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Report to Congressional Committees

February 2018

FEDERAL PRISONS

Information on Inmates with Serious Mental Illness and Strategies to Reduce Recidivism

GAO-18-182

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GAO Highlights

Highlights of GAO-18-182, a report to congressional committees

Why GAO Did This Study

In 2016, SAMHSA estimated that about 10.4 million adults in the United States suffered from a serious mental illness, which generally includes conditions such as schizophrenia and bipolar disorder. As of May 27, 2017, BOP was responsible for overseeing 187,910 inmates and 7,831 of these inmates were considered to have a serious mental illness. Research has shown that inmates with serious mental illness are more likely to recidivate than those without.

The 21st Century Cures Act directed GAO to report on the prevalence of crimes committed by persons with serious mental illness and the costs to treat these offenders—including identifying strategies for reducing recidivism among these individuals. This report discusses (1) what is known about crimes committed by inmates with serious mental illness incarcerated by the federal and selected state governments; (2) what is known about the costs to the federal and selected state governments to incarcerate and provide mental health care services to those individuals; and (3) what strategies have the federal and selected state governments and studies identified for reducing recidivism among individuals with serious mental illness.

GAO selected six states that varied in their adult incarceration rates and provided geographic diversity. At BOP and the six states' departments of corrections, GAO analyzed criminal offense and incarceration and mental health care cost data and interviewed officials about strategies for reducing recidivism for inmates with serious mental illness. The results from these six states are not generalizable, but provide insights. GAO also reviewed studies that analyzed the relationship between various programs and recidivism among offenders with mental illness.

View GAO-18-182. For more information, contact Diana Maurer at (202) 512-8777 or maurerd@gao.gov.

What GAO Found

About two-thirds of inmates with a serious mental illness in the Department of Justice's (DOJ) Federal Bureau of Prisons (BOP) were incarcerated for four types of offenses—drug (23 percent), sex offenses (18 percent), weapons and explosives (17 percent), and robbery (8 percent)—as of May 27, 2017. GAO's analysis found that BOP inmates with serious mental illness were incarcerated for sex offenses, robbery, and homicide/aggravated assault at about twice the rate of inmates without serious mental illness, and were incarcerated for drug and immigration offenses at about half or less the rate of inmates without serious mental illness. GAO also analyzed available data on three selected states' inmate populations and the most common crimes committed by inmates with serious mental illness varied from state to state due to different law enforcement priorities, definitions of serious mental illness and methods of tracking categories of crime in their respective data systems.

BOP does not track costs related to incarcerating or providing mental health care services to inmates with serious mental illness, but BOP and selected states generally track these costs for all inmates. BOP does not track costs for inmates with serious mental illness in part because it does not track costs for individual inmates due to resource restrictions and the administrative burden such tracking would require. BOP does track costs associated with mental health care services system-wide and by institution. System-wide, for fiscal year 2016, BOP spent about $72 million on psychology services, $5.6 million on psychotropic drugs and $4.1 million on mental health care in residential reentry centers. The six state departments of corrections each used different methods and provided GAO with estimates for different types of mental health care costs. For example, two states provided average per-inmate costs of incarceration for mental health treatment units where some inmates with serious mental illness are treated; however, these included costs for inmates without serious mental illness housed in those units.

DOJ, Department of Health and Human Service's Substance Abuse and Mental Health Services Administration (SAMHSA), and criminal justice and mental health experts have developed a framework to reduce recidivism among adults with mental illness. The framework calls for correctional agencies to assess individuals' recidivism risk and substance abuse and mental health needs and target treatment to those with the highest risk of reoffending. To help implement this framework, SAMHSA, in collaboration with DOJ and other experts, developed guidance for mental health, correctional, and community stakeholders on (1) assessing risk and clinical needs, (2) planning treatment in custody and upon reentry based on risks and needs, (3) identifying post-release services, and (4) coordinating with community-based providers to avoid gaps in care. BOP and the six states also identified strategies for reducing recidivism consistent with this guidance, such as memoranda of understanding between correctional and mental health agencies to coordinate care. Further, GAO's literature review found that programs that reduced recidivism among offenders with mental illness generally offered multiple support services, such as mental health and substance abuse treatment, case management, and housing assistance.

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Abbreviations

BEMR	Bureau Electronic Medical Record
BJA	Bureau of Justice Assistance
BOP	Bureau of Prisons
BRAVE	Bureau Rehabilitation and Values Enhancement Program
DOJ	Department of Justice
DOCCS	New York Department of Corrections and Community Supervision
DSM	Diagnostic and Statistical Manual of Mental Disorders
FACT	Forensic Assertive Community Treatment
FMC	Federal Medical Center
HHS	Department of Health and Human Services
ISMICC	Interdepartmental Serious Mental Illness Coordinating Committee
MOU	Memoranda of Understanding
NIC	National Institute of Corrections
NIJ	National Institute of Justice
PDS	Psychology Data System
PTSD	Post-Traumatic Stress Disorder
The Reentry Council	Federal Interagency Reentry Council
RRC	Residential Reentry Center
SAMHSA	Substance Abuse and Mental Health Services Administration

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441 G St. N.W.
Washington, DC 20548

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Mental illness is widespread in the United States.[1] According to figures from the Substance Abuse and Mental Health Services Administration (SAMHSA)—an agency within the Department of Health and Human Services (HHS)—an estimated 44.7 million adults in the United States suffered from a mental illness in 2016. Among those, about 10.4 million suffered from a serious mental illness, which generally includes conditions such as schizophrenia, bipolar disorder, major depression, and severe post-traumatic stress disorder (PTSD).[2]

At the federal and state levels, law enforcement components—such as the Department of Justice's (DOJ) Federal Bureau of Prisons (BOP) and state departments of corrections—are responsible for incarcerating individuals who are charged with or convicted of crimes. Some of these individuals have serious mental illness and require mental health care while incarcerated. Multiple U.S. courts over the years have determined that inmates have a constitutional right to adequate medical and mental health care.[3] By statute, BOP is required to provide for suitable housing and the safekeeping, care, and subsistence of all persons charged with or convicted of offenses against the United States.[4] As part of its duties, BOP is responsible for delivering adequate health care, including medical,

[1]Mental illness is generally defined as a health condition that changes a person's thinking, feelings, or behavior and causes the person distress and difficulty in functioning. Mental disorders are diagnosed using criteria in the Diagnostic and Statistical Manual of Mental Disorders—Fifth Edition (DSM-V).

[2]Substance Abuse and Mental Health Services Administration. (2017). *Key substance use and mental health indicators in the United States: Results from the 2016 National Survey on Drug Use and Health* (HHS Publication No. SMA 17-5044, NSDUH Series H-52). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.

[3]For example, the United States Supreme Court held in the case of *Brown v. Plata,* 563 U.S. 493, 497 (2011), that adequate medical and mental health care must meet minimum constitutional requirements and meet prisoners' basic health needs. Similarly, the United States Supreme Court concluded in the case of *Estelle v. Gamble*, 429 U.S. 97, 104 (1976), that deliberate indifference to the serious medical needs of prisoners by prison personnel constitutes the unnecessary and wanton infliction of pain prohibited by the Eighth Amendment.

[4]18 U.S.C. § 4042(a)(2).

dental, and mental health care, in a manner consistent with accepted community standards for a correctional environment.[5] As of May 27, 2017, BOP incarcerated and was responsible for ensuring that about 187,910 inmates received medical and mental health care—the agency considered 7,831 (4.2 percent) of these inmates to have a serious mental illness.[6] See appendix I for the characteristics of BOP's inmate population with and without serious mental illness, as of May 27, 2017.

Research has shown that inmates with serious mental illness are more likely to have higher rates of recidivism than those without.[7] Further, inmates with co-occurring serious mental illness and substance use disorders are more likely to recidivate than those with serious mental illness alone.[8]

This report responds to the 21st Century Cures Act (Act), which directed us to report on the prevalence of crimes committed by persons with serious mental illness and the costs to treat the offenders—including identifying strategies for reducing recidivism among individuals with

[5]BOP's Health Services Administration Program Statement states that BOP is to deliver medically necessary health care to inmates in accordance with proven standards of care. See BOP Program Statement 6010.05, *Health Services Administration*, June 26, 2014.

[6]BOP defined "serious mental illness" in accordance with the agency's program statement, BOP Program Statement 5310.16, *Treatment and Care of Inmates with Mental Illness,* May 1, 2014, which states that classification of an inmate as seriously mentally ill requires consideration of his/her diagnoses; the severity and duration of his/her symptoms; the degree of functional impairment associated with the illness; and his/her treatment history and current treatment needs. BOP used this program statement along with other variables to develop six criteria to identify the population of inmates with serious mental illness who were incarcerated as of May 27, 2017.

[7]J. Baillargeon, I. A. Binswanger, J.V. Penn, B.A. Williams, and O.J. Murray. "Psychiatric Disorders and Repeat Incarcerations: The Revolving Prison Door." *American Journal of Psychiatry*, vol. 166, no 1 (2009). K.G. Cloyes, B. Wong, S. Latimer, J. Abarca. "Time to Prison Return for Offenders with Serious Mental Illness Released from Prison: A Survival Analysis." *Criminal Justice and Behavior*, vol. 37, no. 2 (2010). J.A. Wilson and P.B. Wood. "Dissecting the Relationship between Mental Illness and Return to Incarceration." *Journal of Criminal Justice*, vol. 42 (2014).

[8]J. Baillargeon, J. V. Penn, K. Knight, A. J. Harzke, G. Baillargeon, and E. A. Becker. "Risk of Reincarceration among Prisoners with Co-Occurring Severe Mental Illness and Substance use Disorders." *Administration and Policy in Mental Health*, vol 37, (2010). J.A. Wilson, and P.B. Wood. "Dissecting the Relationship," 534. According to SAMSHA guidance, substance use disorders occur when the recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home.

serious mental illness.[9] Specifically, this report addresses the following questions:

1. What is known about the crimes committed by inmates with serious mental illness who were incarcerated by the federal and selected state governments?
2. What is known about the costs to the federal and selected state governments to incarcerate and provide mental health services to incarcerated individuals with serious mental illness?
3. What strategies for reducing recidivism among individuals with serious mental illness have federal and selected state governments and studies identified?

