or services in securing over 13 thousand unique instances of employment [41].

One of the most important partners of the HCVES program is the Homeless Veterans' Reintegration Program (HVRP), funded by the US Department of Labor. Initially authorized in 1987 as part of the Stewart B. McKinney Homeless Assistance Act [42], HVRP is a grant program that served over 16,000 participants in 2016. Community-based grantees perform outreach to veterans, employers, and other partners; assessment; case management utilizing a veteran-centered approach; and training and job placement. Specific categories that have been prioritized to receive HVRP services have included chronically homeless veterans; homeless female veterans and veterans with families; and incarcerated veterans. In program year July 2017 through June 2018, the program achieved a placement rate for program participants of 60 percent, at an average wage of $13.50 [43].

Summary

The Department of Veterans Affairs offers an unparalleled range of programs and treatment within a nationwide, coordinated system of care. Drawing on its size, scope, and mission, VA strives to end veteran homelessness utilizing its wealth of resources. VA's clinical treatment programs are unmatched by the community as they are delivered within a comprehensive, integrated continuum of care that encompasses many disciplines. VA also leverages its strengths through its critically important partnerships with other federal agencies, state and local governments, and community-based organizations.

Our work continues with strengthening efforts to sustain existing services by engaging in enhanced efforts to enroll homeless veterans in primary care, which is a protective factor against homelessness; effectively addressing co-occurring psychiatric and substance use disorders among homeless veterans; identifying innovative practices to address age-related deficits among homeless veterans, in order to improve their ability to sustain housing; fostering collaborations with other VA services such as caregiver support, women's and rural health, telehealth, and whole health; and continuing to initiate and nurture vital community partnerships. VA's progress in ending veteran homelessness has been significant. However, our mission will not be complete until any and all episodes of veteran homelessness are rare, brief, and a one-time experience.

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Chapter 21

Medical Respite for the Homeless: Moving from the Present to the Future

Evan G. DeRenzo

Introduction

Over 30 years ago, this author, as a doctoral student, published a short editorial with Richard Jed Wyatt, MD, Chief, Neuropsychiatry Branch, National Institute of Mental Health (NIMH), National Institutes of Health (NIH), titled Scienceless to Homeless [1]. The piece was about how little solid data existed upon which to base the sweeping deinstitutionalization movement. Even then, these reforms were producing rising numbers of psychiatrically ill persons who were made homeless by the lack of community services. We concluded the piece by predicting, "…unless we invest time, energy, money, and our good minds toward a solution, today's problem will remain for tomorrow" [1]. Our prediction sadly was correct. That tomorrow is now.

In the 2018 Annual Homeless Assessment Report (AHAR), from the US Agency for Housing and Urban Development (HUD), in reporting out on single night numbers, this HUD report found that roughly 553,000 individuals in 2018 were homeless on any given day [2]. This represents an increase in homelessness for a second year in a row after these numbers had declined by 2 percent between 2014 and 2015 and by 11 percent since 2007 [3].

These numbers result in a heavy burden on acute care hospitals. Because individuals experiencing homelessness ordinarily lack access to primary care, hospital emergency rooms are where many of them seek healthcare. When acute care is necessary, these emergency room patients are often admitted into the hospital.

Just looking at cardiovascular disease in adults experiencing homelessness, a recent study [4] found that of 1,852,790 total hospitalizations during the study

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period for persons with cardiovascular conditions across 525 US hospitals, 24,890 occurred in persons who were experiencing homelessness. The study authors found that cardiovascular disease has mortality rates substantially higher for homeless adults than for housed adults. They concluded with a call for hospitals that care for persons experiencing homelessness to be supported by public health and policy efforts.

To explore why these inpatient disparities exist is beyond the scope of this chapter. Here, we address what is likely only a sliver of the solution to the problem of homelessness in America. Nonetheless, we claim that if addressed by increased, excellent medical respite programs for those experiencing homelessness prior to acute care hospitalization, then when these patients are ready for discharge, there will be safe, medically adequate and ethically sound places for these patients to heal and recuperate. Presently, such discharge possibilities are sparse to non-existent. Furthermore, discharge to shelters or the streets is ordinarily simply unsafe, medically inadequate, and ethically unsound. If we can produce a future in which medical respite for persons experiencing homelessness is actually available, however, at least some of the burdens borne by such patients and the hospitals that serve their acute care needs can be lightened.

