THINK **BIGGER** DO **GOOD**
POLICY SERIES

Policy and Practice Innovations to Improve Prescribing of Psychoactive Medications for Children

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Winter 2020

Dear Reader,

Now is the time to solve the growing behavioral health needs in our country by advancing public policies that transform the delivery of mental health and substance use disorder services and address outdated funding mechanisms.

This paper is part of Think Bigger Do Good, a series of papers launched in 2017 through the support and leadership of the Thomas Scattergood Behavioral Health Foundation and Peg's Foundation. While the paper topics continue to evolve, our goal to develop a policy agenda to improve health outcomes for all remains constant.

In partnership with national experts in behavioral health, including our editors, Howard Goldman and Constance Gartner, we identified seven critical topics for this third series of papers. Each paper identifies the problem and provides clear, actionable solutions.

We hope you join us in advocating for stronger behavioral health policies by sharing this paper with your programmatic partners, local, state, and federal decision makers, advocacy organizations, and voters. To learn more about Think Bigger Do Good and to access the other papers in the series, visit **www.thinkbiggerdogood.org**

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Sincerely,

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We would like to acknowledge the following individuals for their participation in the meeting that led to the conceptualization of the paper series.

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Psychiatric Services

We are grateful for the partnership that allows this paper and others to appear in Psychiatric Services, a peer-reviewed monthly journal of the American Psychiatric Association. Content can be viewed at **ps.psychiatryonline.org**.

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1 Introduction

Psychoactive medications are the most expensive and fastest-growing class of pharmaceutical agents for children. The four drugs prescribed to children with the highest Medicaid cost are all psychoactive medications (1, 2). Stimulants alone account for 20.6% of all pediatric drug expenditures. At the same time, psychoactive medications have extensive and expensive side effects and frequently have minimal monitoring. For example, although metabolic monitoring through laboratory assessments is recommended for all children and adolescents taking antipsychotics, less than one-fifth of children receive such monitoring (1). Studies of prescribing practices and their costs, both economically and medically, have raised concerns among clinicians, patient advocates, and agencies with accountability for insuring children and adolescents that psychoactive medications are often used inappropriately.

We briefly review prescribing for three classes of psychoactive drugs—stimulants, antidepressants, and antipsychotics—and then discuss current system approaches to improving appropriateness of prescribing.

Here, we briefly review prescribing for three classes of psychoactive drugs—stimulants, antidepressants, and antipsychotics—and then discuss current system approaches to improving appropriateness of prescribing. System approaches include monitoring guideline concordance or lack thereof, and new but untested pharmaceutical policies and implementation of prescribing strategies to improve appropriateness. Inappropriate prescribing is difficult to define except on a case-by-case basis. Therefore, we refer to the broader category of potentially inappropriate prescribing as "questionable prescribing practices." Both refer to the prescription of drugs in patterns that appear incongruous with clinically accepted, evidence-based guidelines. (For convenience, we sometimes use the word "children" to refer to children and adolescents.)

2 Stimulant Prescribing

One of the most challenging areas of psychotropic prescribing involves children and adolescents diagnosed as having attention-deficit hyperactivity disorder (ADHD). Although the American Academy of Pediatrics (AAP) continues to update clinical guidelines for the treatment of ADHD (3), there remains debate among providers about the accuracy of diagnosis, because many disruptive or impulsive behaviors attributed to ADHD can overlap with normative behavior among young children or may be a manifestation of trauma history or other psychosocial challenges.

Nevertheless, overall diagnosis rates for ADHD are increasing, and prescribing has followed in tow. By 2011, one in nine parents of youths ages 4–17 reported a history of ADHD diagnosis among their children, up more than 40% from the prior decade (4). ADHD stimulant use has similarly risen, reaching one in 15 of all youths, up 25% during the same period (4). One in three ADHD diagnoses occurs among preschool children, and diagnoses have climbed among younger children since the AAP issued new guidelines in 2011 (4, 5). At the same time, diagnosis and treatment have not been consistent across all groups of children. In particular, children in Medicaid and African-American and Latino children lag behind white children in diagnosis rates and access to many kinds of behavioral treatments (6). Meanwhile, as diagnoses have climbed for older youths, so have concerns about overdiagnosis and increasing trends in illegal diversion of medication from youths with prescribed stimulants to their fellow high school and college students (7).

The result has been a highly variable treatment environment in which many children may be at risk of overdiagnosis and treatment; however, we are also mindful that many children continue to be undertreated. In fact, half of the estimated 7.7 million U.S. children with a treatable mental disorder do not obtain necessary

treatment (8). Multiple challenges exist in connecting children to services, including substantial differences in access to treatment for vulnerable groups. Insurance coverage, race-ethnicity, income, gender, and geography all affect children and families' access to mental health services (9), and reactions to overtreatment, as evidenced here, should be anchored in this acknowledgment.