To address all three objectives, we reviewed documents, interviewed officials, and analyzed data obtained from BOP and selected states' departments of corrections. For objective 3, we also reviewed documents and interviewed officials from DOJ's Office of Justice Programs and HHS (SAMHSA and the National Institute of Mental Health). For purposes of this review, we based our work on the definitions of "serious mental illness" that are provided by each of the selected federal agencies and selected states' department of corrections. We selected six states based upon variation in the rate of incarcerated adults per capita to obtain a mix of states with high, medium, and low rates, specialist recommendations on data quality and quality of programs for inmates with serious mental illness, and variation in geography. Using these criteria, we selected California, New York, Ohio, Texas, Virginia, and Washington.

To determine what types of crimes were committed by inmates with serious mental illness who were imprisoned by the federal government and selected state governments, we analyzed policies and guidance at BOP and the departments of corrections in selected states to determine how, if at all, the agencies define serious mental illness and the processes used to identify incarcerated inmates with serious mental illness. We also analyzed available data from BOP and the departments of corrections in selected states to identify the most serious types of crimes for which inmates with serious mental illness were convicted and incarcerated during fiscal year 2017. We focused on fiscal year 2017 as it was the most recent year of data available on BOP's population of inmates with serious mental illness. To assess the reliability of BOP's

[9] 21st Century Cures Act, Pub. L. No. 114-255, § 14016, 130 Stat. 1033, 1306-07 (2016).

criminal offense data, tracked in BOP's SENTRY data system, we performed electronic data testing for obvious errors in accuracy and completeness and interviewed agency officials knowledgeable about the system to determine the processes in place to ensure the integrity of the data.[10] We determined that the data were sufficiently reliable for the purposes of this report. We also interviewed officials from the selected state departments of corrections to determine the challenges they faced in recording, tracking, and maintaining data on inmates with serious mental illness, but we did not independently assess the internal controls associated with the selected states' data systems. We provided state level data as illustrative examples of the crimes committed by inmates with serious mental illness in selected states.

To identify what is known about the costs to the federal government and selected state governments to incarcerate and provide mental health services to incarcerated individuals with serious mental illness, we interviewed officials from BOP's Reentry Services Division, Correctional Programs Division, Administration Division, Program Review Division, and Health Services Division, and the departments of corrections in selected states to discuss and obtain documentation on the processes and systems used to identify the costs to incarcerate and provide mental health services to inmates with serious mental illness—including any challenges faced in tracking such costs. We obtained and analyzed BOP obligation data from fiscal year 2016, the last full year of cost data available, for the following budget categories for services related to mental illness: Psychology Services, psychotropic medications, and Residential Reentry Center mental health care costs.[11] To assess the reliability of BOP's obligations data, we performed electronic testing for obvious errors in accuracy and completeness, and interviewed agency officials knowledgeable about BOP's budget to determine the processes in place to ensure the integrity of the data. We determined that the data were sufficiently reliable for the purposes of this report.

[10]BOP's SENTRY is a real-time information system consisting of various applications for processing sensitive but unclassified inmate information and for property management. Data collected and stored in SENTRY includes information relating to the care, classification, subsistence, protection, discipline, and committed criminal offense(s) of BOP's inmates.

[11]Residential reentry centers provide a structured, supervised environment and counseling, job placement, and other services to facilitate inmates' reentry to the community after a period of incarceration.

Additionally, we obtained and analyzed BOP data from the Psychology Data System (PDS) on the extent to which BOP personnel engaged in psychology services related to inmate psychological well-being during fiscal year 2016, to calculate the average psychology services interactions (by category) per inmate during fiscal year 2016.[12] To assess the reliability of BOP's psychology services utilization services data, we performed electronic testing for obvious errors in accuracy and completeness, and interviewed agency officials knowledgeable about BOP's psychology services to determine the processes in place to ensure the integrity of the data. We determined that the data were sufficiently reliable for the purposes of this report.

To determine what strategies for reducing recidivism among individuals with serious mental illness have been identified by the federal government and selected state governments and in literature, we obtained and analyzed documents and interviewed officials from BOP and the selected states' corrections departments, as well as from DOJ and HHS organizations that support research, training, and programs related to mental health and recidivism. These DOJ organizations included the National Institute of Corrections within BOP, and the Bureau of Justice Assistance (BJA) and National Institute of Justice (NIJ) within the Office of Justice Programs. The HHS organizations included SAMHSA and the National Institute of Mental Health. We also interviewed subject matter specialists from the Council of State Governments Justice Center, Pew Charitable Trusts, and the Treatment Advocacy Center, which we selected to obtain perspectives from researchers and mental health and criminal justice organizations. Further, we conducted a literature review of studies that have sound methodologies and use primary data collection or secondary analysis to assess the impact of programs or interventions during incarceration or reentry on recidivism among adult offenders with mental illness.[13] Appendix II contains a more detailed discussion of our objectives, scope, and methodology.

[12]PDS is used by BOP's Psychology Services staff to manage all documentation relevant to inmate mental health including: psychological evaluations and assessments, drug and alcohol abuse treatment, therapy, counseling, and crisis intervention. PDS also has a treatment group component, which is used to manage the clinical treatment groups within the institution (e.g., drug education, and sex offender treatment).

[13]Given the differences in definitions and terminology for "serious mental illness," we conducted a broad literature review on mental illness to ensure that we captured all relevant publications.

We conducted this performance audit from February 2017 through February 2018, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

BOP's Roles and Responsibilities in Providing Mental Health Care to Incarcerated Inmates

To identity inmates with mental illness, BOP screens inmates prior to designation to a facility by reviewing an inmate's pre-sentence report and assigning preliminary medical and mental health screening levels.[14] Once an inmate is designated to a BOP institution, the institution staff assesses inmates to provide an accurate mental health diagnosis and determination of the severity of any mental illness as well as determining their suicide risk. BOP also identifies the mental health needs of each inmate and matches the inmate to an institution with the appropriate resources. Institution mental health care levels range from 1 to 4, with 1 being institutions that care for the healthiest inmates and 4 being institutions that care for inmates with the most acute needs. Inmate mental health care levels are also rated in this manner from level 1 to level 4. After an inmate arrives at a BOP institution, during the admission and orientation process, every inmate receives information on mental health services available at that site. Table 1 identifies inmate mental health care levels and the percentage of all inmates by designated level. Throughout an inmate's incarceration, BOP psychologists, psychiatrists, and qualified mid-level practitioners (i.e., a physician assistant or nurse practitioner who is licensed in the field of medicine and possess specialized training in mental health care) can determine a new mental health care level following a review of records and a face-to-face clinical interview.

[14]BOP's policies dictate that all inmates receive a preliminary mental health screening (which consists of psychological interviews, social history reviews, and behavioral observation) upon admission to a BOP facility. The purpose of the interview is to identify inmates who need referral for mental health, sex offender, or substance abuse treatment services; collect information that can be used in future crisis counseling situations; identify strengths as well as potential adjustment problems to incarceration; and discuss possible programmatic needs with inmates.

Table 1: Description of the Mental Health Care Levels of Bureau of Prisons' (BOP) Total Inmate Population

Mental health care level designation	Description	Percentage of all inmates at each inmate mental care level (as of November 2017)[a]
Level 1	Inmates show no significant level of functional impairment associated with mental illness and demonstrate no need for regular mental health interventions.	95
Level 2	Inmates require routine outpatient mental health care on an ongoing basis and/or need brief, crisis-oriented mental health care of significant intensity.	4
Level 3	Inmates require enhanced outpatient mental health care, such as weekly interventions, or placement in a residential Psychology Treatment Program.[b]	<1
Level 4	Inmates require acute care in a psychiatric hospital.	<1

Source: BOP Program Fact Sheet. | GAO-18-182

[a]Percentage does not equal 100 percent as some inmates were still under an initial care level designation—known as screen level—which is made by BOP's Designation and Sentence Computation Center before arrival at a BOP institution. Upon arrival at a BOP institution, BOP staff determines the mental health care level.

[b]Psychology treatment programs typically involve standard protocols that apply to all participants, including residential and non-residential drug treatment programs, sex offender management programs, and other specialized mental health treatment programs.