What Post-Hospital Care of Previously Homeless Individuals Has Looked Like in Most Big Cities Until Recently

This chapter started with deinstitutionalization, but that is not where the problem of homelessness started. When the term “homelessness” entered the cultural lexicon, it described itinerant men who traveled from city to city looking for jobs. Some saw this development as a crisis of character, the moral decline of society, and as an attack on the family. Prior to the 1820s, fewer than 7 percent of Americans lived in cities [5]. But the Industrial Revolution of the nineteenth century lured (usually) men away from farm work toward population hubs such as Boston, New York, and Chicago, and so it was that jobs were originally seen as the solution to vagrancy.

After the Civil War, homelessness again increased. Construction of the railroad facilitated transportation and generalized industrialization, and urbanization resulted in (usually) men riding the rails looking for work, jumping on and off the trains. This train-riding population increased until the First World War put everyone to work.

The situation of homeless individuals congregating in cities simply started all over again after each of the World Wars. The Great Depression of the 1930s was only halted by World War II. Once this war was over, homelessness resumed its previous patterns of being almost exclusively male and white. Increasingly, however, the homeless population, now dependent on welfare or social security, was becoming more ethnically diverse, older, and disabled [6]. Given that many among these groups lived in single occupancy hotels (SROs), cheap hotels or what were then called flophouses, the notion that the solution to the problem of homelessness shifted from a focus on jobs to a focus on affordable housing. But the solutions did not emerge. The situation only grew worse.

Deciding where, historically, to draw a line between one epoch and another is always a fraught task. But for our purposes here, this author will draw the line marking the modern era of homelessness as the 1980s. This was the time of the convergence of forces that changed the face of homelessness in America. Starting with the gentrification of the inner cities, this process saw the reduction or complete obliteration of cheap city housing. There were deep cuts to the HUD budget and to those of many social service agencies because a national recession second only to the Great Depression [7] resulted in high unemployment rates. It was also the time of the emergence of HIV/AIDS. And now we circle back to deinstitutionalization, with many then and today in the homeless population with serious mental illness [8]. These social factors were the perfect storm to explode our homeless populations with persons who were sicker than ever before.

Early on, with the focus on housing, with its Pathways Housing First (PHF) programming, there has been an important effort in the direction of housing persons experiencing homelessness [9]. Because an evidence-based approach to the interconnected problems of mental illness, substance abuse, and homelessness developed, requirements for abstinence as a housing eligibility criterion were removed so that many chronically homeless individuals have been able to receive supported housing. (Chronic homelessness is defined as homeless for 1 year or more or experiencing four homeless episodes in short succession into housing with wraparound services.)

As important as housing is, this kind of program does not meet the needs of the patients we consider here. Even those who might have been able to live independently become ill and find their way to hospitals. Once too ill to return to housing that does not have the capability of caring for sick and frail patients, these patients have nowhere to go. They often stay in the hospital so long that the window closes on the utility of the kind of vigorous physical and occupational therapy provided outside the acute care hospital to not homeless patients who have a much higher expectation of benefit.

Enter EMTALA. EMTALA, as is always the way to which this legislation is referred, stands for the 1986 Emergency Medical Treatment and Active Labor Act. The US Congress passed this legislation to ensure public access, regardless of ability to pay, to anyone who had an emergency medical condition and came into a hospital emergency department to be treated or who was in labor [10].

