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REVIEW PAPER

Using Systems of Care to Reduce Incarceration of Youth with Serious Mental Illness

Chris D. Erickson

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Abstract Youth with serious mental illness come into contact with juvenile justice more than 3 times as often as other youth, obliging communities to expend substantial resources on adjudicating and incarcerating many who, with proper treatment, could remain in the community for a fraction of the cost. Incarceration is relatively ineffective at remediating behaviors associated with untreated serious mental illness and may worsen some youths' symptoms and long-term prognoses. Systems of care represent a useful model for creating systems change to reduce incarceration of these youth. This paper identifies the systemic factors that contribute to the inappropriate incarceration of youth with serious mental illness, including those who have committed non-violent offenses or were detained due to lack of available treatment. It describes the progress of ongoing efforts to address this problem including wraparound and diversion programs and others utilizing elements of systems of care. The utility of systems of care principles for increasing access to community-based mental health care for youth with serious mental illness is illustrated and a number of recommendations for developing collaborations with juvenile justice to further reduce the inappropriate incarceration of these youth are offered.

Keywords Mental illness · Juvenile justice · Systems of care

C. D. Erickson (✉)
The George Washington University, 2134 G. Street N.W., Washington, DC 20052, USA
e-mail: agloria@education.wisc.edu

Introduction

Between 5 and 9% of all children meet the criteria for serious emotional disturbance, including serious mental illness (Friedman et al. 1996), yet as few as 10% of youth with serious mental illness receive adequate treatment (USDHHS 2000). Serious mental illnesses are classified as brain disorders by the National Institute of Mental Health, just like epilepsy and autism, and are distinguished from other mental disorders such as anxiety, adjustment, attention, or conduct disorders by the amount of impairment, including cognitive impairment, caused.[1] Without treatment, these illnesses impair youths' ability to discern reality from delusions or hallucinations which dramatically affects their social, academic, and occupational development. Yet the symptoms of serious mental illnesses, which include problems with judgment and insight, are highly treatable with proper medication and social supports.

[1] There are three definitions of serious mental illness most often used for clinical and policy purposes with regard to youth (Narrow et al. 1998). Public Law 102–321, the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) Reorganization Act of 1992 defined serious mental illness as a 12-month disorder, other than a substance use disorder, that meets DSM-IV criteria that causes "serious impairment" which a SAMHSA advisory group defined as equal to a Global Assessment of Functioning (GAF) score of 60 or less (Epstein et al. 2004). The US Senate Committeeon Appropriations in the 1993 appropriations bill for the Departmentof Health and Human Services defined severe mental illness as those disorders with psychotic symptoms including"schizophrenia, schizoaffective disorder, manicdepressive disorder, autism, as well as severe forms of other disorders such as major depression, panic disorder, and obsessivecompulsive disorder." Public Law 94–142, the Individuals with Disabilities Education Act (IDEA), originally passed in 1975, developed a definition of emotional disturbance for use in educational settings, but which has been criticized for its vagueness and outmoded terminology (Narrow et al. 1998).

Untreated, however, these symptoms cause erratic behavior and impaired judgment which place youth with serious mental illness at increased risk of coming into contact with the juvenile justice system.

There is a lack of data on the rates of serious mental illness among incarcerated youth (Cocozza and Skowyra 2000; Robertson et al. 2004). Failure to use standardized assessment procedures or criteria for determining mental illness limits the usefulness of existing research, so it is not possible to quantify any trends in rates of serious mental illness among juvenile justice populations. Depending on the criteria and assessment methods used, between 17 and 27% of incarcerated youth have been found to have a serious mental illness (National Center on Addiction and Substance Abuse 2004a). Rates of serious mental illness among incarcerated youth are actually 2–5 times higher than those of non-incarcerated youth (Teplin et al. 2002; Timmons-Mitchell et al. 1997), and the proportion of incarcerated youth with serious mental illness is larger than that of incarcerated adults with serious mental illness (OJJDP 2000; USDHHS 2002). Unfortunately, most youth with serious mental illness go undiagnosed and untreated during their incarceration (Cocozza and Skowyra 2000).

Unlike youth with other mental disorders, youth with serious mental illness are most often incarcerated for relatively minor offenses including disrupting public order or status offenses (acts that would not be a crime if committed by an adult such as truancy, running away, smoking cigarettes or drinking alcohol, curfew violations, and chronic disobedience). Two-thirds of youth with serious mental illness were incarcerated for non-violent offenses (Cocozza 2005), which were often the direct result of the untreated symptoms of their illness (Skowyra and Cocozza 2007). In other cases, shortages in mental health services leave youth with serious mental illness who have not even committed a crime to wait in juvenile detention facilities until mental health treatment becomes available (GAO 2003; US House of Representatives Committee on Government Reform 2004), a phenomenon which has not been observed among youth with other mental disorders.

The Juvenile Justice System, however, was not designed to treat serious mental illness and does not have the capacity or mandate to do so (Skowyra and Cocozza 2007); consequently, as few as 10% of incarcerated youth with serious mental illness receive treatment (USDHHS 2000). Often, their symptoms are treated as discipline problems, which can worsen their condition (GAO 2003) and suicide rates of incarcerated youth are 4–5 times that of the general population (Farand et al. 2004; Memory 1989).