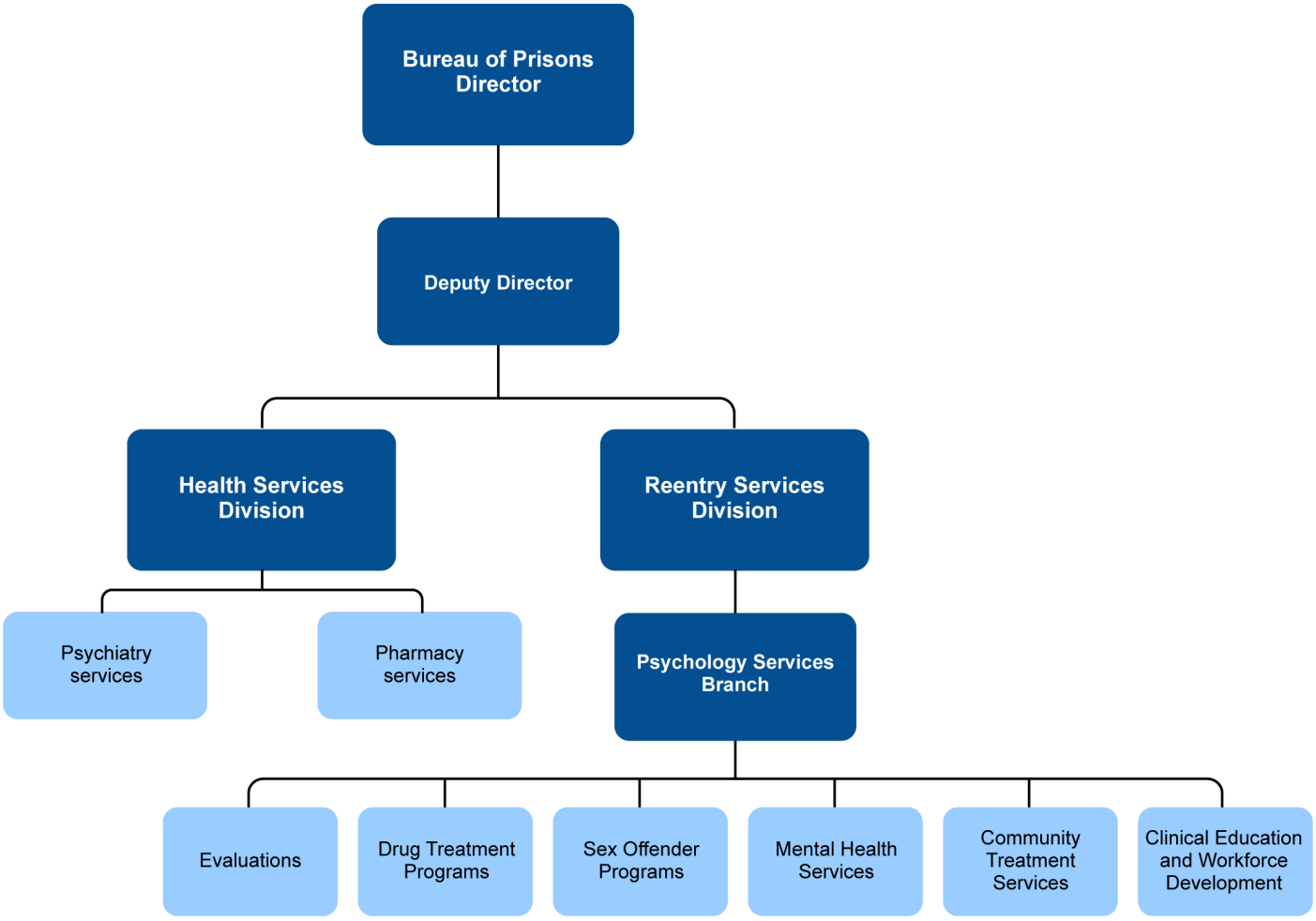
BOP's Psychology Services Branch, which the Reentry Services Division oversees, provides most mental health services to inmates in BOP-operated institutions, including providing individualized psychological care and residential and non-residential treatment programs (Figure 1 shows BOP's organization for providing mental health services).[15] BOP's Health Services Division manages psychiatry and pharmacy services. Most mental health treatment is provided in what BOP calls its mainline, or regular, institutions. Acutely ill inmates in need of psychiatric hospitalization, such as inmates suffering from schizophrenia or bipolar disorder, may receive these services at one of BOP's five medical referral centers, which provide inpatient psychiatric services as part of their mission.[16] At BOP institutions, psychologists are available for formal

[15]The Psychology Services Branch consists of the following sections: drug treatment programs, sex offender programs, mental health services, evaluations, community treatment services, and clinical education and workforce development.

[16]BOP's medical referral centers consist of Federal Medical Center (FMC) Butner, FMC Carswell, FMC Devens, FMC Rochester, and U.S. Medical Center for Federal Prisoners Springfield. BOP's psychiatric services are delivered at BOP institutions through the services of staff and contract or consultant psychiatrists, other mental health care providers, and allied health professionals.

counseling and treatment on an individual or group basis. In addition, staff in an inmate's housing unit is available for informal counseling. Psychiatric services available at the institution are enhanced by contract services from the community.[17]

Figure 1: Bureau of Prison's (BOP) Organization for Providing Mental Health Services



Source: GAO analysis of information from the Bureau of Prisons. | GAO-18-182

[17]Community treatment services include treatment for inmates with substance use disorders and mental illnesses.

BOP Criteria Used to Identify the Population of Inmates with Serious Mental Illness

Prior to the passage of the 21st Century Cures Act,[18] and at the beginning of our work, BOP defined serious mental illness in accordance with the agency's program statement[19]—which states that classification of an inmate as seriously mentally ill requires consideration of diagnoses; the severity and duration of symptoms; the degree of functional impairment associated with the illness; and treatment history and current treatment needs.[20] In accordance with BOP's program statement, BOP used this guidance along with other variables to develop six criteria to identify the population of inmates with serious mental illness who were incarcerated in fiscal years 2016 and 2017—the most recent fiscal years for which data on these criteria are available. The additional criteria to identify the population of inmates with serious mental illness are as follows:

1. Inmate was evaluated by BOP and assigned a mental health care level 3: An inmate requires enhanced outpatient mental health care such as weekly psychosocial intervention or residential mental health care.
2. Inmate was evaluated by BOP and assigned a mental health care level 4: An inmate requires acute care in a psychiatric hospital; the inmate is gravely disabled and cannot function in a general population environment.
3. Inmate was assigned a mental health study level 4: This indicated that the inmate was subject to a court ordered forensic study that required an inpatient setting.

[18] 21st Century Cures Act, Pub. L. No. 114-255, 130 Stat. 1033 (2016).

[19] BOP Program Statement 5310.16, *Treatment and Care of Inmates with Mental Illness*, May 1, 2014. The primary purpose of BOP's program statement is to ensure that inmates with mental illness are identified and receive treatment to assist their progress toward recovery, while reducing or eliminating the frequency and severity of symptoms and associated negative outcomes of mental illness, such as exacerbation of acute symptoms, placement in restrictive housing, need for psychiatric hospitalization, suicide attempts, and death by suicide.

[20] Based on BOP's program statement, the following diagnoses are generally classified as serious mental illnesses: schizophrenia spectrum and other psychotic disorders, bipolar and related disorders, and major depressive disorders. In addition, the following diagnoses are often classified as serious mental illnesses, especially if the condition is sufficiently severe, persistent, and disabling: anxiety disorders, obsessive-compulsive and related disorders, trauma and stressor-related disorders, intellectual disabilities and autism spectrum disorders, major neurocognitive disorders, and personality disorders. BOP Program Statement 5310.16, *Treatment and Care of Inmates with Mental Illness*, May 1, 2014.

4. Inmate was diagnosed to have one or more of 74 Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnoses, both active and in remission, that BOP considers a serious mental illness.
5. Inmate was evaluated by BOP and identified as having a chronic suicide risk, due to the inmate having a history of two or more suicide attempts.
6. Inmate was evaluated by BOP and assigned a psychology alert status. This designation was applied to inmates who were evaluated as having substantial mental health concerns and requiring extra care when changing housing or transferring institutions.

On August 15, 2017, in a memorandum for the Comptroller General of the United States from the Acting Director of BOP, BOP defined "serious mental illness" for purposes of section 14016 of the 21st Century Cures Act as follows:

Individuals with a serious mental illness are persons:

- Who currently or at any time during the past year,
- Have had a diagnosable mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified within the most current edition of the Diagnostic and Statistical Manual of Mental Disorders,
- That has resulted in functional impairment which substantially interferes with or limits one or more major life activities.[21]

The memorandum also stated that BOP may further operationalize this definition by identifying specific mental disorders which are to be classified as serious mental illness and providing examples of functional impairment specific to BOP's settings and/or populations. BOP officials indicated that BOP's program statement and the six criteria to identify the population of inmates with serious mental illness who were incarcerated in fiscal years 2016 and 2017 would coincide with the definition for "serious mental illness" provided in the memorandum for the Comptroller General of the United States for purposes of the 21st Century Cures Act

[21]The memorandum defined "functional impairment" as "difficulties that substantially interfere with or limit role functioning in one or more major life activities including basic daily living skills (e.g., eating, bathing, dressing); instrumental living skills (e.g., maintaining a household, managing money, getting around the community, taking prescribed medication); and functioning in social, family, and vocational/educational contexts."

and identify an identical set of BOP inmates with "serious mental illness" for fiscal years 2016 and 2017.

Incarceration and Reentry Are Key Periods to Affect Recidivism

The periods during incarceration in federal and state prisons and reentry into the community are considered to be key periods to implement interventions to reduce recidivism among individuals with serious mental illness, according to public health and correctional stakeholders.[22] The Bureau of Justice Statistics has found that for all offenders, regardless of their mental health status, the highest rate of recidivism occurs during the first year after release from prison.[23] Further, researchers have found that offenders with serious mental illness return to prison sooner than those without serious mental illness.[24] Multiple factors may contribute to the cycle of repeated incarceration among individuals with serious mental illness. SAMHSA reports that individuals with mental illness face additional challenges upon reentering the community, including those associated with finding treatment providers, stable housing, and employment. Federal agencies have established interagency groups and other mechanisms to share information on how to address the challenges related to recidivism among offenders with serious mental illness. Examples of these information sharing mechanisms are described in appendix III.

While the periods of incarceration and reentry are the focus of this review, there are other points in the criminal justice system where there are opportunities to intervene to prevent individuals with serious mental illness from becoming further involved with the system, such as during the initial law enforcement response or during court proceedings.[25] Further,

[22]See Substance Abuse and Mental Health Services Administration, *Guidelines for Successful Transition of People with Mental or Substance Use Disorders from Jail and Prison: Implementation Guide*, (SMA)-16-4998 (Rockville, MD: 2017); and Urban Institute, *Opportunities for Cost Savings in Corrections Without Sacrificing Service Quality: Inmate Health Care* (Washington, D.C.: February, 2013).

[23]M.R. Durose, A.D. Cooper, and H.N. Snyder, *Recidivism of Prisoners Released in 30 States in 2005: Patterns from 2005 to 2010,* NCJ 244205 (Bureau of Justice Statistics, April 2014).

[24]K.G. Cloyes, B. Wong, S. Latimer, J. Abarca, "Time to Prison Return for Offenders with Serious Mental Illness," 182. J.A. Wilson, P.B. Wood. "Dissecting the Relationship," 532.

