# Special Population: Care of Incarcerated Persons

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## Introduction

The criminal legal system includes many settings for persons experiencing incarceration. Jails are municipal- and county-administered facilities for individuals who have been detained awaiting charges for a crime, charged with a crime and awaiting trial, or those who have been sentenced to less than 1 year [1]. Prisons are state- and federally administered facilities for persons who are sentenced for greater than 1 year. Community programs include probation and parole and are responsible for persons who have been convicted of a crime but are no longer incarcerated [1]. Probation involves correctional supervision within the community instead of incarceration in a facility after conviction. Parole is a conditional and supervised release from prison [1].

The phenomenon of mass incarceration is unique to the US with historical roots in history and a legacy of national policies. When the Civil War ended, the Thirteenth Amendment preserved involuntary servitude in the event of punishment for a crime [2]. During reconstruction and the subsequent Jim Crow era, new strategies to enslavement involved the passage and enforcement of Black Codes, or laws designed to limit the freedoms of African Americans, which led to an increase of imprisonment and prison farms [3]. Over a century later, the closure of mental health institutions and shift to community-based settings was poorly planned and underfunded [4]. Concomitantly, the federal War on Crime and War on Drugs led to federal policies with strict enforcement for drug possession and created the Drug Enforcement Administration (DEA) [5]. The 1980s expanded enforcement of drug-related law offenses and zero tolerance policies, which included mandatory minimum sentences for drug possession [5], and was followed with three-strike laws, which stipulated life sentences for people with three or more serious or violent offenses [6]. These policy changes dramatically increased the number of persons incarcerated in the US, which now is the leading country for incarceration in the world [7].

Over 2 million people are incarcerated in US jails and prisons and nearly 4.5 million are under community supervision through probation or parole [8]. The prevalence varies by state, with states such as Oklahoma and Louisiana having the highest rates of incarceration, while others like Georgia and Rhode Island focusing on correctional control in the community through probation [9]. Racial disparities are prevalent throughout the criminal legal system. Black (5 times) and Latino populations (1.3 times) are incarcerated at rates greater than White populations [9]. Disparities also vary by state, with Wisconsin having a rate of 2742 per 100,000 Black residents in prison and Arizona having the highest rate of incarceration for Latino residents at 742 per 100,000 [9]. New Jersey has a high ratio of Black to White persons who are incarcerated and Massachusetts has the highest ratio of Latino to White persons incarcerated [9]. American Indian and Alaska Native populations are particularly overrepresented in local jails [10].

Men are overrepresented in the US criminal legal system; however, the rates of women are rising [11, 12]. One in every 15 women in the prison system is serving life-without-parole [13]. Women are more often in the community, but remain in correctional control through probation and parole [14]. In rural areas and smaller counties, the rates of women in jails are growing at a greater rate than urban areas [15]. Compared to men, women who are incarcerated have a higher prevalence of chronic medical illness, mental illness, and substance use disorders [16, 17].

Transgender persons have higher rates of incarceration than the general population [18]. Black, Indigenous, and persons of color who identify as transgender face disproportionate rates of incarceration with 47% of Black, 30% of

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Indigenous, and 25% of Latino transgender people reporting having been sent to jail or prison for any reason [19]. Gay, Lesbian, and Bisexual persons are three times more likely to be incarcerated than the general population and more likely to face solitary confinement than heterosexual individuals [20, 21]. The average age of the prison population has increased since the 1970s with nearly one-third of people in prison are over age 40 [22]. Older individuals in the criminal legal system suffer from diabetes, cardiovascular conditions, and liver disease in addition to mental health conditions [22, 23].