Numerous investigations and national reports (IOM 2006; New Freedom Commission on Mental Health 2003; USDOJ 2005: USDHHS 1999) have concluded that systems change is urgently needed to reduce the problem of incarceration of youth with serious mental illness. This paper identifies the systemic factors that contribute to the inappropriate incarceration of youth with serious mental illness, including those who have committed non-violent offenses that were the result of untreated or undertreated symptoms of their illness or who were detained in juvenile facilities due to lack of available treatment. It describes the progress of on-going efforts to address this problem including wraparound and diversion programs and others utilizing elements of systems of care. The utility of systems of care principles for increasing access to community-based mental health care for youth with serious mental illness is illustrated and a number of recommendations for developing collaborations with juvenile justice to further reduce incarceration of these youth are offered.

The Incarceration of Youth with Serious Mental Illness

Youth incarceration rates have risen steadily since the 1970s as a result of state legal reforms that have moved from an emphasis on diversion and rehabilitation toward more accountability, punishment, and concern for public safety (GAO 1995; Grisso 1996, 2004; IOM 2001b; Knoll and Sickmund 2009). In the juvenile justice system incarceration refers to placement in any out-of-home setting, including public or private juvenile correctional facilities, or other shelter placements (Justice Policy Institute 2009). As a result of increased incarceration rates, 34% more adolescents were being held in detention, correctional, or shelter facilities in 2004 than in 1985 (Stahl et al. 2007).

Beginning in the 1990s, juvenile justice personnel began reporting increased numbers of adolescents with serious mental illness entering the system (GAO 2003; Grisso 2004). Youth with serious mental illness can become involved with juvenile justice when the symptoms of their illness (impulsivity, recklessness, impaired judgment, etc.) cause individuals to behave in ways that attract the attention of law enforcement (Geller and Bieber 2006). The cognitive impairments caused by serious mental illness, for example, put youth at risk for hurting themselves or others in reckless behavior and accidents (Monohan et al. 2001). Without access to proper diagnosis and treatment however, many children's serious mental illnesses go unrecognized and instead these children are labeled "troubled" or "delinquent." Some families even pursue arrest or detention for their child in hope of getting the mental health treatment they have been unable to access in their community or out of concern for the safety of other children in the home (GAO 2003; Grisso 2004).

Because emergency treatment for serious mental illness is often not readily available, communities frequently rely on law enforcement to provide crisis response instead and

officers are frequently called upon to respond to psychiatric emergencies. In fact, serious mental illness has been found to be a factor in approximately 9% of all police responses (Reuland and Margolis 2003). One study of Florida police officers found they respond to 34% more serious mental illness crises than DUIs (McGaha and Stiles 2001). These situations place demands on law enforcement personnel beyond those for which they were trained. In many cases, it may not be clear to officers that a youth is experiencing a serious mental illness, but even when officers detect a child's mental illness, lack of available mental health treatment may force them to place the child in detention until treatment becomes available (US House of Representatives Committee on Government Reform 2004).

The problem of incarceration affects ethnic minority youth in particular who are 3 times more likely to be incarcerated than White youth (Sickmund et al. 2008), yet less likely to receive mental health treatment. While 69% of White youth with significant mental health needs do not receive treatment, 78% of African American youth, and 86% of Hispanic youth with significant mental health needs do not receive treatment (RAND 2001). Incarcerated youth of color also have less access to mental health treatment than White youth, even when controlling for the severity of their symptoms (Dalton et al. 2009).

Despite juvenile justice facilities' obligation to provide adequate mental health services under the Civil Rights of Institutionalized Persons Act of 1980 (Hunsicker 2007), most youth with serious mental illness do not receive adequate mental health treatment. Many never even receive a diagnosis while in custody and few receive any treatment whatsoever (Cowles and Washburn 2005; IOM 2001b). Many youth detention facilities are not set up to provide adequate mental health treatment (California Department of Corrections and Rehabilitation 2005) and instead rely heavily on isolation to control behavior (Burrell and Bussiere 2005). Indeed, the Civil Rights Division of the US Department of Justice has conducted a series of investigations that have found consistently inadequate mental health treatment for incarcerated youth (Butterfield 1998; USDOJ 2005) resulting in a number of federal lawsuits, consent decrees and settlement agreements(Hunsicker 2007).

At best, this arrangement is an inefficient use of resources, since adjudication and incarceration are usually much more costly than treatment and also much less likely to lead to improved health outcomes (Cuddeback et al. 2010), leaving these youth at risk of becoming heavy users of expensive public services over their lifetimes. At worst, incarceration can be counterproductive or even destructive to the health and well-being of youth with serious mental illness (Kupers 2005; Wolf et al. 2007), disrupting their lives and removing them from their routine, support systems, family, and school environment. Moreover, the use of isolation as a means of controlling these individuals' behavior has been found to actually increase psychotic symptoms (Grassian 1983; Grassian and Friedman 1986; Haney 1993). Without treatment in custody, incarceration can reduce opportunities for adolescents to develop independent living skills, receive job training, or develop a working alliance with a mental health provider to learn about and manage their illness. Moreover, incarceration can expose individuals with serious mental illness to exploitation, mistreatment, and sexual victimization at the hands of violent offenders (Human Rights Watch 2001; Wolf et al. 2007) and suicide rates of incarcerated individuals with serious mental illness are 5 times higher than those without serious mental illness (Marcus and Alcabes 1993).