[25]GAO recently reported on federal law enforcement responses to individuals with mental illness. GAO, *Federal Law Enforcement: DHS and DOJ Are Working to Enhance Responses to Incidents Involving Individuals with Mental Illness*, GAO-18-229 (Washington, D.C.: February 8, 2018).

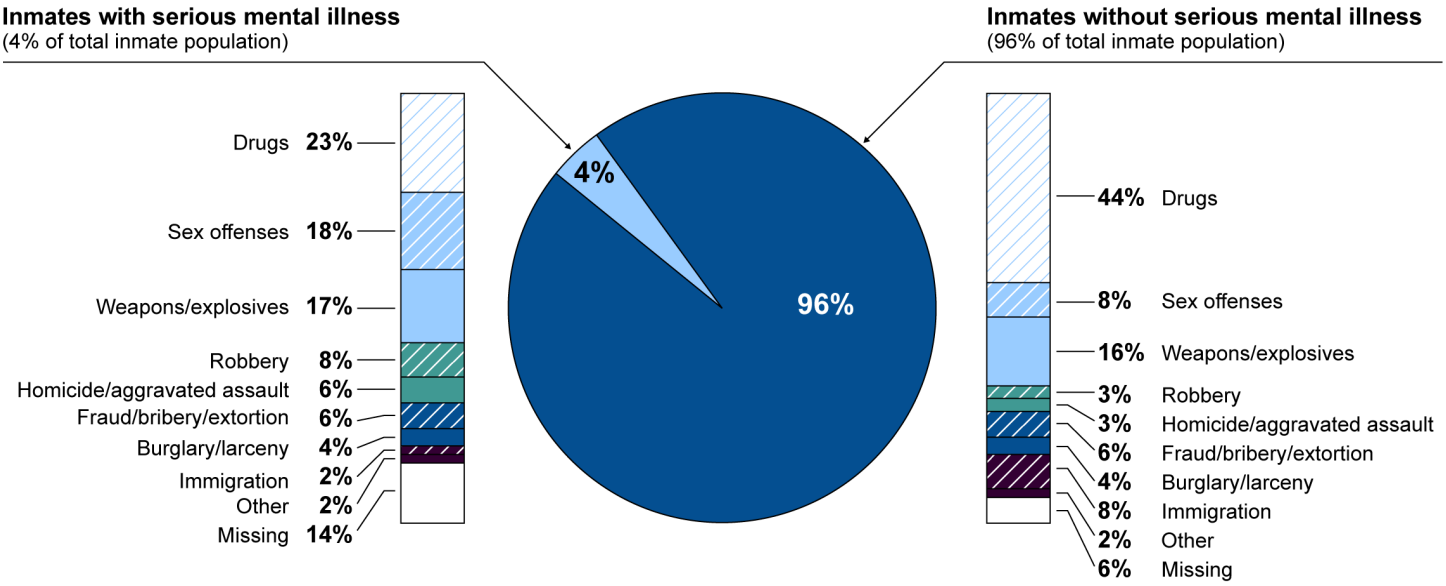
SAMHSA has identified connecting those in need of treatment to community mental health services before a behavioral health crisis begins as a way to prevent individuals with mental illness from becoming involved in the criminal justice system.

The Type of Crimes Committed by Inmates with Serious Mental Illness Incarcerated by BOP and Selected States' Departments of Corrections Vary

BOP Inmates with Serious Mental Illness Were Incarcerated for Similar Crimes as BOP Inmates Without Serious Mental Illness, But Some Differences Exist

About two-thirds of BOP inmates with a serious mental illness were incarcerated for four types of offenses—drug offenses (23 percent), sex offenses (18 percent), weapons and explosives offenses (17 percent), and robbery (8 percent)—as of May 27, 2017. As shown in figure 2, some differences in offenses exist between inmates with and without serious mental illness in BOP custody. Specifically, our analysis found that BOP inmates with serious mental illness were incarcerated for sex offenses, robbery, and homicide or aggravated assault at about twice the percentage of inmates without serious mental illness, and were incarcerated for drug and immigration offenses at about half or less the rate of inmates without serious mental illness.

Figure 2: Types of Crimes Committed by Federal Bureau of Prisons (BOP) Inmates with and without Serious Mental Illness, as of May 27, 2017



Source: GAO analysis of BOP data. | GAO-18-182

Note: The "Other" category includes offenses related to Counterfeit/Embezzlement, Court/Corrections, National Security, Miscellaneous, and Continuing Criminal Enterprises.

Additionally, we found some differences between BOP inmates with and without serious mental illness in the length and severity of sentences. Although a similar percentage of inmates with and without serious mental illness have life sentences (2.8 percent and 2.5 percent, respectively), a lower percentage of inmates with serious mental illness had sentences of 10 years or less (43.5 percent and 49.2 percent, respectively). About .06 percent (5 inmates) of inmates with serious mental illness and about .03 percent (52 inmates) of inmates without serious mental illness received a death sentence. See appendix I for additional information on the characteristics of BOP inmates with and without serious mental illness.

The Most Common Types of Crimes Committed by Inmates with Serious Mental Illness Varied Among Selected States' Departments of Corrections

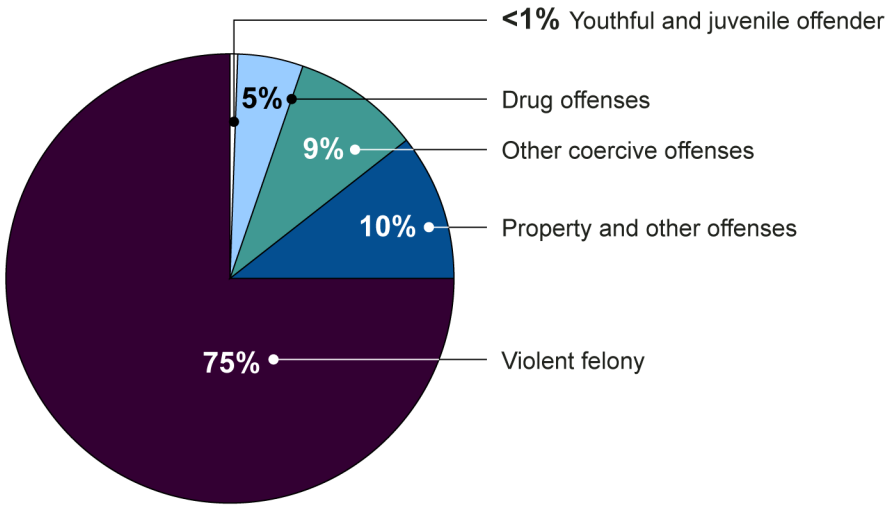
Based on our analysis of available data provided by selected states' departments of corrections, the most common crimes committed by inmates with serious mental illness varied from state to state. The difference in types of crimes reported by states and BOP may be due to different priorities, laws, and enforcement priorities across the state and federal criminal justice systems, among other things. The federal and state governments also define serious mental illness differently, and they track different categories of crime in their respective data systems. The percentages and types of crimes committed by incarcerated inmates are shown in figures 3 through 5 below for three selected states' departments of corrections.[26]

New York

The New York State Department of Corrections and Community Supervision (DOCCS) cared for 2,513 inmates with serious mental illness out of a total of 51,436 inmates as of December 31, 2016. Figure 3 shows the categories of offenses committed by inmates defined by DOCCS as having serious mental illness. Three out of four inmates with serious mental illness under the care of DOCCS were incarcerated for violent crimes. According to DOCCS program descriptions, diagnostic criteria for serious mental illness are: (1) an inmate is determined by the New York State Office of Mental Health to have specified mental health diagnoses; (2) an inmate is actively suicidal or has made a recent, serious suicide attempt; or (3) an inmate is diagnosed with serious mental illness, organic brain syndrome, or a severe personality disorder that is manifested in significant functional impairment such as acts of self-harm or other behaviors that have a serious adverse effect on life or on mental or physical health.

[26]Of the six states we contacted for our review, these three states were able to provide us with data on crimes committed by inmates with serious mental illness. Officials from the other three states said that the information was not readily available or that they could not provide the data.

Figure 3: Crimes Committed by New York Inmates with Serious Mental Illness, December 31, 2016 (N=2,513)



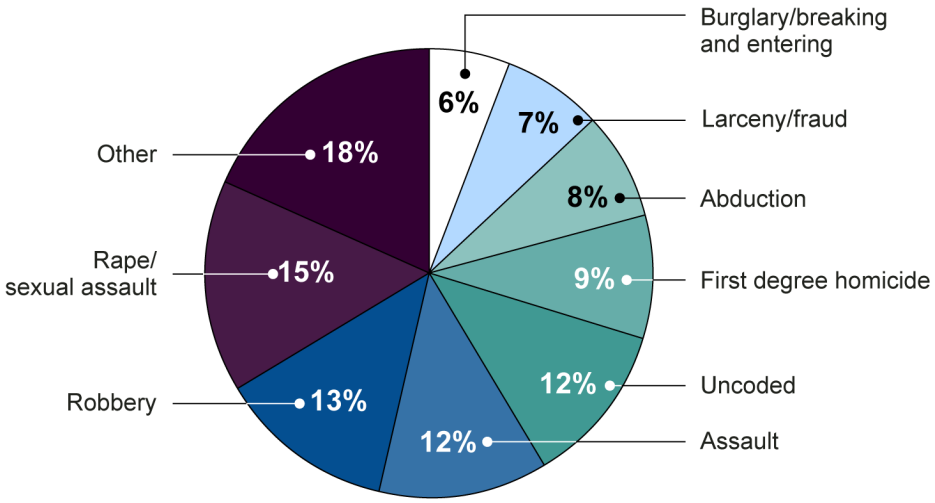
Source: GAO analysis of New York State Department of Corrections and Community Supervision data. | GAO-18-182

Note: The New York officials provided us with crimes committed data for 37 categories—which they organized into the 5 broad categories listed above—consisting of (1) youthful and juvenile offenders, (2) drug offenses, (3) other coercive offenses, (4) property and other offenses, and (5) violent felony. Violent felony includes murder, attempted murder, manslaughter in the first degree and aggravated harassment in the second degree, rape in the first degree, robbery in the first and second degrees, assault in the first and second degrees, burglary in the first and second degrees, arson in the first and second degrees, sodomy in the first degree, sexual abuse in the first degree, aggravated harassment in the second degree, weapons offenses, kidnapping in the first and second degrees, other violent felony offense sex offenses, and other violent offenses. Property and other offenses includes burglary in the third degree, grand larceny, forgery, stolen property offenses, driving intoxicated offenses, criminal contempt in the first degree, all other felonies, and business corruption offenses. Other coercive offenses includes manslaughter in the second degree, other homicide offenses, robbery in the third degree, attempted second degree assault, conspiracy in the second, third, and fourth degrees, other weapons offenses, other sex offenses, and other coercive offenses.