Chronic illness and conditions have greater prevalence in both adolescents and adults who are involved in the criminal legal system [24, 25]. Diseases such as asthma, hypertension, cardiac disease, cancer, liver disease, HIV/AIDS [16, 26–28], mental health conditions, and substance use disorders are common [24, 29–31]. Social determinants of health (e.g., homelessness and unemployment) create additional barriers to health for people experiencing incarceration [29]. This chapter is a primer to the care of persons who are incarcerated. The first section is an overview of health services that are provided and is followed by clinical care considerations. Next, information about quality of care in carceral settings and post-release care is outlined. The chapter closes with a review of programs that promote reentry as well as future directions.

## Health Services During Incarceration

### Legal Precedents

Persons who are incarcerated in the US are guaranteed the provision of healthcare under the Eighth Amendment which prohibits cruel and unusual punishment to prisoners [32]. This law was affirmed in Estelle v Gamble in which the US Supreme Court ruled that officials and medical personnel in criminal legal settings cannot deliberately fail to respond to the medical needs of a person who is incarcerated if there is substantial risk of harm to the individual [33]. This standard is known as showing deliberate indifference and has served as precedent in subsequent court cases that protect people who are incarcerated against sexual assault [34], and the provision of dental care [35] and mental healthcare [36]. Deliberate indifference consists in both identifying a serious medical need and demonstrating excessive risk to the health and safety of the individual who is incarcerated [34, 37]. Failing to provide treatment, delaying care, poor medical judgment below professional medical standards, and ignoring obvious conditions are examples of demonstration of deliberate indifference. While individuals who are incarcerated have the constitutional right to healthcare services, multiple cases have upheld the use of co-pays and charging for over-the-counter medications as constitutional [38, 39].

### Organization of Care

Health services across the criminal legal system are often interconnected since individuals can be incarcerated in different facilities (e.g., jails to prisons) and the care in each institution is linked to the capacities of the jurisdiction responsible for that facility [40]. In local settings, there are three healthcare delivery models. A partner agency such as the local health department or public hospital may be responsible in the jail setting [41]. Some jails and prisons utilize contractors that are either public or private companies and provide care onsite while others directly employ healthcare personnel [40, 41].

Each state is responsible for administering its prison system and different strategies are used for ambulatory services and hospital-based services [40]. Services can be provided directly through clinicians employed through the department of corrections, through contracts with private companies, through the state's university medical school and affiliated hospital system, or by combinations of these services [40]. Reimbursement in the state prison system varies between a mix of state-allocated funds, capitated contracts, and Medicaid if the state opted for Medicaid expansion under the Affordable Care Act (ACA) [40]. Some states, such as North Carolina, created its own prison hospital which is operated by the Department of Correction [40]. Texas and Georgia also have dedicated hospitals, which are run by university systems that provide healthcare [40].

The federal criminal legal system organizes healthcare services based on location. For individuals who are pre-trial under federal laws, such as those in US Marshalls or Immigration and Customs Enforcement, healthcare is usually provided by a local contracting agency where individuals are detained, which may be the local jail or dedicated detention facility [42, 43]. Native American and Indigenous communities also have tribal jails and prisons. Unlike other federal jurisdictions which fall under the Department of Justice, tribal facilities fall under the Department of the Interior [44].

There are no federal accreditations or regulatory requirements for healthcare services provided in criminal legal settings, in contrast to acute hospitals and long-term care facilities that are accredited by the Joint Commission and have federal regulations under the Center for Medicaid and Medicare [45]. Each state determines rules and regulations that inform care requirements which often fall under the state department of corrections, rather than the department of health. Federal prisons provide care under the standards of the Federal Bureau of Prisons [46]. While accreditation does exist for criminal legal settings through the National Commission on Correctional Healthcare and the American Correctional Association, it is optional [47, 48].

Healthcare financing in criminal legal settings is the responsibility of the jurisdiction. In 1965, the Medicaid Inmate Exclusion Policy (MIEP) prohibited the use of federal Medicaid funding for healthcare for persons who are incarcerated [49]. Because of MIEP, local and state jurisdictions are responsible for the cost of care of individuals who are incarcerated, in contrast to a cost-sharing model between local, state, and federal governments that finances safety-net medical care [41]. MIEP applies whether the individuals who are incarcerated are pre-trial or convicted, both of which disproportionately impact Black, Indigenous, and communities of color [41].