The response among the pediatric community to questionable prescribing, both over- and undertreatment, has led to calls to standardize care and to an emphasis on the value of shared decision making between providers and caregivers. The AAP guidelines seek to clarify the treatment environment for children and adolescents with ADHD (3). These guidelines endorse behavior therapy as the primary line of therapy for preschool children, and medications and behavior therapy are endorsed, with clinical equipoise, for school-age children. The guidelines emphasize medication treatment as a primary indication for older children.

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Recent research has lent support to the criminogenic risk perspective by finding that criminogenic risk factors mediate the risk of recidivism among people with serious mental illness. A growing body of research suggests that justice-involved individuals with serious mental illness may manifest the same criminogenic risk factors as those in the criminal justice system without serious mental illness but at greater rates (14, 25–27). Taken together, research on co-occurring substance use and the criminogenic risk perspective illustrate another layer of complexity in the treatment needs of justice-involved people with serious mental illness. However, criminogenic needs are not a focus of treatment in most existing mental health services, which is a situation that must be corrected.

3 Antipsychotic Prescribing

The story is different for antipsychotics. The largest part of antipsychotic pediatric use is off-label use for nonpsychotic disorders, primarily for ADHD and other externalizing symptoms (10–12). In a large study by the Mental Health Research Network, a consortium of 13 healthcare delivery systems across the United States, 66% of boys ages 6–11 who were prescribed an antipsychotic medication did not have a psychotic disorder or other indication approved by the U.S. Food and Drug Administration (FDA). In the American Psychiatric Association's Choosing Wisely recommendations, the fifth recommendation is, "Don't routinely prescribe an antipsychotic medication to treat behavioral and emotional symptoms of childhood mental disorders in the absence of approved or evidence supported indications" (13).

Another concerning trend is that antipsychotics are disproportionately given to children in foster care, most commonly for disruptive behaviors (14). Giving antipsychotics to foster care children not only increases risks of side effects but also exposes the developing brain to medications for which there have been no long-term studies of outcomes. Antipsychotics are also associated with increased risk of death among children (15)..

The sequential intercept model proposes five points of contact in the criminal justice system at which a person with mental illness can be "intercepted." These points include the following:

INTERCEPT 1
interactions with law enforcement and the crisis response system

INTERCEPT 2
initial detention and initial hearings

INTERCEPT 3
jail and courts after initial hearings

INTERCEPT 4
reentry from jail, prison, or a forensic hospital

INTERCEPT 5
community corrections and community support

Originally in this model, the community mental health system was described as the "ultimate intercept," where people with serious mental illness at risk of justice involvement or who may have other conditions putting them at risk of such involvement, such as trauma, social disadvantages, or substance dependence, could be identified and an integrated treatment or intervention plan could be enacted or coordinated with the appropriate service system (55). Thus the ultimate intercept refers to a treatment and service system that is responsive to the diverse, and at times intricately intertwined, needs of people with severe and persistent mental illnesses — ideally, before they ever become involved in the criminal justice system.

Recently Policy Research Associates, which operates the Substance Abuse and Mental Health Services Administration's (SAMHSA's) GAINS Center, introduced "intercept 0" within the sequential intercept model and defined it as encompassing "the early intervention points for people with mental and substance use disorders before they are placed under arrest by law enforcement" (58). Whereas intercept 1 represents a collaborative effort between law enforcement and the behavioral health community to avoid arrest when possible, the concept of intercept 0 recognizes the need for a full crisis response continuum and expands the partnership to broader mental health and law enforcement collaborations (58, 59). The discussion around intercept 0 has effectively mobilized advocacy to expand crisis services, as evidenced by the inclusion in the fiscal year 2020 SAMHSA budget passed by the U.S. House of Representatives of a 5% set-aside in block grant funds to the states to enhance crisis services (60).

Although we fully endorse intercept 0, we believe that it is best conceptualized as a renaming, and perhaps reframing, of what was called the ultimate intercept in the original description of the model. Although crisis services are an important piece of a comprehensive mental health system, they are only one element of the ultimate intercept as originally conceptualized, which also identified the need for evidence-based interventions, including community support services, medications, and vocational and housing services (55). The vision that we are presenting here is for an integrated behavioral health system to serve as the ultimate intercept, as originally envisioned, which we now call intercept 0, to include accessible, effective, and criminologically informed services for people with serious mental illness to help them avoid entering the justice system altogether (55, 57, 61).