After EMTALA's enactment, it was only a brief time before persons who were experiencing homelessness and who were impoverished started using hospital emergency departments for their primary care as well as any other medical care need. In the decades since, this has become a common phenomenon, especially in big urban hospitals. It has become clear to public policymakers, those in the community working to end homelessness, and, of course, the hospitals themselves that affordable housing alone will not solve the problems of homelessness. At least for those who had been homeless prior to a hospital stay for some illness or injury that has left them sicker and frailer than before having that illness or injury, the need for places where such a patient can continue to heal and recuperate should be obvious to anyone in a hospital attempting discharge. Such patients need to be discharged to places where they have access to the full array of medical and psychiatric services, physical and occupational therapy, and social services needed post-hospitalization care to get back on one's feet, literally. Such a program must have the medical and psychiatric services needed in addition to having the social services staff needed to then get that patient to the next phase to allow these individuals to meet their fullest potential and not return to the streets if at all possible. Conceptualizing and thereafter creating such well-rounded and service-rich medical respite programs are daunting. The first step is to recognize that such programs are the kinds of programs that should be created.

Why the Status Quo Is Now Ethically Unacceptable

Mahatma Gandhi usually gets the credit, but it was not he who said or wrote the words so often misquoted about how the moral worth of a people is judged by how it treats its most vulnerable. Rather, some of the credit for this notion can be accurately attributed to Pearl Buck (1892–1973), US Nobel Laureate in Literature, who wrote, "Yet somehow our society must make it right and possible for old people not to fear the young or be deserted by them, for the test of a civilization is in the way that it cares for its helpless members" [11]. Even closer to the Gandhi misattribution is what Hubert Humphrey (1911–1978) said in his speech at the 1976 Democratic National Convention (in his collected speeches held by the Minnesota Historical Society but often misattributed to a speech he gave dedicating the Hubert Humphrey Building in Washington, D.C., 1977), "The ultimate moral test of any government is the way it treats three groups of its citizens. First, those in the dawn of life -- our children. Second, those in the shadows of life – our sick, our needy, our handicapped. Third, those in the twilight of life -- our elderly" [12].

This notion of civic responsibility, for the sick and needy, however, has not always been interpreted to apply to where a patient goes at hospital discharge. For too long, an appreciation of that responsibility applying to hospital discharge of patients experiencing homelessness has been skirted. Given that, it is only fair that once a hospital has safely discharged a patient, that patient is no longer the hospital's responsibility. Fair enough, this is an ethically reasonable presumption, i.e., when the discharge is into the arms of loving family, bound for one's own home or another care-rich environment. But when that discharge is to a shelter or back to the streets, ethically, it is a completely different situation. That is, this author's claim is that for a patient who is, by clinician assessment, too sick or frail to be able to care for oneself and recuperate, then discharge to a shelter or the streets is, ordinarily, unsafe, medically inadequate, and ethically unsound.

Fortunately, ethical norms evolve. That is not to say that ethical principles and theories are all relative and so what anyone thinks is ethical is ethical. Such relativism is to this author completely unsupportable. Rather, for example, just because one accepts the ancient and time-tested ethical norm that healthcare professionals are to act in the best interests of their patient, there is nothing logically inconsistent in suggesting that what might have been considered ethically permissible within the understanding of what this ethical norm required 20 or 30 or 40 years ago is not ethically permissible now. Instead, ethics evolution here is a matter of a changing appreciation of what is required to act in the best interest of a patient today. In 2020, thinking through what is required of a healthcare professional and what is required of the hospital in which care is provided to act in the patient's best interest is different than it was in the last century. And in that difference is the ethics evolution; we now consider it ethically required to make safe discharges for all patients. The norm of acting in the patient's best interest has not changed; only an understanding of what that entails has changed.

This ethics evolution has in large part come about because healthcare professionals know, most of the time, when discharge to a shelter or the streets is unsafe, medically inadequate, and ethically unsupportable. When these health professionals know that such an unsafe discharge is being attempted, they must courageously lean into the financial headwinds blowing back on them, insisting that such patients stay in the hospital until appropriate placement has been found. Deciding, however, what is and is not a safe discharge can be in the eye of the beholder.