Several payment models have evolved for healthcare services during incarceration. Some facilities may opt to cost share and assume risk in providing care, depending on the health needs of facility population [40, 41]. Facilities that do not risk share may pay healthcare service contractors at an hourly rate or a set fee structure. If financial risk is shared, contractors will use either a flat fee or a capitated payment system. For flat fees, there is a fixed annual amount paid that covers pre-determined costs and can include hospitalization, while capitation involves a set reimbursement per person [40, 41].

Another cost-sharing approach charges patients' co-pays for medications, dental treatment, physician visits, and other health services [50, 51]. The goal is to reimburse states and counties for medical care and reduce unnecessary care. Co-pays, however, create barriers to accessing care and are proportionately more expensive than community rates [50]. People who are incarcerated earn 14–62 cents/h; a $2–$5 for a co-pay is up to 1 month's worth of wages in some facilities [50]. If incarcerated persons cannot afford to pay, some facilities cover the costs with dedicated funds while others create a debt for the patient [51]. Jails typically have fewer resources than prisons given the dependence on funding at the local jurisdiction and greater turn over. Prisons tend to focus on the acute and chronic needs of patients, which do include treatment of chronic diseases like hepatitis C and preventive services [48].

The Health Information Technology for Economic and Clinical Health Act was passed in 2009 which promoted the meaningful use of electronic health records (EHRs) in the US [52]. This legislation did not include healthcare provided in criminal legal settings. In consequence, there is a patchwork system of EHRs across criminal legal institutions; a fully operational EHR; a hybrid electronic and paper system; or a paper system [53]. Most EHRs built for criminal legal care are not integrated with other community health systems, creating barriers in communication and subsequently care. After release, records are not always available to community healthcare providers and may be delayed up to 90 days and have associated fees [54]. The use of aliases in justice-involved populations presents additional challenges in tracking and verifying health records.

Generally, there are dedicated locations in criminal legal settings for healthcare-related activities, including exam rooms, clinical units, and infirmaries with dedicated nursing cares. Although there are standards to promote patient privacy, it is not the same standard as in the community [55, 56]. For example, patients may be evaluated with open doors and security staff nearby in some circumstances. In others, individuals are not allowed out of their housing units as determined by security staff and must be evaluated in their housing unit or even in their cell. The Health Insurance Portability and Accountability Act (HIPAA) stipulates the communication requirements regarding health information that can be shared [57]. HIPAA does allow for sharing protected health information for patients in criminal legal settings [57]. Sharing of protected health information may occur, for example, if an individual is diagnosed with an infectious disease where there is concern that others in the criminal legal facility and staff have been exposed [58]. Information may also be shared for medical conditions that impact housing selection and diet options (e.g., diabetes mellitus).

Dual loyalty arises in criminal legal settings and reflects the duty to treat a patient and to interests of a third party, most notably the jail or prison authority [59]. Dual loyalty is challenging when healthcare professionals are employed by the jail or prison directly, as opposed to separate employment. Healthcare providers should participate in professional relationships with those incarcerated or detained in order to evaluate, protect, or improve their physical and mental health, and avoid participation in activities such as force-feeding during hunger strikes [60]. Providers may be compelled to limit treatment of hepatitis C due to cost, or limit prescriptions for opioid use disorder given security concerns. In these instances, administrative or public health personnel who are independent from direct patient care may provide recommendations [60].

Informed consent is an important principle in carceral settings. The same standards of consent to procedures and treatment that are required in the community apply to carceral settings, including the use of written consent [55, 56]. In some instances, a blanket consent for treatment is signed upon admission. If healthcare is refused, this should be documented and attested by the individual refusing offered care, without repercussions for punishment. In cases where individuals are unable to consent based upon capacity to consent or refuse treatment due to psychiatric illness, there are circumstances in some jurisdictions where medical treatment can be implemented.