Virginia

The Virginia Department of Corrections cared for 527 inmates with serious mental illness out of a total of 30,052 inmates as of September 29, 2017. Figure 4 shows the crimes committed by inmates that Virginia defined as having serious mental illness. About one quarter of the inmates with serious mental illness in Virginia committed rape, sexual assault, and other assault crimes. Virginia policy defines an inmate with serious mental illness as an offender diagnosed with a psychotic disorder, bipolar disorder, major depressive disorder, PTSD or anxiety disorder, or any diagnosed mental disorder (excluding substance use disorders) currently associated with serious impairment in psychological, cognitive, or behavioral functioning that substantially interferes with the person's ability to meet the ordinary demands of living and requires an individualized treatment plan by a qualified mental health professional(s).

Figure 4: Crimes Committed by Virginia Inmates with Serious Mental Illness, September 29, 2017 (N=527)



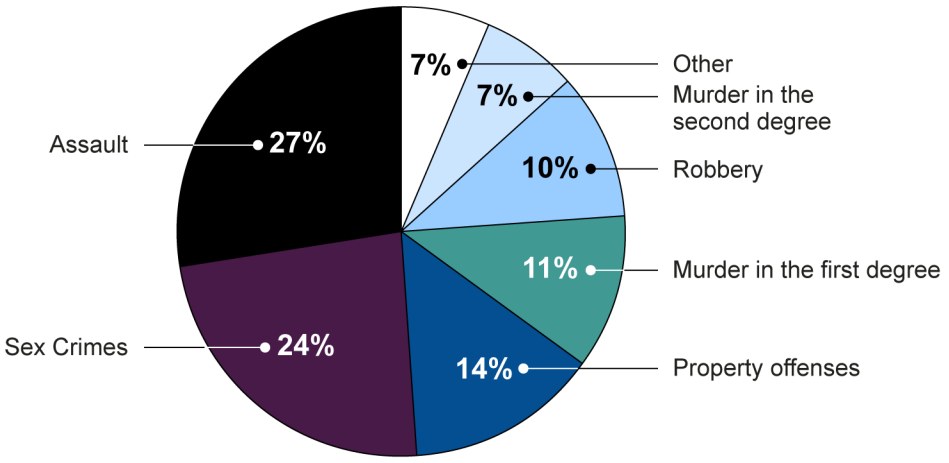
Source: GAO analysis of Virginia Department of Corrections data. | GAO-18-182

Note: The "Other" category includes, in descending order of percent of crimes committed, second degree homicide, drug sales, capital murder, sex offense, drug possession, weapons offense, arson, conspiracy, manslaughter, driving under the influence, habitual offender, and other non-violent offenses. Uncoded refers to inmates who have a mental health code but do not have a most serious offense entered in the data yet. According to Virginia officials, they likely have a new term and the Courts and Legal department are either waiting for additional sentencing information or are working on their time calculation.

Washington

The Washington Department of Corrections cared for 1,881 inmates with serious mental illness out of a total of 17,234 inmates as of June 30, 2017. Figure 5 shows the crimes committed by Washington inmates that Washington defined as having serious mental illness. About half of the inmates with serious mental illness in Washington committed assault or sex crimes. The Washington Department of Corrections defines serious mental illness as a substantial disorder of thought or mood which significantly impairs judgment, behavior, or capacity to recognize reality or cope with the ordinary demands of life within the prison environment and is manifested by substantial pain or disability. The Washington Department of Corrections' definition does not include inmates who are substance abusers or substance dependent—including alcoholics and narcotics addicts—or persons convicted of any sex offense, who are not otherwise diagnosed as seriously mentally ill.

Figure 5: Crimes Committed by Washington Inmates with Serious Mental Illness, June 30, 2017 (N=1,881)



Source: GAO analysis of Washington State Department of Corrections data. | GAO-18-182

Note: The "Other" category includes drug offenses, manslaughter, unknown, and not applicable.

BOP Does Not Track Costs Related to Inmates with Serious Mental Illness but BOP and Selected States Generally Track Costs Related to Treating Inmates with Mental Illness

BOP Does Not Track Costs Related to Inmates with Serious Mental Illness

According to BOP officials, the agency does not track costs specifically associated with inmates with serious mental illness due to resource restrictions and the administrative burden such tracking would require. BOP officials stated that BOP, unlike a hospital, is not structured to bill individual interactions; and noted that, generally, the correctional industry does not account for costs by tracking individual costs. BOP officials said

that requiring BOP staff to gather individual cost data manually would be an extremely time consuming and burdensome process. In addition, BOP does not maintain the mental health care cost data necessary to calculate the individual inmate costs related to specific program areas (i.e., psychology and psychiatric services).

BOP Tracks Some Costs Related to Treating Inmates with Mental Illness

BOP tracks the costs associated with incarcerating its overall inmate population and with providing mental health care services to inmates system-wide and separately by institution. For fiscal year 2016, BOP's institution-level data show that total incarceration costs vary by BOP institution (ranging from $15 million to over $247 million), for a number of reasons, including varying amounts of medical and mental health care available at each institution. Table 2 identifies BOP's costs for mental health care services provided to all inmates (including inmates with serious mental illness) for fiscal year 2016, the last year for which BOP had complete data during our audit work. The costs below are the most readily available BOP-wide costs directly related to mental health care. BOP's Psychology Services staff provides most inmate mental health services in BOP-operated institutions, including the provision of individualized psychological care. Psychotropic medication may be used to treat mental illness, although in some instances, BOP uses psychotropic medication to treat individuals with other kinds of health conditions. Residential Reentry Centers, also known as halfway houses, provide assistance to inmates nearing release, including some inmates with serious mental illness.

Table 2: Federal Bureau of Prisons (BOP) Obligations for Mental Health Care Services to All Inmates (Including Inmates with Serious Mental Illness), Fiscal Year 2016

Service	Cost (in dollars)
Psychology Services[a]	72,117,505
Psychotropic medication[b]	5,631,023
Residential Reentry Center Mental Health Costs[c]	4,143,796

Source: BOP obligations data. | GAO-18-182

[a]Psychology Services costs include all expenses related to providing routine psychological treatment to inmates in BOP-operated institutions, salaries and expenses for psychology staff, and some treatment programs. The costs do not include administrative oversight provided by BOP headquarters, or by regional officials who oversee the operations of the institutions within their respective geographic regions.

[b]This category of costs may be an imprecise measure of the use of drugs to treat mental health conditions. Some psychotropic medications can be used to treat certain non-mental health conditions and some non-psychotropic medications can be used to treat certain mental health conditions. For example, antihistamines used to treat allergies are considered psychotropic medications.

[c]BOP contracts with residential reentry centers (RRCs), also known as halfway houses, to provide assistance to inmates who are nearing release. According to BOP, RRCs provide a safe, structured, supervised environment, as well as employment counseling, job placement, financial management assistance, and other programs and services. RRC contractors also provide offenders an opportunity to access medical and mental health care and treatment. The intent is to assist the offender in maintaining continuity of medical and mental health care and treatment. Inmates ordinarily transfer from an institution to an RRC with an initial supply of required medications.

BOP includes psychiatric treatment and services under medical care costs, but BOP does not track psychiatric costs separately.[27] In July 2013, we reported that BOP also does not track its contractors' costs of providing mental health services to the 13 percent of BOP inmates housed in privately managed facilities.[28] The performance-based, fixed-price contracts that govern the operation of BOP's privately managed

[27]According to BOP data, in fiscal year 2016, the agency obligated about $1.3 billion for healthcare. Medical services obligations as reported by BOP include medical staff salaries and expenses, medical supplies, pharmaceutical costs, and costs of treating inmates outside of BOP institutions, including overtime costs paid to correctional officers to transport inmates.

[28]GAO, *Bureau of Prisons: Timelier Reviews, Plans for Evaluations, and Updated Policies Could Improve Inmate Mental Health Services Oversight*, GAO-13-1 (Washington, D.C.: July 17, 2013).

facilities give flexibility to the contractors to decide how to provide mental health services.[29]

BOP tracks and maintains information on the number and types of inmate interactions with Psychology Services personnel. These interactions include clinical and non-clinical interactions between Psychology Services staff and inmates that may be crisis-oriented or routine, such as individual and group therapy. Based on our analysis of these data, in fiscal year 2016, BOP inmates with serious mental illness were more likely than other inmates to use 18 of the 20 services or programs tracked by Psychology Services.[30] On average, we found that an inmate with serious mental illness had 9.6 clinical interventions compared to 0.24 clinical interventions for inmates without serious mental illness during fiscal year 2016.[31] As a result, an average BOP inmate with serious mental illness was 40 times more likely to receive a clinical intervention than an average inmate without serious mental illness. BOP data do not capture the time and resources associated with any of the Psychology Services interactions; thus we cannot assign a cost value to differences between populations in receipt of these services. Appendix IV shows the extent to which BOP's inmate population received specific types of psychology services in fiscal year 2016.