The advent of the contemporary clinical ethics movement may be able to provide assistance in figuring out when safe in some eyes is not safe enough in others. For those hospitals with sophisticated clinical ethics programs, the clinical ethicists are likely to be part of the resistance to what they consider a premature discharge of a patient previously experiencing homelessness. Some ethicists will have been party to clinical ethics consultations in which patients with these medical and care needs are being readied for discharge to a shelter or the streets, but there is still much debate about whether such discharge is premature. At least until the debate is settled in a way that the clinicians are satisfied that the discharge is safe, it is likely that the ethicist will (or should) resist the discharge as well. For those ethicists who are also involved in the organizational ethics functions of the hospital, they too will be likely to resist discharge of such patients back to shelters and the streets. But there are never going to be so many ethicists in any hospital to effectively resist every potentially unsafe, medically inadequate, and ethically unsound discharge. There are never going to be enough courageous clinicians willing and able to dig their heels in on every discharge where others think the discharge is safe enough. And given the sorry state of community services to meet the needs of such patients, the places we have for discharging these patients to are not plentiful enough to break the cycle of hospital readmission after readmission [13–15].

In all fairness, it should be noted that it can be clinically difficult to decide who among this population can safely be discharged and who cannot. Because clinicians of good judgment can disagree about how safe is safe enough for any particular patient and how medically adequate is medically adequate enough to be considered medically and ethically permissible to discharge, discussions can be uncomfortable with those in a hospital who are most responsible for discharging patients. This too, however, is another particularly vexing quandary that is not just a matter of everything is relative so anyone's assessment is good enough. It is vexing, at least, for two primary reasons. First, it is simply clinically complex and difficult to figure out if the clinical status of a particular patient, who had been experiencing homelessness prior to hospitalization, is clinically appropriate to be safely discharged back to a shelter or the streets – especially for those who are saying they want to return to a shelter or the streets and who are on that fine line of being (or not being) decisionally capacitated. Second, it seems a just question to ask about how long it may be the reasonable responsibility of an acute care hospital to allow a (perhaps questionably) decisionally capacitated, previously homeless patient to stay in the hospital when all acute needs have long been addressed. Just because such a patient does not want to be discharged to a nursing home or other long-term care facility, if all think such a discharge is the best available choice and because there are actually no excellent places for discharge of such a patient, is it fair to allow such a patient to stay in an acute care hospital indefinitely because there is no clinical consensus that discharge elsewhere is safe, medically adequate, or ethically sound? At minimum, this ought not be an acute care hospital's burden alone.

Further, there is no literature to which one can turn to find answers to these questions. These are refined medico-moral judgments that take much collaborative and creative thinking on a per-patient basis. Some might turn to the blossoming literature on those in a hospital who are found to be unbefriended, but these two populations do not map exactly on to each other. Although the issue of hospital care of the unbefriended has gathered quite a bit of attention in the last several years [16–19], an unbefriended hospital population turns out not to be synonymous with a hospital's population of patients experiencing homelessness. These populations most definitely intersect, and while care of the unbefriended does present some of the same discharge challenges as the previously homeless, the previously homeless patient may have many friends. Friendships grow on the streets and in the shelters. Perhaps the previously homeless patient has loving family who have brought the individual food for years and kept an eye on the individual, perhaps even forging close emotional bonds. Such caring friends and family, nevertheless, can be unable or unwilling to take the dischargeable patient into their own home post-hospitalization.

Conceptually, there is one solution that seems clear when one has the experience of working with these patients and one knows the range of possible community programs. The fact that there just are not enough well-designed, medically and psychiatrically rich, physical and occupational therapy-rich, social services-rich programs to meet the need does not mean that the best solutions are not visible. Although educating the many constituencies that would have to be involved to develop excellent medical respite programs for those previously experiencing homeless is a complex, long, and difficult task [20, 21], there is good evidence that it can be done. Perhaps the best place to start is with the hospitals; they, along with the patients, will be the greatest beneficiaries of excellent medical respite programs for patients experiencing homelessness.