## Providing Care to Persons Who Are Incarcerated

### Clinical Services

An initial medical evaluation consisting of screening, a general health assessment, and clearance is routinely completed when individuals enter a criminal legal facility [55, 56]. Medical clearance includes a documented clinical assessment that is completed prior to entry and may require transfer to a local emergency department if there are acute injuries or conditions, including acute traumatic injury, chest pain, or concern for acute drug ingestion. Screening seeks to identify urgent conditions, such as acute withdrawal syndromes, and potentially contagious conditions like MRSA or influenza (NCCHC J-E-02, J-E-04 [55]). Screening is completed by healthcare staff, if available, but in some facilities is completed by correctional staff. The initial health assessment is a comprehensive review that is required within 14 days of admission to a facility and can be performed by registered nurses or providers [55].

When healthcare providers are not onsite, some facilities designate a healthcare liaison who has special training to address medical conditions (NCCHC J-E-07) [55]. Requests for mental health and substance use disorder care may follow a comparable process; however, facilities may have separate workflows. In general, access to services rely on incarcerated persons to self-advocate for care, and often involve the medicalization of activities of daily living, including dietary modifications, the use of adaptive equipment, and skin care [61]. The use of hardcopy (i.e., written) and electronic systems are challenged due to high rates of limited health literacy [62]. There may be required assessments and exams that are guided by local jurisdiction regulations, such as testing for tuberculosis, HIV, syphilis, and other sexually transmitted diseases.

Healthcare services in carceral facilities depend on the type and size of the facility, the healthcare delivery model, and the local healthcare environment. Detention centers and jails with individuals who are pre-adjudication/pre-trial have greater patient turnover and inconsistent length of stay due to variability in posting bail and changes to court proceedings [55]. Prisons and jails with individuals who are post-adjudication can have a greater predictability [55, 56]. Short-term facilities tend to focus more on urgent medical concerns and may not address non-emergent chronic concerns or preventive services. Prisons generally have resources and protocols that can address chronic conditions and provide preventive screening.

Emergency healthcare and response planning are important components in carceral settings. Facilities routinely have plans for responding to medical emergencies in the facility, depending on resources and the clinical situation. Patients may be treated at the facility or in a contracted emergency department for conditions such as seizures, chest pain, altered mental status, acute opioid overdose, and acute traumatic injury [63]. In many cases, an on-call physician is available to address immediate concerns and to guide care planning.

Non-emergent services are typically considered as acute care and chronic care. This care may be requested through written, electronic, or phone requests in a process described as sick call, which has roots in a US military practice in which personnel would line up for medical attention [64]. Medical requests are triaged by nursing staff, depending on the facility, and may lead to a medical provider visit. Most facilities have nursing protocols for symptoms and conditions that are within a scope of practice. When the acute needs of the patient cannot be addressed in a local setting, several approaches facilitate higher acuity. Some larger facilities have their own urgent care centers, infirmary units, and even hospitals, while others rely on emergency departments and healthcare systems for urgent and emergent health conditions [40]. The logistics for transfer to an outside facility involves coordination with correctional staff and the receiving facility. Depending on patient needs, the correctional facility may transport the patient, or an ambulance service may be utilized. Specialty care referrals or off-site care often involves review by a health authority or health services administrator to determine the need for consultation. In some instances, a formal utilization review process is used.

Chronic disease is often treated using condition-specific protocols that are based on clinical practice guidelines (NCCHC J-F-01) [55]. Conditions such as asthma, diabetes, HIV/AIDS, and hypertension are examples and involve routine monitoring, medication management, lab testing, and providing patient education. Chronic disease management can vary based on the facility. For example, jails that may have short length of stay focus on medication management alone, while prisons with longer sentences can focus on more comprehensive management. Correctional facilities have formularies to help manage healthcare costs, which prioritize generic and less-costly medications [55]. For example, the American Diabetes Association recommends the initial use of metformin and then non-insulin medications prior to beginning insulin [65]. Newer agents, like GLP1 agonists and SGLT2 inhibitors, are infrequently used in criminal legal settings due to cost.