4 The Behavioral Health System as Intercept 0

For the integrated community behavioral health system to operate as an effective intercept 0, the system must both widen and deepen its array of services. To do so, it will need to master integration at multiple levels. Mental health, substance use, primary medical, criminogenic, and social needs all must be addressed in a coordinated and timely manner to achieve the desired goals of improved health, prevention of institutionalization (hospitalization and incarceration), and overall recovery.

Incorporating multiple layers of integration into the operation of any one system is challenging, but this type of integration is an essential effort aimed at reducing the overrepresentation of people with serious mental illness in the justice system, and we believe it can be done. Because of its focus on prevention, early intervention, and recovery, the community behavioral health system is well poised to lead coordinated efforts to address the multiple needs of people with serious mental illness who are in the justice system. An integrated behavioral health system can focus on the provision of trauma-informed care to reduce the risk of traumatization as people with serious mental illness become involved (or reinvolved) with the justice system. Prevention efforts around substance use and efforts to intervene earlier in the course of serious mental illness have proven to be effective models of lessening the trajectory and harmful impact of illness (62).

Furthermore, integrated approaches have worked in the past. Historically, community mental health services, substance use services, and overall health care were provided in largely separate systems. To better address the needs of individuals with serious mental illness, there have been considerable efforts to integrate mental health treatment with treatment for co-occurring substance use disorders through integrated dual-diagnosis treatment (63). More recently, there have been major efforts to further integrate behavioral health care with overall primary health care (64, 65), including the current eight-state initiative establishing certified community behavioral health clinics (66).

There is an increasing awareness of the need to address criminogenic needs of people with serious mental illness to prevent justice involvement. Interventions based in cognitive-behavioral therapy that engage a social learning approach to target specific criminogenic needs (e.g., antisocial behavior or attitudes) have been effective in reducing criminal offending (30), and evidence is emerging that these approaches can be effective for justice-involved people with serious mental illness (67). Osher and colleagues (51) developed a shared framework to integrate approaches to address multiple needs that builds on efforts to classify and treat mental illness and substance use disorders (e.g., the four-quadrant model) by adding the dimension of criminogenic risk. In this framework, individuals may be assessed on the basis of high or low levels of criminogenic need and clinical mental health or substance use treatment needs, and if a broader array of clinical services is available, appropriate service engagement can be arranged to meet these individual needs. There is also recent acknowledgment of the importance of earlier intervention in the trajectory of justice involvement by recognizing both individual factors and social conditions that contribute to criminality and justice involvement (33, 68).

For the integrated community behavioral health system to operate as an effective intercept 0, the system must both widen and deepen its array of services.

The community behavioral health system is also well positioned to address the structural risk factors that drive justice involvement of people with serious mental illness (e.g., poverty, homelessness, and unemployment), either directly or through the coordination of services. There is evidence that suggests that addressing these social determinants of health within the purview of the community behavioral health system can lead to successful outcomes. For instance, supported employment and Housing First initiatives have been shown to effectively increase treatment engagement among people with serious mental illness and also help them gain independent housing or competitive employment and reduce criminal reoffending (69–71).

Our vision is also consistent with current directions and priorities at the federal level. In 2017, the Interdepartmental Serious Mental Illness Coordinating Committee, a partnership among U.S. federal agencies to enhance coordination to improve service access and delivery of care for people with serious mental illness, developed priorities for increasing community partner engagement to address social determinants of health, improve service coordination, and create effective jail diversion opportunities (72).

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5 Implications for Policy and Practice

Strange as it may seem, having the behavioral health system take the lead in addressing the overrepresentation problem is a significant change in many communities. Justice system leaders assert that they have been placed in the position of taking on the responsibility of justice-involved people with serious mental illness (73). Many of the newer solutions to the problems confronting this population have been led by sheriffs, judges, and other criminal justice system leaders (74).

Although mental and substance use disorders and criminogenic needs all need to be addressed, efforts to make the behavioral health system the focal point for the provision of this care will likely encounter resistance. The community behavioral health system may not want to take on this challenge, the criminal justice system may not want to give up control, and social service agencies may not be prepared for the degree of collaboration needed. Within community mental health systems, justice-involved individuals with serious mental illness are perceived to be qualitatively different from other individuals with serious mental illness. As with earlier resistance to integrate care for co-occurring substance use disorders with care for mental illness, community behavioral health system stakeholders should recognize that justice involvement in the population served is common and not a rare exception. Studies have reported a range from 25% to as high as 71% of people with serious mental illness in community samples who have a history of justice involvement (75–78). Community behavioral health agencies and social service agencies will need to make a commitment to integrating approaches and coordinating efforts to reduce the siloed organization of services. They must also be prepared to accept that justice-involved individuals should not be additionally stigmatized but should be welcomed as an appropriate, and substantial, population to be served (79). Research is needed to improve models of care that can deliver treatments as seamlessly as possible to meet the multiple needs of clients.