How Medical Respite for Those Previously Experiencing Homelessness Can Be a Win-Win for Patients and Hospitals Alike

Persons who experienced homelessness prior to a hospital admission can present serious care and discharge challenges for hospitals. Longer lengths of stays and higher readmissions are common in this population. For example, an early study found that patients who were homeless prior to hospital admission stayed in the hospital 4.1 days longer and cost more than previously housed low-income patients [22]. A more recent study found persons experiencing homelessness visited an emergency department (ED) six times per year compared to those with stable housing who visited the ED only 1.6 times per year [23]. More recently still, data presented at a meeting workshop in Connecticut showed that this population has a 30-day hospital readmission rate much higher (5.7 times) over their previously housed (1.9 times) counterparts [24].

Medical respite programs for the homeless can help hospitals with these complexities in discharge. According to the National Health Care for the Homeless Council (NHCHC), the standard setting organization in the field, medical respite is defined as “acute and post-acute medical care for those experiencing homelessness who are too ill or frail to recover from a physical illness or injury on the street or in a shelter, but are not ill enough to stay in a hospital [25].” The NHCHC goes on to elaborate that, “Medical respite care is not skilled nursing care, nursing home care, assisted living care, or a supportive housing program. Instead, it offers a safe and humane alternative when ‘discharge to home’ is not possible for those without homes [25].” A similar term, “recuperative care,” is sometimes used interchangeably with the term “medical respite.” As defined by the US Health Resources and Services Administration, recuperative care means “Short-term care and case management provided to individuals recovering from an acute illness or injury that generally does not necessitate hospitalization but would be exacerbated by their living conditions (e.g., street, shelter or other unsuitable places)” [26].

This population deserves to receive needed care in a well-coordinated program. Unfortunately, like the community services that were promised as part of the deinstitutionalization movement and that never materialized, most jurisdictions do not have the kind of community services needed by individuals who were experiencing homelessness prior to hospital admission and who are ready for hospital discharge but are too medically complex or fragile to safely be discharged to a shelter or back to the streets.

Yet, where such programs exist, their value is becoming evident. A recent study evaluated a medical respite pilot program for those experiencing homelessness, collecting data 1 year prior and 1 year post-respite stay. This was a small study of 29 patients, but the findings are striking. Participants reduced hospital admissions (−36.7%), and when admitted, they experienced reduced inpatient days (−70.2%). Healthcare charges for the cohort were markedly reduced from the year prior to the pilot (48.6%) [27]. These data are spectacularly promising. We just need more medical respite programs for those experiencing homelessness, and we need them to collect and publish data about how these medical respite programs impact their local hospital systems [28]. There are already stories emerging about how these programs are positively affecting the lives of individuals homeless prior to a hospital stay yet too sick post-hospital admission to return to a shelter or the streets [29].

We now have stories emerging of how profoundly such programs can touch such patients at the end of life. In the short-term housing and respite program in California's San Francisco Bay Area, a resident, age 66, died of cancer only a week after he arrived. But as he was fading and the medical personnel were considering moving him back to an acute care hospital, he asked that he be allowed to stay and die in his home. That only after a week's stay, this resident saw his medical respite center as his home is in itself remarkable. But that the respite center team allowed this resident to stay and die, there is a testament to how providing compassionate, out-of-hospital, end-of-life care can bring profound psychological wellness [30].

Moving from the Present to the Future

Homelessness is a problem seen across the country and around the world [31]. For those in the United States, homelessness is not only a big city problem. But as has been the case since the migration of those leaving farms to seek jobs, the big cities have been the primary destinations. Until now, however, not only have the big cities not solved the problems of homelessness; hospitals have been left to themselves to solve the specific problem of discharging patients experiencing homelessness.

For the many years that there have been those laboring to end homelessness, social workers, psychologists, physicians, nurses, and chaplains, to name but a few, they have long recognized that finding services for the sickest and most frail patients experiencing homelessness is a difficult task. For the most part, at best there have been but a handful of beds and services, spread throughout a major metropolitan area, supported by grants and donations cobbled together, often in spaces supported by religious organizations. Where there have been a few beds devoted to such respite care, these have usually been embedded in facilities not set up to provide a full range of needed recuperative services, and so when physically able, these previously sick or frail persons experiencing homelessness return to homelessness.