Upon their release, these adolescents often find themselves with few job skills or employment prospects, and less stability in their lives than before they entered custody, returning to a family with little expertise in or support for caring for their mental illness. Treatment, on the other hand, yields dramatic improvements in functioning for most individuals with serious mental illness (USDHHS 1999). Despite a common misconception that mental illness is difficult to treat or untreatable (Boyle and Callahan 1995), most individuals are dramatically helped with proper medication, information, and support (USDHHS 1999). Research has found, for example, that 72–85% of individuals receiving treatment for mental illness have significant symptom reduction. These rates of improvement are comparable, and in some cases better, than the improvement rates for treatments of many other conditions, including surgery (National Advisory Mental Health Council 1993). Compared to treatment, incarceration relies on more expensive, more restrictive services for dealing with these youth than are actually required, with little therapeutic benefit.

Additionally, the deterrence effects of incarceration appear less applicable for individuals with serious mental illness (Pustilnik 2005). This is likely related to the cognitive deficits caused by untreated serious mental illness that include impaired judgment which makes it difficult to take future consequences into account when making decisions. Mentally ill adults in state prisons are almost 90% more likely to have eleven or more prior convictions than those without serious mental illness and mentally ill adults in federal prisons are almost 350% more likely than non-mentally ill inmates to have been convicted of eleven or more prior offenses (Ditton 1999).

Moreover, the US spends a great deal of money to incarcerate youth with serious mental illness. States spent $4.6 billion on juvenile justice facilities and programs in 2000 (National Center on Addiction and Substance Abuse 2004b), and the federal juvenile justice budget in 2004 was $349 million (Murray 2005). These costs do not include

law enforcement or court costs which are also considerable (National Center on Addiction and Substance Abuse 2004b). Table 1 shows the relative annual costs of treatment and incarceration of youth with serious mental illness.

In addition to the direct costs of incarceration, the US incurs substantial indirect costs in incarcerating youth with serious mental illness. This includes losses in productivity of incarcerated youth as their academic and vocational development is severely impacted both by incarceration and by lack of treatment. There are also losses in the productivity of family members who provide care for individuals with untreated serious mental illness. Additionally, individuals with serious mental illness are the largest group of individuals receiving Social Security Insurance (SSI) payments for disability, and account for *36% of all persons receiving benefits*. In 2000, SSI payments to persons with serious mental illness totaled more than $20 billion (Hogan 2002), and the majority of these individuals are not even receiving mental health treatment. Incarceration instead of treatment does little to reduce this economic burden on the US. As of yet there has not been research that has attempted to calculate the costs to the US economy of incarcerating individuals with serious mental illness (Pustilnik 2005).

Table 1 Costs of treatment for mental illness and incarceration

Item	Cost/savings
Annual cost of incarceration per youth	$87,961[a]
Annual cost of community based treatment per youth with multiple psychiatric diagnoses and a substance use disorder	−$13,067[b]
Potential savings per youth treated in lieu of incarceration	=$74,894
Number of youth incarcerated at census in 2006	92,854[c]
Estimated number of youth with mental illness	20,427[d]
Annual costs of incarceration for youth with mental illness	$1,796,779,300[e]
Savings of diverting 1/2 youth with mental illness to treatment	$764,929,860[f]

[a] While the annual costs of maintaining youth in custody vary by region and type of placement, this represents the average annual cost per youth (ages 12–18) for the 28 states that reported such data (American Correctional Association 2008)

[b] King et al. (2000). NOTE: Costs of community treatment vary widely depending on geographic region and types of services offered. These cost data are for the traditional community services provided in the Fort Bragg systems of care study for youth with a blend of mental health disorders (less than a quarter of which were serious mental illnesses). Treatment costs were calculated for youth aged 12 or older who had more than one psychiatric diagnosis *and* a substance use disorder (N = 24) and thus are from a non-representative sample. The authors compared the cost of providing services to these youth to the costs of treating youth with only one, non substance use psychiatric diagnosis ($11,038, N = 32) and youth with two non substance use psychiatric disorders ($11055, N = 109)

[c] The number of youth incarcerated at census, 2006, the most recent year for which data are available (Sickmund et al. 2008). The majority of youth in juvenile justice facilities are ages 13–17, 1,207 of these youth were age "12 or younger" and 13,115 were age "18 or older."

[d] Since estimates of the percent of incarcerated youth with mental illness range from 17 to 27%, this is 22% of 92,854

[e] Assuming an average annual cost of $87,961 per youth to incarcerate 20,427 youth with mental illness

[f] Assuming an average annual savings of $74,894 per youth treated in the community instead of incarcerated, diverting half (10,213.5) of the 20,427 incarcerated youth with mental illness would yield a net savings of more than $760 million

Beyond the financial burden of incarcerating youth with serious mental illness, the US incurs enormous social costs as well. Youth with serious mental illness come from all walks of life. Serious mental illness can strike the class president, or the editor of the school newspaper, just as it can anyone else. Before they became ill, these youth had the same hopes and dreams as other children, with talents and interests and abilities. Because of the nature of the deficits caused by these illnesses, their early onset, and a general lack of awareness of the nature of mental illness among the general public, people often mistakenly assume individuals with serious mental illness have always been functionally impaired (a mistake less often made about individuals with Alzheimer's disease because the impairments arise much later in life after many people had a chance to get to know them). If youth with serious mental illness were receiving proper diagnoses and treatment in a timely manner instead of incarceration, many could achieve successful employment, participate in civic activities, raise their children, volunteer in their communities, and otherwise contribute to society.