[29]According to BOP, performance-based contracts generally establish the performance standards for the contractor, including those related to mental health services, and it is up to the individual contractors to determine how they will meet those standards. BOP's fixed priced contracts only require the contractors to provide BOP with their overall incarceration costs on a per inmate per day basis.

[30]On average, BOP inmates with serious mental illness used two of the psychology services—the Residential Drug Abuse Treatment and the Bureau Rehabilitation and Values Enhancement (BRAVE) programs—less than inmates without serious mental illness in fiscal year 2016.

[31]Clinical interventions are the provision of direct clinical services to inmates. These include both crisis-oriented and routine clinical interventions, such as individual and group therapy.

Selected States' Departments of Corrections Provided Estimated Costs for Inmate Mental Health Care

The selected state departments of corrections provided us with estimates for different types of mental health care costs, but did not identify mental health care costs specifically for inmates with serious mental illness. Additionally, the states did not provide us with the total cost to incarcerate inmates with serious mental illness. For example, officials from one state said staff did not calculate costs separately for inmates with mental illness compared to inmates without mental illness as they did not believe an accurate comparison could be made. Officials from another state said that they did not track costs of incarceration or mental health services per inmate based on whether or not an inmate has mental illness, while officials from another state said they were not able to track costs for mental health services for inmates at the individual level. The selected state departments of corrections also used different methods to determine the costs of the mental health services they provided to their inmate population.[32] For example:

- Two state departments of corrections provided us with the average per-inmate costs of incarceration for a mental health treatment unit or treatment center where some inmates with serious mental illness are treated, but these per-inmate costs also included incarceration costs for inmates without serious mental illness who were housed in these facilities.
- Another state department of corrections provided total psychotropic medication costs for all inmates and mental health care costs per offender. Mental health care costs per offender were averaged across all offenders, not exclusively those with serious mental illness.
- Two other states provided total costs for one budget item related to mental illness: total mental health program spending in one state, and psychiatric care expenditures in the other state. These costs were for all inmates, not exclusively for inmates with serious mental illness.
- Another state department of corrections provided an estimate for average mental health care costs per inmate with mental illness, but this estimate included all inmates diagnosed as having a mental illness, not exclusively those inmates diagnosed with serious mental illness.

[32]We do not report dollar figures because the data varied so widely among states.

Targeting Treatments Based on Risk and Coordinating Transition Plans of Individuals with Serious Mental Illness Are among Strategies Identified by Federal and Selected State Agencies and Studies

In 2012, the Council of State Governments Justice Center developed the Criminogenic Risk and Behavioral Health Needs Framework in collaboration with DOJ's National Institute of Corrections and Bureau of Justice Assistance, SAMHSA, and experts from correctional, mental health, and substance abuse associations.[33] The framework is an approach to reduce recidivism and promote recovery among adults under correctional supervision with mental illness, substance use disorders, or both. It calls for correctional agencies to assess individuals' criminogenic risk (the risk of committing future crimes), substance abuse and mental health needs.[34] The agencies are to use the results of the assessment to target supervision and treatment resources based on these risks and needs. Additionally, the framework states that individuals with the highest criminogenic risks should be prioritized for treatment to achieve the greatest effect on public safety outcomes.

[33]F. Osher, D.A. D'Amora, M. Plotkin, N. Jerret, A. Eggleston, *Adults with Behavioral Health Needs Under Correctional Supervision: A Shared Framework for Reducing Recidivism and Promoting Recovery,* (New York, NY: Council of State Governments Justice Center, 2012).

[34]Researchers have identified the following factors as being associated with the greater risk of committing future crimes, or "criminogenic risk": (1) criminal history, (2) antisocial personality (e.g., pleasure-seeking, aggressive, weak self-control), (3) procriminal attitudes (e.g., anger, resentment, defiance, and rationalization of crime), (4) procriminal associates (i.e., close association with criminals and few non-criminal associates), (5) poor relationships with family, (6) poor performance in school or work settings, (7) little involvement in leisure or recreation, and (8) substance abuse.

Mental health and substance abuse treatment

There are a number of different approaches that can be tailored and combined to address an individual's mental health and substance abuse treatment needs. Examples include:

- **Psychopharmacology.** Treatment that uses one or more medications to reduce depression, psychosis, or anxiety.
- **Cognitive behavioral therapy.** Approach that aims to address dysfunctional thoughts, moods, or behavior through time-limited counseling.
- **Modified therapeutic community.** A residential treatment program for individuals with both substance use and mental disorders that uses a peer community to address substance abuse, psychiatric symptoms, cognitive impairments, and other common impairments.
- **Forensic peer specialists**. Individuals who are in recovery and have previously been involved in the criminal justice system provide support to others who are also involved in the criminal justice system.
- **Forensic intensive case management.** A case manager coordinates services in the community to help clients sustain recovery and prevent further involvement with the criminal justice system.
- **Forensic Assertive Community Treatment (FACT)**. Treatment is coordinated by a multidisciplinary team, which may include psychiatrists, nurses, peer specialists, and probation officers. FACT teams have high staff-to-client ratios and are available around-the-clock to address clients' case management and treatment needs.

Source: GAO analysis of Substance Abuse and Mental Health Services Administration information. | GAO-18-182

To help implement the principles set forth in the framework, SAMHSA developed additional guidance in collaboration with the Council of State Governments Justice Center, the Bureau of Justice Assistance and experts from correctional, mental health, and substance abuse associations.[35] This guidance is for mental health, correctional, and community stakeholders, and uses the Assess, Plan, Identify, Coordinate model to provide procedural guidelines to reduce recidivism and promote recovery at different points during incarceration and reentry. Table 3 below describes selected guidelines and examples of strategies that were identified by BOP and the six selected states that correspond to each element of the model.

[35]See Substance Abuse and Mental Health Services Administration, *Guidelines for Successful Transition of People with Mental or Substance Use Disorders from Jail and Prison: Implementation Guide*, (SMA)-16-4998 (Rockville, MD: Substance Abuse and Mental Health Services Administration, 2017); and A.M. Blandford and F.C. Osher, *Guidelines for the Successful Transition of Individuals with Behavioral Health Disorders from Jail and Prison*, (Delmar, NY: SAMHSA's GAINS Center for Behavioral Health and Justice Transformation, November 2013).

Table 3: Selected Guidelines and Examples of Strategies to Reduce Recidivism Among Individuals With Mental Illness in Prison and During Reentry

Selected Guidelines from the Substance Abuse and Mental Health Services Administration (SAMHSA)	Examples of Bureau of Prisons (BOP) and Selected State Strategies
Assess the individual's clinical and social needs, and public safety risk[a]	
• Conduct universal screening as early in the booking/intake process as feasible and throughout the criminal justice continuum to detect substance use disorders, mental disorders, co-occurring substance use and mental disorders, and criminogenic risk. • Follow up with comprehensive assessment to guide program placement and service delivery. Assessment should include clinical needs, social support needs (e.g., housing, education, employment, and transportation), and risk factors.	• All six selected states and BOP have developed mental health assessments during the intake process. • BOP officials stated that the agency is in the process of enhancing the predictive validity of its criminogenic risk assessment and expects to complete this project in 2018. • One of the six selected states uses a multidisciplinary treatment team composed of a clinician, psychiatrist, and correctional counselor, to assess the treatment and programming needs of inmates with serious mental illness. In addition to mental health treatment, the multidisciplinary team assesses if the inmate is ready for and would benefit from institutional services such as academic and vocational education programs, work, or substance abuse counseling. These assessments occur at least annually, but may occur whenever an inmate's treatment needs have changed.
Plan for the treatment and services required to address the individual's needs during custody and upon reentry	
• Develop individualized treatment and service plans using information obtained from the risk and needs screening and assessment process. • Develop collaborative responses between mental health and criminal justice practitioners that match individuals' levels of risk and behavioral health needs with the appropriate levels of supervision and treatment.	• BOP identified seven programs that address the needs of inmates with serious mental illness. For example, BOP's Mental Health Step Down Unit is a residential treatment program that provides programming five days a week based on cognitive-behavioral therapies, skills training, and a modified therapeutic community. Additionally, BOP has a Dual Diagnosis Residential Drug Abuse Program designed to provide specialized treatment services for inmates with co-occurring substance abuse and mental illness. Programming is delivered within a modified therapeutic community. Both of these programs also address criminal thinking. • One of the six selected states received a Justice and Mental Health Collaboration Program Grant from the Department of Justice to provide intensive case management to high-risk parolees with serious mental illness reentering the community. Individual treatment and reentry plans are developed by a multidisciplinary team composed of a parole officer, mental health staff, medical staff, and a human service specialist.
Identify required community and correctional programs responsible for post-release services	
• Anticipate that the periods following release (the first hours, days, and weeks) are critical and identify appropriate interventions as part of transition planning practices for individuals with mental and co-occurring substance use disorders who are leaving correctional settings. • Develop policies and practices that facilitate continuity of care through the implementation of strategies that promote direct linkages (i.e., warm hand-offs) to post-release treatment and supervision agencies.	• One of the six selected states established a reentry program for female inmates with serious mental illness that is designed to provide continuity of care as the inmates leave prison. The program is coordinated with a community mental health agency, which provides in-reach services approximately 120 days prior to the inmates' release from prison. In addition to intensive mental health treatment pre-release, the program provides offenders with access to community-based case management services post-release and also uses forensic peer specialists. • Officials from one of the six selected states said they have two programs that use interdisciplinary teams to provide around-the-clock case management and treatment for individuals with serious mental illness reentering the community from prison. • BOP and the six selected states help offenders apply for some federal benefits, such as Medicaid or Social Security prior to their release.[b]

Selected Guidelines from the Substance Abuse and Mental Health Services Administration (SAMHSA)	Examples of Bureau of Prisons (BOP) and Selected State Strategies
Coordinate the transition plan with community-based services to avoid gaps in care	
• Develop mechanisms to share information from assessments and treatment programs across agencies and organizations involved with individuals in the criminal justice system to advance cross-system goals.	• Two of the six selected states have memoranda of understanding (MOU) between their respective state correctional and mental health agencies. These MOUs document, among other things, practices for sharing treatment plans prior to an inmate's release, and responsibilities for providing services for those being released to the community.
• Collect and analyze data to evaluate program performance; identify gaps in performance; and plan for long-term sustainability.	• BOP has developed a plan to conduct outcome evaluations to assess the performance of its programs for offenders with serious mental illness.[c] The first evaluations, including one for the Mental Health Step Down Unit, are scheduled for fiscal year 2018. Additional evaluations are scheduled over fiscal years 2019 through 2024.