### Mental Health

Psychiatric disorders are common in individuals who experience incarceration with prevalence estimates of more 60% of people in jails, and greater than 50% of people in prison [24, 66]. Major psychiatric disorders—including major depres-

sive disorder, bipolar disorder, schizophrenia, and psychotic disorders—are associated with repeat incarceration [67]. Most individuals with mental health conditions are managed with pharmacotherapy while incarcerated, though fewer report adherence at the time of arrest [24].

In pre-trial settings, a psychiatric evaluation may be conducted for individuals who have court cases involving determinations of sanity and competency to stand trial [68]. Typically court-appointed mental health professionals work with legal counsel and hearing judges to inform determinations about the court case. A pre-trial mental health team can develop treatment plans which may include counseling services, group sessions, and pharmacotherapy. When the court issues an order for involuntary medication based upon local case law, the mental health and medical teams are responsible for medication management [69, 70].

Mental health screenings at admission and/or within 14 days of admission are recommended by National Commission of Correctional Healthcare, American Correctional Association, the Bureau of Prisons, and state departments of corrections. Screenings are performed by a member of the patient care team and include psychiatric history including psychiatric hospitalizations, suicide attempts, violent behavior, traumatic brain injury, trauma history, screening for intellectual functioning, and substance use history along with medication history (NCCHC J-E-05) [55, 56]. Although facilities provide access to pharmacotherapy, access to mental health professionals, formulary options, and the use of in-person versus tele-psychiatry vary widely [71, 72]. Mental health teams may contract separately with the criminal legal institution, while other facilities have dedicated mental health units that offer group and individual counseling [73].

Suicide is a particular risk for individuals who are incarcerated since it is the leading cause of death in jails and a significant cause of death in prisons [74]. The most common cause of suicide is by hanging. Institutions use several screening tools for suicide prevention, including the Columbia-Suicide Severity Rating Scale and the Suicide Behaviors Questionnaire-Revised [75, 76]. Policies and protocols to prevent suicide include the use of Kevlar or other resistant clothing, the absence of bedding or other clothing to prevent the use of ligatures, a special diet that limits utensils, and more frequent monitoring by both mental health and security staff [77]. In some settings, individualized care plans can progressively restore incarceration life to the patient [77].

Most US jails and prisons use administrative segregation or solitary confinement, which can involve up to 23 h a day in a cell and meets international definition of torture [78]. Although the psychological consequences of solitary confinement have been well reported, this practice continues in most criminal legal settings despite studies showing that this practice increases the risk for self-harm [79]. New York and other states have limited solitary confinement and have reduced the potential use of solitary confinement for adolescents, those with severe mental illness (SMI), and the elderly [80, 81].

### Substance Use Disorders

Substance use disorders are ubiquitous in criminal legal settings, with over half of persons in state prisons and two-thirds of persons sentenced in jails reporting substance use or dependence [82]. Alcohol use has been identified in more than half and illicit substances in three-fourths of all people incarcerated [83]. A history of criminal legal involvement has been associated with more than half of individuals with prescription opioid use disorder or heroin use [31]. Individuals with substance use disorder may have longer jail stays and are more likely to serve time in segregation while incarcerated [84, 85]. Upon release there is a marked increased risk of overdose death within 2 weeks of release [86].