Factors Contributing to the Incarceration of Youth with Serious Mental Illness

The Under-Detection of Serious Mental Illness

Serious mental illness in children and adolescents often goes undetected. An evaluation of physicians' case loads found that 79% of children with mental health problems severe enough to warrant an evaluation did not receive one (Katoaka et al. 2002). Even in cases of severe impairment, a child's serious mental illness can go unrecognized, especially in its early stages. This may be due in part to the commonly held mistaken belief that serious mental illness is rare in children or adolescents. Also, the symptoms of serious mental illness can be difficult to detect and can sometimes emerge gradually, or fluctuate rapidly making them even more difficult to recognize. Serious mental illness can also be "masked" by addiction or by delinquent behavior, such as when a child's substance use or oppositional behavior is more easily identifiable than their mental

illness. Moreover, many criminal justice personnel and even many mental health professionals have little training in the detection of childhood mental illness (GAO 2003; IOM 2006). One study, for example, found almost 70% of mental health professionals mistakenly believed that serious mental illness is significantly caused by unhealthy parenting (Rubin et al. 1998).

Children's mental illness often first shows up in doctors' offices. In fact, the majority of all children's mental health treatment is actually delivered during visits with a pediatrician or primary care physician (RAND 2001). Yet many primary care physicians are reluctant to diagnose or treat mental illnesses and, without training in the interviewing and observational skills needed to detect the sometimes subtle clues to these illnesses, many fail to detect them in their patients (Wells et al. 1996). One study found general physicians missed more than half the conspicuous psychiatric conditions present in their patients (Goldberg and Huxley 1992). The other significant source of children's mental health care is school counselors (IOM 2006) who also have little training in detecting mental illness (USDHHS 1999). Even when school personnel recognize children as having difficulties, they typically evaluate to make *educational diagnoses* (e.g. learning disabled) to determine what educational services the child needs but which do not correspond to medical diagnoses (Laidler 2004). Thus, children's serious mental illness can go undetected for years, and instead be mistaken for a temporary phase, adjustment difficulties, or behavior problems.

Limitations in Treatment Availability and Quality

Once diagnosed, it is often difficult for children with serious mental illness to get treatment (GAO 2003; USDHHS 2000) and almost three quarters of children with clinically significant mental health needs do not receive treatment (RAND 2001). In fact, access to treatment for serious mental illness in the US has actually *decreased* in recent years (IOM 2006). Reductions in the duration of hospital stays, for example, have been more dramatic for children than they have for adults, down from 12.2 days in 1990 to just 4.5 days by 2000 (Case et al. 2007), but have not been adequately supplemented by community-based care. As one sociologist explained "the burden that had been the hospital's has been shifted to the family. Yet in most parts of the country, no system of services aids the family in meeting crises or in dealing with the patient and the problems of care effectively." (Mechanic 1999, p. 105).

Decreases in hospital treatment availability have actually been found to be associated with increases in the incarceration of individuals with serious mental illness, a trend sometimes called "transinstitutionalization." By comparing rates at which communities reduce the availability of inpatient treatment, it is possible to estimate the actual effect of reduced treatment on incarceration. One study of differences in rates of deinstitutionalization between states and corresponding increases in their adult prison populations found that state prison populations grew by 1 for every 2–7 individuals no longer receiving hospital care (Raphael 2000).

Another factor significantly affecting the availability of treatment for serious mental illness is health insurance. Most families depend on health insurance to pay for their child's health care (GAO 2003) yet health insurance pays for less treatment for mental disorders than for other health conditions (USDHHS 1999). Insurers have been reducing the amount of treatment covered for serious mental illnesses by using increasingly more stringent authorization criteria for their treatment than for general health care (Mechanic and McAlpine 1999) and the gap in authorization rates between mental health and general health care has widened. One study found requests for hospital admissions for obstetrics, medical admissions, and surgery were approved 93, 86, and 83% of the time, respectively, while requests for admissions for psychosis were approved only 54% of the time (the same rate as for all other types of mental health concerns, including mild disorders) (Wickizer and Lessler 1998). As a result, between 1988 and 1998, average physical health care insurance benefits declined 11.5%, but mental health insurance benefits dropped by 54.7% (GAO 2003). During this time mental health benefits dropped from 6.1% of total employer health care costs to 3.1% (The Hay Group 1998). Interestingly, although they have been found to significantly reduce the out-of-pocket costs for families (Barry and Busch 2007), less than half of all State mental health parity laws address children's mental health services (NMHA 2003).

Limitations in coverage for mental health treatment also mean that the types of services paid for by insurance are often not comprehensive enough for families to maintain a child with serious mental illness in the home (GAO 2003). Psychiatric rehabilitation, for example, is rarely paid for and thus rarely used. Moreover, a survey of county juvenile justice officials found that they believe private health insurance limitations have directly led to increases in the number of children with serious mental illness in the juvenile justice system (GAO 2003).