Source: GAO analysis of Substance Abuse and Mental Health Services Administration, Department of Justice, and selected state information. | GAO-18-182.

[a]Public safety risks are criminogenic risk factors that are associated with criminal behavior.

[b]Under the Affordable Care Act, millions of low-income individuals who have been involved in the criminal justice system can obtain insurance coverage for mental health and substance abuse treatment needs. For example, states may elect to expand the Medicaid program to all adults with incomes below 133 percent of the Federal Poverty Level. We have previously reported that two states that have expanded Medicaid eligibility have estimated that as many as 80 to 90 percent of people leaving prison may be eligible for Medicaid based on their income status. The Department of Health and Human Services (HHS) reports that access to Medicaid coverage for individuals leaving prison or jail can help provide continuity of care, which may improve health outcomes, reduce recidivism, improve public safety, and lower the costs of incarceration. HHS advises that correctional agencies can help realize these benefits by helping inmates apply for benefits prior to their release.

[c]BOP took this action in response to a recommendation that we previously made to DOJ to develop such a plan. See GAO, *Mental Health: HHS Leadership Needed to Coordinate Federal Efforts Related to Serous Mental Illness*, GAO-15-113 (Washington, D.C.: Dec. 18, 2014).

Studies Indicate Some Promising Strategies to Reduce Recidivism Among Offenders with Mental Illness

To identify strategies to reduce recidivism among offenders with mental illness during incarceration and reentry, we searched for studies that analyzed the relationship between programs and recidivism among offenders with mental illness.[36] Our search identified about 200 publications. We used a systematic process to conduct the review, which appendix II describes in more detail. We ultimately identified 14 studies that (1) assessed correctional institution or reentry programs for offenders with mental illness implemented in the United States, (2) contained quantitative analyses of the effect of a program on recidivism, and (3) used sufficiently sound methodologies for conducting such analyses.[37]

The studies examined different kinds of recidivism outcomes (e.g., re-arrest, re-incarceration, reconviction) and one study often examined more than one recidivism outcome. We categorize the findings for each study as follows:

- **Statistically significant reduction in recidivism:** the study reported that one or more outcome measures indicated a statistically significant reduction in recidivism among program participants; the study may also have one or more recidivism outcome measures that were not statistically significant.
- **Statistically significant increase in recidivism:** the study reported that one or more outcome measures indicated a statistically significant increase in recidivism among program participants; the study may also have one or more recidivism outcome measures that were not statistically significant.
- **No statistically significant effect on recidivism:** the study reported only outcomes indicating no statistically significant effect on recidivism among program participants.

[36]Given the differences in definitions and terminology for "serious mental illness," we conducted a broad literature review on mental illness to ensure that we captured all relevant articles.

[37]In some cases, there was more than one published study by the same group of researchers on the same program. If the studies assessed the recidivism outcomes of the same group of participants, we only included one study. If the studies assessed recidivism outcomes for different groups of participants, then we included both studies. We also identified four studies that assessed recidivism outcomes of programs whose participants included criminal justice-involved adults with mental illnesses, but the programs were not correctional programs and were in other settings, such as in the community after psychiatric hospitalization. These studies are not included in the discussion here, but additional information on these studies can be found in appendix V.

The statistical significance finding categories are based on the effect of the program as a whole and do not indicate if or how all individual elements of the programs impacted recidivism. For additional information on recidivism findings, see appendices V and VI. See appendix VII for a bibliography of the studies.

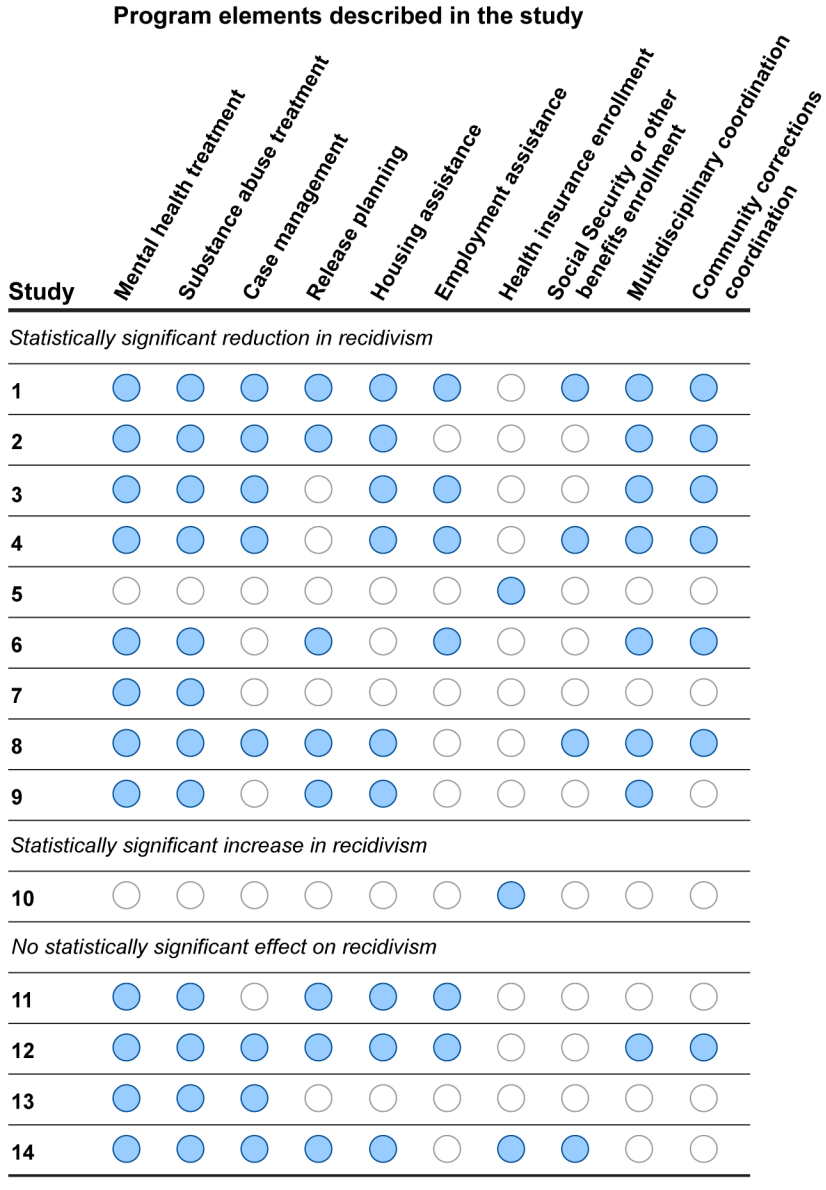
The results of the literature review provide insights into factors that can affect recidivism among individuals with mental illness; however, the following considerations should be taken into account: (1) the type of mental illness of program participants varied within and across programs making it difficult to generalize results to individuals with all types of mental illness; (2) the studies may not provide a full description of the programs; (3) not all participants may have used available program services; (4) studies assessed the programs as a whole and did not determine to what extent different elements of the programs impacted recidivism; and (5) some studies used designs which cannot control for all unobserved factors that could affect the recidivism results.[38]

Nine of the 14 studies we reviewed found statistically significant reductions in recidivism. The studies that found statistically significant reductions generally involved programs that offered multiple support services, as shown in figure 6. Providing mental health and substance abuse treatment (8 of 9 studies), case management (5 of 9 studies), release planning (5 of 9 studies), housing (6 of 9 studies) and employment assistance (4 of 9 studies) were the most common services across the programs where studies we reviewed found statistically significant reductions in recidivism. In addition, more than half of the programs that resulted in statistically significant reductions in recidivism were coordinated with multidisciplinary stakeholders, such as mental health providers, correctional officials, substance use specialists, social workers, and peer support specialists (7 of 9 studies), and community corrections agencies, such as probation or parole offices (6 of 9 studies). However, other studies found that programs that offered multiple support services did not reduce recidivism, suggesting that other factors may also affect recidivism. Such factors may include the extent to which participants used services, as well as other unique programmatic factors, such as addressing criminogenic risk or criminal thinking. We further

[38]Although we found the studies we reference in our report to have used sufficiently sound methods, there are limitations. For example, quasi-experimental and pre-test post-test non-experimental designs may not control for contemporaneous implementation of other criminal justice or mental health policies that could have affected recidivism results.

discuss examples of programs that did and did not reduce recidivism below.

Figure 6: Study Findings and Elements of Correctional and Reentry Programs Examined



Source: GAO analysis of studies. | GAO-18-182

Note: The studies' statistical significance findings are based on the examination of the program as a whole and do not indicate if or how individual elements of the program, such as those listed above, affected recidivism. Multidisciplinary coordination may include coordination between mental health providers, criminal justice agencies, substance use specialists, social workers, and peer support specialists, among others. Community corrections coordination indicates that the program was coordinated with community corrections agencies, such as a probation or parole office.

For example, study 9 examined Washington's Dangerously Mentally Ill Program, in which a multidisciplinary committee determines which offenders meet the program criteria of having a mental illness and are at high risk of being dangerous to themselves or others six months prior to their release from prison. Members of the committee include representatives from the Department of Social and Health Services, Department of Corrections, law enforcement, and community mental health and substance abuse treatment agencies. Offenders designated for participation are immediately assigned a community mental health treatment provider and receive special transition planning prior to their release from prison. After release, and for up to five years, a variety of services are available to participants based on assessed needs. Services may include mental health and substance abuse treatment, housing and medical assistance, training, and other support services. Researchers found that program participants were about 42 percent less likely to be reconvicted of a new felony than similar offenders in the comparison group four years after release (recidivism rates were 28 percent and 48 percent, respectively).