Managing clinical withdrawal syndromes is an important treatment for persons who are incarcerated. Withdrawal is usually managed with clinical protocols, particularly for those substances with known withdrawal syndromes, such as alcohol, benzodiazepines, and opioids (NCCHC J-F-04) [55]. Protocols often utilize validated tools like the Clinical Institute for Withdrawal Assessment for Alcohol (CIWA-Ar) and the Clinical Opioid Withdrawal Scale (COWS) to guide management; however, medically supervised withdrawal can vary. In many settings, clonidine is used for opioid withdrawal rather than an opioid agonist (e.g., methadone) or partial agonist (e.g., buprenorphine) therapy [87]. Scheduled versus as-needed dosing may vary based on the availability of medical personnel for clinical assessment. There is growing evidence about the efficacy of medications for opioid use disorder (MOUD) in carceral settings [31, 86, 88, 89]. Jail and prison systems have adopted different models for prescribing MOUD, which include buprenorphine, methadone, and intramuscular naltrexone [90]. Specific considerations for MOUD administration in criminal legal settings are the potential for diversion and a plan to continue treatment upon release [90, 91].

## Special Conditions

### Human Immunodeficiency Virus

Human Immunodeficiency Virus (HIV) is prevalent in jails and prisons when compared to the general population given high risk substance use and sexual behaviors in the incarcerated population [92]. Opt-out testing and initiating antiretroviral therapy for HIV have been adopted in many carceral settings [93]. The EnhanceLink Initiative and Transitional Care Coordination Model seeks to connect

patients living with HIV to resources and supports in the community in ways that can continue therapy that has been initiated while incarcerated [94].

### Hepatitis C

Hepatitis C rates in prison populations is estimated to be as high as 18%; approximately 30% of all individuals living with hepatitis C infection in the US pass through a carceral setting each year [95, 96]. Testing strategies include opt-out testing, risk-based, and mandatory testing with opt-out testing being a recommended strategy to help identify new cases, particularly those who are actively viremic [95–97]. The capacity to treat hepatitis C in carceral settings has greatly expanded with the development of direct-acting antivirals therapies (DAA); however, there are cost and length of stay barriers [97]. Legal action has contributed to improved access to hepatitis C treatment, particularly in state prison systems [98–100]. Jails face challenges with rapid turnover and care linkages to the community [101]. The diagnosis and treatment of hepatitis C in carceral settings remain important for the national strategy to mitigate this disease [102].

### Pregnancy

The population of women in prison has increased over 700% in the past 30 years and they are disproportionately from communities of color [103]. Three-quarters of women who are incarcerated are in their childbearing years (ages 18–44) and two-thirds are primary caregivers to young children [104]. Approximately 5% of women entering jails and 4% of women entering state prisons are pregnant upon admission [105]. Prenatal care in carceral settings is variable and dependent on local clinical contracts and resources, though national (e.g., NCCHC) and state policies exist to create standards of care for pregnant women [106, 107].

The use of shackling and restraints during pregnancy varies on the institution and state of incarceration [107]. Only 22 states have legislation prohibiting or limiting the use of shackling of pregnant women, a practice contributing to abdominal trauma and possibly leading to adverse birth outcomes [108–110]. Shackling limits the ability to bond and safely support a newborn in the perinatal period, which is exacerbated by the practice of separating women from their newborns 24 h after birth [110]. Most women deliver alone without social or emotional support, although some doula programs exist [111]. Institutions may adjust the conditions of detention, but in many cases newborn children are placed in the custody of family, friends, or foster care [107].

Women who choose to terminate their pregnancy are legally protected under the law to do so while incarcerated, but the changing landscape around reproductive rights to abortion is threatening access to this care [112]. Transportation to clinic visits for a termination procedure and/or medical treatment can complicate access for incarcerated women seeing care [112]. Often, the incarcerated woman is responsible for costs associated with this care and may be responsible for transportation and security costs despite the legal right to receive this care [113].

## Quality of Care

Although no uniform quality of care standards for health services provided in carceral settings exists, several entities provide oversight. For state-operated facilities and many local jurisdictions, the department of corrections or similar agencies have policies and regulations that inform standards, such as minimum standards for healthcare [114]. The first standards for health services in correctional facilities were established by the American Public Health Association in 1976 and the National Commission on Correctional Healthcare (NCCHC) provides dedicated standards regarding healthcare in jails, prisons, and juvenile detention facilities [114]. The American Correctional Association also has a voluntary accreditation process that includes a continuous quality improvement program [47].