Compounding the problem of limited treatment availability are limitations in the quality of mental health care delivered. When children with serious mental illness do get treatment, it is sometimes not of sufficient quality to be optimally effective. Evaluations of the quality of mental health treatment reveal that its quality is often below the minimum standards of acceptable practice (IOM 2006). In their unsettling *Quality Chasm* series, the Institute of Medicine reported on the large gap that exists between

what is known to be effective care for mental health conditions and the treatment that is actually delivered (IOM 2001a, 2006, 2007). Research has shown, for example, that managed care companies deliver mental health care in accordance with standards of care only 48% of the time compared with 69% of the time for general health care (Druss et al. 2002) and rates of provider treatment guideline adherence for mental health care are below 50% on average, and in some cases as low as 20% (IOM 2006). In particular, mental health providers' expertise in detecting and treating children's serious mental illness has been found lacking (GAO 2003).

In addition to the quality problems in mental health treatment, there are serious deficiencies in the measurement or monitoring of mental health outcomes as well. Unlike in general health care, no standardized system for categorizing types of treatment delivered or their outcomes is widely used or collected for monitoring (IOM 2006). Without outcomes measurement, it is difficult to assess whether evidenced-based treatments are being delivered or ensure the effectiveness of services, making it difficult to align resources with those programs that have proven benefits.

Systems of Care and Juvenile Justice-Involved Youth with Serious Mental Illness

In response to a number of reports on the widespread deficiencies of children's mental health care (GAO 2003; New Freedom Commission on Mental Health 2003; USDHHS 1999), more than a hundred and sixty systems of care programs (SOCs) have been implemented under the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Mental Health Services. Entitled the Child Mental Health Initiative, this funding supports the creation of collaborations among mental health and other human service agencies with the aim of improving the coordination and availability of children's mental health services and supports (Cook and Kilmer 2011). Based on systems of care principles (Stroul and Friedman 1986), SOCs typically use a child and family team approach to develop and implement individualized care plans that build on children's strengths, and integrate services from mental health, education, child welfare, and other agencies to provide a broad range of community-based services and supports including assessment and diagnostic services, emergency and outpatient mental health treatment, educational services and supports, case management, and intensive home-based services (Douglass 2006).

Many SOCs have partnerships with local juvenile justice systems and/or targeted youth at risk for juvenile justice involvement for services. A number of these programs have had demonstrated success at reducing the juvenile justice involvement of the youth they serve (USDHHS 1999). For example, a national evaluation of programs found evidence of reduced behavioral and emotional problems and reduced contacts with law enforcement (Holden et al. 2001) and other studies have found reduced rates of delinquency (Clark et al. 1996; Evans et al. 1996).

One program with a record of reducing the juvenile justice involvement of youth with mental health concerns is the Wraparound Milwaukee program which uses a strengths-based approach to provide individually tailored services to youth at risk for delinquency (Kamradt 2001). The program uses multidisciplinary treatment teams, family involvement, and individualized care plans. Key elements of the program are a Mobile Urgent Treatment Team, the use of blended funding from a number of sources, and the ability to provide a diverse array of services to youth and their families. The Mobile Urgent Treatment Team provides 24-hour crisis intervention services to youth and families and intervenes in family crisis situations that might otherwise result in removal of youth from the home which has eliminated the need for almost all inpatient psychiatric care (Kamradt 2001). By using blended funding from a variety of sources including child welfare, juvenile justice, Medicaid, and SSI, that is then pooled and decategorized, the program is able to fund a broader array of services than would be possible otherwise. As a result, the program has been able to expand its array of services offered from 20 to 60 including such supports as mentoring, job development and placement, crisis home care, tutoring, and respite care.

Wraparound Milwaukee has achieved some impressive outcomes for program participants. Recidivism rates 1 year after the program, for example, are 50% lower than prior to program entry (Kamradt 2001) and out-of-home placements have been reduced by 90% (Cohen and Rae 2002). Moreover, the program saved $18,504 per youth served over previous models of care (Kamradt 2001).

In addition to those under the Child Mental Health Initiative, there are a number of programs that have been used to address the mental health needs of incarcerated youth which utilize systems of care elements. The 2004 Mentally Ill Offender Treatment and Crime Reduction Act provided funding through the US Department of Justice to create the Justice and Mental Health Collaboration Program (JMHCP) which helps foster collaborations between justice systems and mental health to reduce the incarceration of individuals with serious mental illness. JMHCP funds can be used to develop mental health courts, train justice, law enforcement, and mental health personnel, provide treatment for individuals with serious mental illness, create receiving centers, and provide assessments of individuals for serious mental illness. Programs are

required to have juvenile justice and mental health agency collaboration to receive funding and about 25 communities a year receive either planning or implementation grants (Consensus Project). Most programs are for adults, though some serve juvenile populations and future projects could be designed for juvenile justice involved youth with serious mental illness. Two projects for juveniles that were recently funded in 2009 (most recent data available) that use integrative services and address mental illness and/or co-occurring disorders are administered through the Mental Health Center for Boulder and Broomfield County and the Kentucky Administrative of the Court (Consensus Project). More specifically, Colorado's Juvenile Integrated Treatment Court program incorporates mental health treatment, substance abuse treatment, supervision and judicial oversight, and intensive family services for youth with co-occurring serious mental illness and substance abuse disorders who are at risk for further involvement in the juvenile justice system. Similarly, the Jefferson County Drug Court in Kentucky seeks to reduce fragmentation, disruption, and duplication of the system of care services for justice-involved youth with serious mental illness and/or co-occurring disorders (Consensus Project).