Funders of justice and mental health collaborative initiatives may need to rethink funding structures and priorities and ensure that treatment interventions and supports enhance an integrated behavioral health system rather than take place in the justice system. In most parts of the United States, the stark reality is that the publicly funded service system is not adequately supported to take on its daunting tasks. Current efforts to integrate mental health and substance use services within overall health care may run counter to our call for developing specialized service delivery approaches to meet complex medical and social needs of individuals with serious mental illness and justice involvement. We need innovative approaches to funding the behavioral health system that expand service capacity—initiatives such as the certified community behavioral health clinics currently being piloted. These resources may expand further under the proposed Excellence in Community Mental Health and Addiction Treatment Expansion Act.

We also need innovation and adaptability among state and mental health authority leadership. Arizona, for example, has essentially merged its state Medicaid and behavioral health agencies into a single entity and has worked with managed care plans to develop specialized programs for persons with serious mental illness.

We also need innovation and adaptability among state and mental health authority leadership. Arizona, for example, has essentially merged its state Medicaid and behavioral health agencies into a single entity and has worked with managed care plans to develop specialized programs for persons with serious mental illness (80, 81). Ohio may serve as another example of state leadership that has recognized the need for such vision. The state recently created RecoveryOhio, a plan to improve prevention, treatment, and recovery support efforts. Initially focused on the opioid epidemic, RecoveryOhio quickly expanded to include a broader focus on the mental health and substance use system and now emphasizes the need to address the problem of people with serious mental illness in the justice system. Directors of key state agencies work together with the RecoveryOhio director, who reports directly to the governor. Other states may find a model such as this conducive to effecting change to address a problem that they all face.

National initiatives have emerged to improve system responses to justice-involved people with serious mental illness. The Justice Reinvestment Initiatives supported by the Bureau of Justice Assistance, with technical assistance from the Council of State Governments, and the Safety and Justice Challenge, supported by the MacArthur Foundation, are significant efforts to address unnecessary incarceration. The National Partnership for Pre-Trial Justice, supported by Arnold Ventures, has multiple national partners considering best practices in pretrial detention. And the National Stepping Up Initiative provides a framework for local community stakeholders to collaborate across systems to address the problem.

Ultimately, critics and scholars of the problem of the overrepresentation of people with serious mental illness in the criminal justice system need to change the narrative. Instead of blaming overrepresentation on a failed mental health system or lack of inpatient beds, the complexity of the problem and the need for complex solutions must be acknowledged. In many ways, the community behavioral health system is doing the best it can with the resources it has. New initiatives such as the ones described here require increases in funding for community mental health and substance use services; the competency of these systems in integrating treatment of mental illness, co-occurring substance use, general medical conditions, and criminogenic factors must be enhanced, and new integrated treatments need to be developed and studied. In addition, social determinants of health, such as stable housing, employment, and education, need to be integrated, or addressed in coordination, with treatment. Larger social policies that have driven mass incarceration also need to be acknowledged as disproportionately affecting people with serious mental illness but with a recognition that the behavioral health system cannot fix these issues on its own.

Although an array of stakeholders across the behavioral health, justice, and social services systems can become strong advocates for policy change, they (we) must be joined by the public and policy makers alike. We know that broad advocacy works. Recent successes in states that have expanded Medicaid and the passage of the parity laws show that social policy can improve access to critically needed mental health services. The advocacy we need now could include a push for policy reforms and restructured financing models to increase access to integrated behavioral health services.

6 Conclusion

The overrepresentation of people with serious mental illness in the justice system is a complex issue that requires systematic change and collaborative problem solving. We believe that an integrated community-based behavioral health system (i.e., intercept 0) is ideally situated to address the complex needs of this population and prevent criminal justice involvement. If adequately supported, this system could provide accessible, effective, and criminologically informed services to address the clinical, criminogenic, and social support services needs of people with serious mental illness who are involved in the justice system. The goal is to identify people who would be best served in community settings and expand the continuum of services available within the behavioral health system to meet people where they live, work, and receive services. The role of the justice system will move toward collaboration and away from the need to build a parallel treatment system to address the treatment needs of justice-involved people with serious mental illness. We believe that this approach can improve individual and systems outcomes by preventing justice involvement, reducing service redundancy, and improving health and quality of life of people who are living in the community. All of society needs to take on the larger social issues that disproportionately affect people with serious mental illness.

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