Today at least, one is gratified to see medical respite facilities for those experiencing homelessness being established. The big cities are taking the lead. Baltimore, Maryland, has just announced plans to partner with Johns Hopkins University, the University of Maryland, and the area hospitals to create 200 beds to care for this population [32]. Such respite program partnerships as that of California's San Francisco Bay Area and that just announced for Baltimore hold out the promise that medical respite care programs for the sick and frail patient experiencing homelessness will actually begin to provide the care that is needed immediately post-hospitalization.

As such programs take shape, they can look to the model programs cited in materials published by the NHCHC. In their listing, for example, is the program this author suggests is arguably the best model in the country, Circle the City in Phoenix, Arizona (https://www.circlethecity.org/) [33]. Where possible, this is the model to replicate.

In 2012, Circle the City opened the first medical respite facility in Arizona. Today, Circle the City provides medical respite care in its 2 sites, each one a 50-bed facility. Their mobile outreach clinic provides primary care for individuals and families experiencing homelessness in their region. In this program, with its full array of medical and psychiatric services, physical and occupational therapy services, and social services, 80% of the patients are placed in stable housing once well enough to move on to the next phase of their lives. Circle the City can handle patients with highly complex medical and medication management needs. Only those who are ventilator-supported are ineligible. Included are dental services and an actual street address for any member of its community-seeking job placement. Circle the City includes the full range of medical, psychiatric, physical and occupational, social, and spiritual services a patient needs to heal and recuperate in a humane and safe environment. Circle the City demonstrates how standards of excellence can be met, in providing medical respite, post-hospital care to its previously homeless community members. Any group in the country interested in creating a medical respite program for those experiencing homelessness in their jurisdiction should go and visit Circle the City in the earliest planning stages of their own program development. Circle the City sets a high bar for what medical respite for those experiencing homelessness can look like, but it is a bar that can and should be met elsewhere as such programs begin to grow.

Conclusion: Next Steps

As the big cities come to the conclusion that partnering with the area's hospitals (and many others) to provide safe, medically adequate, and ethically sound places to discharge patients previously experiencing homelessness, medical respite facilities will become appreciated as at least part of a real solution. But creating successful, sustainable medical respite facilities will be a tall task. To produce a successful, sustainable medical respite care program, especially one as excellent as Circle the City, will require region-wide coalitions. All the hospitals in a metropolitan area or geographical region will have to participate cooperatively [34, 35]. There may be a need for legislative changes that govern healthcare facilities in a particular metropolitan area or other geographic region, such as previously existing local regulations about provision of hospital-level services in non-acute care hospital settings or who may give discharge permission for previously homeless and unbefriended, questionably capacitated patients. There will need to be community members willing to not only sit on a Board of Directors but who will commit to be a working member of the Board. There will need to be business leaders willing and able to assist with purchase, renovation, and maintenance of buildings. There will need to be many others willing and able to raise the funds to purchase such buildings and then to raise the funds to support the facility's needs past what public and private insurers will cover. Finally, there will need to be dedicated staff members not only superior in their professional skills but of mind, ethical posture, and emotional temperament to serve the needs of these populations. Only then does a jurisdiction have the possibility of providing for the needs of these patients in a way that addresses the themes identified in a literature review [36]. These themes are:

1. A respectful and understanding approach to care
2. Housing assessments
3. Communication/coordination/navigation
4. Supports for aftercare
5. Complex medical care and medication management
6. Basic needs and transportation

Medical respite programming for those experiencing homelessness prior to hospitalization is what is called for in the areas around the country seeking to produce excellence in medical and social services for these specialized and particularly vulnerable populations [37]. Only time will tell if the will is there to meet this very real and difficult challenge [38]. But it is important to remember as groups attempt to build these necessary coalitions that so many individuals and families could move out of homelessness with some assistance from those of us who are more fortunate. Dr. Wyatt and I were right all these many years ago. But obviously the timing was not right. Perhaps now our society will be willing and able to invest the time, energy, and good minds to creating the solutions to homelessness for at least those who are too sick and frail to return to a life of homelessness after acute care hospitalization.

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