The MacArthur Foundation's Models for Change program was recently developed to create systems change in juvenile justice, including reducing the inappropriate incarceration of youth with serious mental illness. Based on a number of systems of care principles including the need for individually-tailored, culturally-relevant services, Models for Change programs promote interagency collaborations to deliver services that are strengths based and centered in the community. State-wide systems change efforts are being supported in Illinois, Pennsylvania, Louisiana, and Washington and targeted systems change projects aimed specifically at reducing the justice involvement of youth with serious mental illness are under way in Colorado, Connecticut, Ohio, and Texas (MacArthur Foundation 2006). Examples of program projects include Pennsylvania's juvenile justice diversion programs and youth crisis intervention training for police officers and the Illinois Models for Change program's recently completed evaluation of their juvenile justice system's mental health services which found a number of deficiencies including a failure to use validated mental health screening instruments, evidenced-based treatment, or a continuum of care, and a critical shortage of mental health professionals, little of staff in serious mental illness, and system-wide inattention to engaging families in the treatment process (Illinois Models for Change 2010).

The Robert Wood Johnson Foundation's Reclaiming Futures Initiative began in 2001 and was designed to increase cooperation and coordination between juvenile justice and social services and decrease gaps in services for families (Roman et al. 2010). The Initiative funds programs that use comprehensive case management to coordinate individually tailored services for juvenile offenders with substance abuse histories using multiple systems of care. Programs are directed by judges and use court/community collaborations to improve treatment quality. Programs typically serve youth transitioning from juvenile justice back to the community and system partners include health and mental health providers, substance abuse treatment, and educational, vocational, and recreational service providers. Early systems assessments have shown improvement in access to services, information sharing, and collaboration among agencies (Chassin 2008). A national evaluation of the systems-level outcomes of 10 programs was just released which found evidence of improved treatment delivery, improved information sharing and cooperation among service providers and improved involvement of families in treatment (Roman et al. 2010).

One particularly promising model for reducing the incarceration of youth with serious mental illness is the juvenile mental health court. Mental health courts are a type of diversion program. Diversion programs work by offering alternatives to incarceration for select individuals (Lamberti et al. 2004). Mental health courts were originally developed for use in adult corrections as a way to reduce the unnecessary incarceration of adults with serious mental illness and have grown exponentially from 2 programs in 1997 to about 90 in 2005 (Redlich et al. 2006). Modeled after drug courts, mental health courts utilize a separate docket and judge, and often separate prosecution and defense as well. They use a non-adversarial, collaborative approach and shared decision-making between mental health and criminal justice professionals to direct individuals with serious mental illness into treatment in lieu of incarceration on the condition that they comply with a program of care and adhere to mental health treatment. Typically, individuals who successfully complete a specified duration of treatment are then eligible to have their conviction expunged (McNeil and Binder 2007). Initial programs encountered problems accessing community-based mental health services for these individuals, but found that a court order improved access to care considerably.

Primarily intended to serve youth with serious mental illness, some juvenile mental health courts also serve youth with brain injury, autism, or mental retardation. Youth with less severe mental disorders such as oppositional defiant disorder or ADHD and youth who have committed violent crimes or sex offenses or who have a history of gang involvement are typically ineligible for these programs. Participants are required to comply with multi-systemic treatment which can include individual and family therapy, psychiatric medication, and substance abuse treatment as needed.

While there are well over 100 adult mental health courts nationwide, as of 2006 there were only eleven juvenile mental health courts in the US (Cocozza and Shufelt 2006). Despite their widespread use, little research has been conducted to assess mental health courts' effectiveness (McNeil and Binder 2007). One of the few studies conducted was an evaluation of San Francisco's Behavioral Health Court for adults that found participation in a mental health court program was associated with a longer time without new criminal charges, including for violent offences. This reduction in recidivism remained significant even after individuals were no longer under mental health court supervision (McNeil and Binder 2007). No collective evaluations of juvenile mental health courts have been conducted, however several programs report significant reductions in incarceration. Indeed, some courts are funded solely by existing juvenile court resources and the costs saved by the reduced out of home placements (Cocozza and Shufelt 2006). Continued careful monitoring of juvenile mental health court outcomes, including long-term outcomes, will be needed to determine the overall effectiveness of these programs. If their effectiveness is demonstrated, they could then be expanded for use in reducing the incarceration of non-violent youth with mental disorders other than serious mental illness as well.