Quality improvement (QI) is usually the responsibility of the medical authority, such as the medical director or chief medical officer, who works in collaboration with representatives from service lines including mental health, dentistry, and nursing (NCCHC J-A-06) [55]. QI programs typically involve strategies to improve performance and the collection and analysis of data outcomes (e.g., number of clinic visits) using health records. Because criminal legal settings, particularly jails, involve frequent intakes and a revolving population, the public health needs of the community are reflected in these settings, and quality and novel initiatives may reflect these changing priorities. In Hennepin County Adult Detention Center in Minneapolis, Minnesota, for example, a statewide hepatitis A outbreak led to changes in practice and measuring outcomes metrics regarding the administration of hepatitis A vaccine. The increased prevalence of illicit fentanyl use in the community led to changes in the same facility, including the expansion of prescribing of buprenorphine [115, 116].

## Post-Release and Reentry

Persons released from incarceration face enormous challenges for successful reentry, including housing instability, food insecurity, unemployment, lack of transportation, lack of identification cards, compliance with post-release supervision requirements, debt, and reunification with loved ones

and family [117]. Over 45,000 US state and local laws create barriers for persons with a criminal record [118], such as criminal background checks for employment. Over 4 million persons were reported in community supervision in 2018, which includes parole and probation [119]. Persons in community supervision are predominantly male (75%) and White (55%), 30% are Black, and 13% are Hispanic. Persons with recidivism report more chronic medical conditions, mental illness, and substance use disorders [120].

For many recently incarcerated persons, the lack of government identification (e.g., driver's license) prevents access to public services and benefits, including healthcare. Obtaining health insurance upon release is highly variable and geographically dependent on states that expanded Medicaid under the Affordable Care Act [121]. In Medicaid expansion states, individuals can often obtain state Medicaid coverage post-release, but may struggle to find providers that accept Medicaid insurance. In non-expansion states, only non-pregnant adults that are aged, blind, or disabled qualify for state Medicaid coverage. Additionally, individuals are often ineligible for ACA insurance subsidies if their incomes are below the qualifying limit of 100% of the federal poverty limit [121].

In the immediate post-release period, there is considerable risk of death for adults and juveniles [122]. The leading cause of post-release death is drug overdose, primarily associated with opioid use [122, 123]. Persons with substance use disorders may receive abstinence-based treatment; however, medication for opioid use disorder (MOUD) has been shown to be effective in reducing post-release overdose death [88]. Unfortunately MOUD is limited in carceral settings, with few people initiating treatment prior to release and connected to care post-release. MOUD is most often discontinued during incarceration for people on treatment for OUD [124]. Another factor associated with post-release death is exposure to solitary confinement from drug overdose, suicide, and homicide [125].

Dedicated transitional care teams and release planners for transition can be effective in reducing morbidity and mortality [117, 126–128]. Medications prescribed during incarceration may be dispensed at release from carceral settings using blister packages or pill bottles. Individuals released to the community can be prescribed medications, except for controlled substances. The practice of prescribing or providing medications at release is not required in all jurisdictions; in some circumstances only 3–7 days are prescribed [128]. Since Medicaid is terminated or suspended when people are incarcerated, even while pre-trial in jails, reobtaining insurance is important in transitioning healthcare services from the carceral setting to the community. Many states have moved toward the suspension of Medicaid, rather than its termination to help facilitate care transitions [129, 130]. There are different models for promoting Medicaid participation. In Massachusetts, individuals can enroll in Medicaid 6 months prior to release [129], a change that was made through Section 1115 waivers [131].

Medical discharge planning from prisons and jails is highly variable. Persons with ongoing medical problems may be given a list of community providers to contact upon release, but effective systems to assure continuity of care are lacking [117]. Post-release referrals for substance use treatment are inconsistent and usually only part of a court order or post-release supervision requirement [140]. Persons with severe mental illness may be given referrals or an appointment with a behavioral health provider in the community, but appointment completion rates are low [140].