Engaging Juvenile Justice in Systems of Care

Despite the fact that juvenile justice involved youth are identified as a priority population of the Child Mental Health Initiative, the majority of SOCs have yet to successfully partner with juvenile justice or target justice involved youth in their service delivery models (National Center for Mental Health and Juvenile Justice 2005). In recognition of this, the Office of Juvenile Justice and Delinquency Programming (OJJDP) began collaborating with the Center for Mental Health Services to try to increase the involvement of juvenile justice systems in SOCs. Using an interagency agreement, OJJDP has funded technical assistance for SOCs in how to include juvenile justice-involved youth with mental health needs in their programs (National Center for Mental Health and Juvenile Justice 2005; Cocozza and Skowyra 2000). Data on the effectiveness of these efforts to increase SOCs engagement with juvenile justice systems are not yet available.

That SOCs have yet to fully engage with juvenile justice systems may be related to a number of challenges associated with integrating the two systems. These include differences between the culture and mission of juvenile justice and mental health, institutional inertia, and the stigma associated both with delinquency and mental illness.

The culture of juvenile justice differs from that of mental health in many ways which can create challenges to implementing collaborations. For example, the concept of punishment may be hard for some to reconcile with the use of a strengths based approach and, without training, juvenile justice personnel may mistakenly assume mental illness always looks bizarre, like in many media portrayals, and mistake symptoms they observe in incarcerated youth for volitional oppositional behavior. Also, the relationship of justice personnel to their "clients" is more adversarial than it is for many other systems of care partners (Weinstein 1997), and justice personnel may not have a model for putting the needs of their "clients" or clients' families first. These differing philosophical approaches may strain the process of consensus building among system partners attempting to develop shared stakeholder understandings about program priorities, allocation of resources, or even target outcomes.

Another challenge to successful collaborations between juvenile justice and systems of care is differences in their missions. More so than mental health, the mission of juvenile justice must balance the needs of the individual with those of the community. In addition to rehabilitating offenders, juvenile justice has a mandate to protect public safety (Kamradt 2001). This adds a significant element of risk aversion to the system (which can be seen in the practice of isolating detainees who may be suicidal). Thus, many justice personnel might consider it safer to detain youth than divert them to treatment, or reconnect them with their social supports (who might be considered bad influences). This can create a number of barriers to collaborating with families of juvenile justice involved youth who often view the system with a great deal of suspicion. Moreover, juvenile justice systems often act parens patriae (as the parent) on behalf of a child (Pisciotta 1982), which can create an adversarial dynamic with families.

In addition to differences in culture and mission, there are differences in the degree of institutional inertia between the two systems as well. Unlike public mental health, which is often fairly fragmented with individual agencies and programs relying on grants or donations for funding, state juvenile justice systems are a regular item of states' budget. This regular funding can create a sense of stability, a well-established hierarchy, and long-standing systems and procedures which are useful in long-range planning. It can also make system change more difficult and cause roadblocks to collaboration with mental health agencies, which typically have less "institutionalization" to work around. This inertia could hinder efforts to increase information sharing, especially when computer systems lack interoperability. It could also pose challenges in establishing roles and responsibilities for collaboration partners (Kamradt 2001) because of differing levels of administrative oversight that exist between the two systems. It could also be problematic when developing mechanisms for

blending streams of funding with mental health. These obstacles might even require changes in local or state policy to be resolved.

Negative attitudes toward both mental illness and juvenile delinquency are another challenge to promoting collaborations between SOCs and juvenile justice systems. Stigma can make it difficult to engage people in constructive collaborations to divert youth with mental illness from incarceration to treatment. Mental illness stigma is even a problem within mental health. Many mental health providers still often hold negative attitudes toward persons with serious mental illness, which can significantly compromise the quality of mental health care (IOM 2006). It turns out that many mental health professionals actually have a preference *not* to work with individuals with serious mental illness (Mechanic 1999). These attitudes can temper enthusiasm for working with youth with serious mental illness making it more difficult to engage partners in collaborations to target these individuals.

To create more successful collaborations between SOCs and juvenile justice, elements of existing programs could be used as well as other strategies to improve program effectiveness. These include establishing meaningful systems collaborations that actively engage system partners, creating clearly defined roles and responsibilities for system partners, developing a system for effectively sharing information with all stakeholders, including a mobile crisis intervention team to address youth and family crises, establishing a system for blending multiple sources of funding, and providing training that promotes understanding of the different missions, cultures, and terminologies used by system partners and increases awareness of the nature of, and treatments for serious mental illness.

One of the first tasks in developing a successful collaboration between juvenile justice and mental health is to obtain buy-in from all system partners. A well-defined mission should be clearly articulated to partnering agencies along with any funding, workload, or other incentives that may be relevant. Involving multiple partners from juvenile justice, such as judges, district attorneys, probation offers, etc., can convey a strong commitment to the success of the collaboration. Increasing public awareness of the problem of incarcerated youth with serious mental illness and the associated costs can also influence local policy makers to support collaborations between mental health and juvenile justice.

Another feature of successful collaborations is to ensure that all partners' roles and responsibilities are well defined. It must be clear who is responsible for youth with serious mental illness who are merely at-risk for juvenile justice involvement, who is responsible for youth in the pre-adjudication phase of juvenile justice, who is responsible for post-release planning, how probation personnel will collaborate with mental health services, etc. Distributing clear system and agency organization charts and phone lists could ensure system partners understand these roles clearly.

Another strategy for establishing effective collaborations between juvenile justice and mental health is to create a system for sharing information with all stakeholders. This includes using common databases, which may require ensuring computer interoperability. Funding for investments in compatible operating systems may be available through public or private implementation grants or through state or local investments in juvenile justice or mental health infrastructure.

One necessary feature of systems of care serving the needs of youth with mental illness who are involved with juvenile justice or at risk of involvement is a mobile crisis team. Mobile crisis teams can provide 24-hour availability for youth and families in crisis and work to keep youth in the home if possible. Having a documented safety plan on file for each youth that can be implemented in a crisis can create confidence among system stakeholders that there is a safety net in place. Not only does a mobile crisis team help address the juvenile justice system's responsibility for public safety, but it can also significantly reduce out-of-home placements.

Given the many differences between mental health and juvenile justice in culture, terminologies, responsibilities, and training, cross training of mental health and juvenile justice personnel would be critical to preparing them to work collaboratively. Without a shared mission and terminology, system partners might not appreciate how their work, and the work of other system partners, contributes to the overall success of the system. Further, by training juvenile justice and mental health professionals together using a collaborative learning approach, differences in terminologies could be resolved and a sense of teamwork created.

A curriculum for such a cross training program should include a review of the definitions of common juvenile justice and mental health terminology and procedures used. Training should also include basic information about the nature of serious mental illnesses including their treatability, high rates of under treatment, and how their untreated symptoms often look like volitional oppositional behavior. It would also be important to provide information on the value of, and strategies for engaging with families as collaborative partners in treatment, including its association with reduced recidivism.

Finally, any system of collaboration between juvenile justice and mental health needs to conduct careful, ongoing program evaluation including regular outcomes measurement. To begin to remedy the dearth of information on the effectiveness of providing systems of care for justice-involved youth, programs should establish a system for

collecting relevant data that relies on standardized definitions of mental illness and standardized assessment procedures including an accurate DSM-IV diagnosis established by a highly qualified diagnostician. Program evaluation should include monitoring adherence to established treatment guidelines and outcomes measurement should include both systems-level outcomes (such as information sharing, access to and continuity of care, engagement of families, cost-effectiveness, and rates of inappropriate incarcerations), and individual-level outcomes including symptom reduction and recidivism. Eventually, these data should be made available on a website orin a publication to aid other systems of care in program planning.

A significant advantage of developing collaborations between juvenile justice and mental health is the potential to capture savings from the use of community-based rather than facility-based care. Creating and delivering systems of care is not inexpensive; in 1999, the Wraparound Milwaukee program cost $39,600 a year per youth served. Yet because this represented a savings of $18,500 a year per youth over the cost of incarceration, which the program was able to capture, it represented a net gain to the program (Kamradt 2001). Treating youth in the community instead of in detention facilities also allows for a substantial portion of care to be paid for by Medicaid or private health insurers, yielding additional offsets to the cost of providing services. By capturing net savings, pooling resources from system partners, and decategorizing monies in order to be used for any service needed, systems of care collaborations with juvenile justice could potentially experience increases in resources which could be used to fund expansions or improvements in services for all youth served, including those without serious mental illness.

It should be noted that a large-scale, 3-year study of the cost-effectiveness of a systems of care program funded by the US Department of Defense at Fort Bragg, North Carolina compared a continuum of care demonstration project to traditional CHAMPUS mental health services for youth who were military dependents and found the continuum of care costs to be higher than traditional CHAMPUS services without significant differences in improvements in behavioral and emotional functioning (Bickman 1996). The higher costs of the demonstration program ($2,592 per youth treated, compared to $1,634 per youth receiving traditional services) were attributed to a higher volume of services, longer time in treatment per youth, and higher per unit costs of services (Bickman 1996). Although improvements in access to services, continuity of care, and client satisfaction were observed in the demonstration project, the failure to produce improved outcomes over traditional services has sparked on-going questions about the cost-effectiveness of systems of care (USDHHS 2000).

These questions, however, would seem less relevant to serving juvenile justice involved youth with serious mental illness using community-based systems of care. Because of the high average annual cost of incarceration per youth ($87,961, American Correctional Association 2008), and the savings from Medicaid and private insurer payments for services, community-based systems of care for non-violent youth with serious mental illness could prove to be dramatically less expensive than the cost of incarceration. Moreover, if services can also reduce recidivism, the long-term reductions in juvenile justice costs could be substantial.

The other half of the cost-effectiveness equation, however, is equally important to consider, particularly given the significant quality of care problems that have been identified in US mental health services (IOM 2006). Any systems of care serving justice involved youth with serious mental illness must take steps to improve the actual quality of care delivered. Even if costs were reduced, any collaboration with juvenile justice that did not produce significant improvements in youths' symptoms and functioning than over usual services could not be considered effective. Thus on-going training in best practices and program evaluation that includes careful monitoring of treatment fidelity would be important to hold service providers' accountable and ensure quality services are provided.

Conclusions

The problem of the disproportionate involvement of youth with serious mental illness in the juvenile justice system represents one of the most serious challenges to be addressed in US mental health care. While a number of promising programs and practices have emerged for reducing the incarceration of youth with serious mental illness, systems of care hold enormous promise for expanding the availability of these programs to youth at risk for juvenile justice involvement. Successful programs could become a model for reducing the incarceration of and improving the outcomes for youth with many other mental health concerns as well.

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