## Programs to Promote Reentry

Reentry programs, primarily in urban areas, focus on meeting the needs of people returning from incarceration, such as employment readiness, emergency housing, and life skills. Unfortunately, few programs include linkages to essential health services [117]. The Transitions Clinic Network (TCN) is a multistate program that seeks to connect post-release individuals to a primary care medical home [132]. The core of TCN includes community health workers (CHWs) who have lived experience of incarceration and are trained to interface across correctional institutions, reentry service providers, and medical homes. CHWs work to create a comprehensive reentry plan with their clients and are often embedded in primary care practices to facilitate comprehensive services [117]. TCN has been shown to reduce emergency room utilization by 50%, reduce ambulatory care sensitive hospitalizations, and reduce the number of days incarcerated by 25, per client per year [126–128]. There are over 40 TCN clinical sites in 12 states and Puerto Rico and most are in states that expanded Medicaid [132]. However, Texas, Louisiana, and North Carolina have also developed programs. In North Carolina, the North Carolina Formerly Incarcerated Transition Program (NCFIT) has developed eight clinical sites in six counties [133]. Through funding by grants and philanthropy, NCFIT partners with federally qualified health centers and covers costs for chronic medications.

Formerly incarcerated women have a high prevalence of mental health disorders [134, 135], which may be attributed to childhood and intimate partner violence [136]. A Rochester, NY TCN program developed The Women's Initiative Supporting Health and provides screening and vaccinations, mental health treatment, and substance use disorder treatment to recently incarcerated women [137]. In addition, the Women on the Road to Health program, an app-based intervention, focuses on reducing sexually risky behaviors, sexually transmitted infections, and intimate partner violence [138].

Post-release programs and interventions for people afflicted with severe mental illness (SMI) are essential. Without community support after release, people with SMI have high rates of rearrest and reincarceration [139]. Many states have deployed special mental health parole officers to work with individuals upon release, improving linkages to care. Another approach is forensic assertive community treatment, which combines intensive support (e.g., embedded psychiatric services) from justice-informed community treatment teams (e.g., mental health courts and probation and parole) for recently incarcerated person with SMI [140]. Forensic assertive community treatment has been associated with reductions in criminal convictions and increased engagement in outpatient care [141].

One model is transitional healthcare coordination that was started at Riker's Island Jail in New York City. This program involves a multisector transition of care team involving Medicaid, community-based healthcare providers, and departments within the health department and other city agencies [142]. The Transition from Jail to Community model is another approach which incorporates dedicated screening, a care transition plan, and targeted interventions like case management, referrals and education, and additional supports [143].

Although not a specific transitions model, compassionate release allows for changes in sentencing or bail given an individual's life circumstance. For example, a sentence is changed to that of time served while incarcerated and persons can be released to the community. Release may be due to age or declining health status, the incapacitation of a spouse or registered partner, or the incapacitation of the caregiver of the individual's child(ren) [144]. The healthcare team can play a role in advocating for compassionate release for a patient, depending on clinical circumstances and other factors.

## Future Directions

The use of telemedicine and electronic consultation has been expanding in carceral settings for primary care, mental health, substance use disorder treatment, and specialty care [145]. Electronic consultation can be used to address a specific clinical question that can then be implemented by a primary provider. This strategy is associated with expedited and efficient care [146]. Telehealth services are an opportunity to expand healthcare resources in carceral facilities, particularly those in resource-constrained settings. Telemedicine has comparable patient satisfaction outcomes compared to in-person visits, but there are many factors in carceral institutions that impact the acceptability of telemedicine for patients and staff [145]. As the electronic and organization infrastructure for telemedicine and electronic consultation expanded during the COVID-19 pandemic, guidelines regarding the use of telemedicine will continue to emerge [147].

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