Two other studies (numbers 3 and 6) evaluated Colorado's Modified Therapeutic Community, a residential program that was provided both as a 12-month prison program and 6-month reentry program after release from prison for offenders with co-occurring mental illness and substance use disorders. Participants may have participated in only the prison program, only the reentry program, or both. Both programs use a cognitive-behavioral curriculum designed to help participants recognize and respond to the interrelationship of substance abuse, mental illness, and criminality and to use strategies for symptom management. The reentry program was coordinated with the community corrections agency, which provided the residential facility and monitored medication and compliance with parole terms for both participants and the comparison group. The reentry program also assisted with housing placement and employment. Researchers found that both the prison program and the reentry program resulted in statistically significant reductions in recidivism among participants. Specifically, the studies found that at 12 months post-release, prison program participants had a 9 percent reincarceration rate

versus a 33 percent rate for the comparison group that did not participate in either program; and reentry program participants had a 19 percent reincarceration rate versus 38 percent for the comparison group. Further, researchers found that those who participated in both the prison and reentry program experienced the greatest reductions in recidivism, with a reincarceration rate of 5 percent versus a rate of 33 percent for the comparison group that did not participate in either program 12 months after release from prison.

Studies that did not find a reduction in recidivism also provide insights on factors that may affect recidivism. For example, study 10 examined a Washington program to help enroll inmates with severe mental illness in Medicaid prior to their release from prison and found that jail and prison stays were higher among program participants than non-participants. The researchers hypothesized that receiving mental health treatment may have led to more interaction with authorities, putting participants at a greater risk of being caught violating the terms of their parole than non-participants. There was some evidence to support this: they found that most of the difference in prison days between participants and non-participants was the result of noncompliance with conditions of parole (technical violations) rather than the commission of new crimes. Further, the researchers conclude that Medicaid benefits alone are not enough to reduce arrests or keep people with severe mental illness out of jail or prison.

In addition, study 11 examined Minnesota's release planning services for inmates with serious and persistent mental illness, which provided some of the same types of services as the programs that did reduce recidivism. For example, while incarcerated, inmates were provided pre-release planning to address vocational, housing, chemical dependency, psychiatric, disability, medical, medication, and transportation needs. However, this program did not result in any significant reduction in recidivism. The researchers conclude that including programming to target criminogenic risks and providing a continuum of care from the institution to the community, instead of only providing services in the institution, may make the program more effective at reducing recidivism.

Agency Comments

We provided a draft of this report to DOJ and HHS for review and comment. DOJ and HHS did not provide official written comments or technical comments.

We are sending copies of this report to the Assistant Attorney General for Administration, Department of Justice, the Secretary of Health and Human Services, selected congressional committees, and other interested parties. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-8777 or maurerd@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VIII.

Diana Maurer
Director, Homeland Security and Justice

List of Committees

The Honorable Lamar Alexander
Chairman
The Honorable Patty Murray
Ranking Member
Committee on Health, Education, Labor and Pensions (HELP)
United States Senate

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The Honorable Dianne Feinstein
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The Honorable Frank Pallone, Jr.
Ranking Member
Committee on Energy and Commerce
House of Representatives

The Honorable Bob Goodlatte
Chairman
The Honorable Jerrold Nadler
Ranking Member
Committee on the Judiciary
House of Representatives

Appendix I: Characteristics of the Federal BOP's Inmate Population with and without Serious Mental Illness, as of May 27, 2017

The population of Federal Bureau of Prisons (BOP) inmates with and without serious mental illness varies in several characteristics, see table 4.

Table 4: Characteristics of Federal Bureau of Prisons (BOP) Inmate Population with and without Serious Mental Illness, as of May 27, 2017

	Population with Serious Mental Illness	Population with Serious Mental Illness (percentage)	Population without Serious Mental Illness	Population without Serious Mental Illness (percentage)
Gender:				
Female	1,162	14.8	11,533	6.4
Male	6,669	85.2	168,546	93.6
Age:				
Average	41.5		40.4	
Median	40		39	
Length of Sentence:				
10 Years or less	3,410	43.5	88,678	49.2
10+ Years	3,050	39.0	76,298	42.4
Life or Death Sentences	223	2.9	4,604	2.6
Negative Months[a]	35	0.5	30	0.0
Missing[b]	1,113	14.2	10,469	5.8
Life or Death Sentence:				
Life	218	2.8	4,552	2.5
Death	5	0.06	52	0.03
Race:				
American Indian	351	4.5	3,719	2.1
Asian/Pacific Islander	99	1.3	2,668	1.5
Black	2,675	34.2	68,174	37.9
White	4,706	60.1	105,518	58.6
Ethnicity:				
Hispanic	1,239	15.8	61,820	34.3
Non-Hispanic	6,592	84.2	118,259	65.7
Security Level:				
Unassigned[b]	250	3.2	6,885	3.8
Minimum	931	11.9	31,797	17.7
Low	2,467	31.5	68,256	37.9
Medium	2,499	31.9	53,399	29.7
High	1,684	21.5	19,742	11.0

	Population with Serious Mental Illness	Population with Serious Mental Illness (percentage)	Population without Serious Mental Illness	Population without Serious Mental Illness (percentage)
Mental Health Care Level:[c]				
1	3,460	44.2	155,495	86.4
2	2,857	36.5	1,349	0.8
3	707	9.0	0[d]	0[d]
4	479	6.1	2[d]	0.0[d]
Screen 1	1	0.0	13,873	7.7
Screen 2	20	0.3	3,255	1.8
Screen 3	8	0.1	18	0.0
Screen 4	26	0.3	4	0.0
Study level 3	35	0.5	105	0.1
Study level 4	212	2.7	0[d]	0[d]
Missing[b]	26	0.3	5,978	3.3
Offense for which individual has been sentenced:				
Drugs	1,770	22.6	79,863	44.4
Sex Offenses	1,371	17.5	14,180	7.9
Weapons/Explosives	1,321	16.9	28,615	15.9
Robbery	626	8.0	5,979	3.3
Homicide/Aggravated Assault	495	6.3	5,086	2.8
Fraud/Bribery/Extortion	455	5.8	10,876	6.0
Burglary/Larceny	346	4.4	7,690	4.3
Immigration	182	2.3	14,359	8.0
Miscellaneous	74	0.9	1,275	0.7
Court/Corrections	48	0.6	725	0.4
Counterfeit/Embezzlement	20	0.3	508	0.3
National Security	6	0.1	63	0.0
Continuing Criminal Enterprises	4	0.1	391	0.2
Missing[b]	1,113	14.2	10,469	5.8
Serious Diagnostic and Statistical Manual of Mental Disorders (DSM) Diagnosis[e]	6,370	81.3	0[d]	0[d]
Chronic Suicide Risk[f]	2,392	30.5	0[d]	0[d]
Psychology Alert[g]	1,482	18.9	0[d]	0[d]

Source: GAO analysis of BOP data. | GAO-18-182

[a]BOP officials said that a negative term typically indicated inmates being evaluated for competency.

[b]BOP officials said that inmates with a missing offense may have not had their information keyed at the time of the data upload. Inmates with a missing length of sentence or offense also may be serving a term of community confinement without a BOP sentence. Inmates that have not yet been assigned a security level are considered Unclassified. Mental health care level assignments are not required for inmates housed in non-Bureau facilities; in addition, these assignments are not required for inmates in transit.

[c]Mental health care level 1 inmates show no significant level of functional impairment associated with mental illness and demonstrate no need for regular mental health interventions. Mental health care level 2 inmates are those requiring routine outpatient mental health care on an ongoing basis or need brief, crisis-oriented mental health care of significant intensity. Mental health care level 3 inmates are those that require enhanced outpatient mental health care, such as weekly interventions, or placement in a residential treatment program. Mental health care level 4 inmates are those requiring acute care in a psychiatric hospital. Screen levels are initial care level designations made by BOP's Designation and Sentence Computation Center before an inmate's arrival at a BOP institution. Upon

arrival at a BOP institution, BOP staff determines the mental health care level. Study levels are assigned to inmates with court ordered forensic studies.

[d]BOP used this category as one of the six criteria for identifying inmates with serious mental illness; therefore, no inmates without serious mental illness meet this description.

[e]Inmates with serious mental illness were assigned one or more of the 74 DSM diagnoses that BOP considers as a serious mental illness.

[f]Inmate was evaluated by BOP and identified as having a chronic suicide risk, due to the inmate having a history of two or more suicide attempts.

[g]This designation was applied to inmates who were evaluated as having substantial mental health concerns and requiring extra care when changing housing or transferring institutions.

Appendix II: Objectives, Scope, and Methodology

To address all three objectives, we reviewed documents, interviewed officials, and analyzed data obtained from the Federal Bureau of Prisons (BOP) and selected states' departments of corrections. For objective 3, we also reviewed documents and interviewed officials from the Department of Justice's (DOJ) Office of Justice Programs and the Department of Health and Human Services' (HHS) Substance Abuse and Mental Health Services Administrations (SAMHSA) and the National Institute of Mental Health. We selected six state departments of corrections (California, New York, Ohio, Texas, Virginia, and Washington) based upon variation in the rate of incarcerated adults per capita to obtain a mix of states with high, medium, and low rates, specialist recommendations on data quality and quality of programs for inmates with serious mental illness, and variation in geography. We contacted officials from SAMHSA and the National Institute of Mental Health and representatives from correctional accreditation organizations, as well as subject matter specialists from Pew Charitable Trusts and the Treatment Advocacy Center that we identified through previous work and asked for their recommendations of states that, in their view, had reliable data sources on the number of incarcerated individuals with serious mental illness and the costs of providing mental health services, as well as noteworthy programming for inmates with serious mental illness. The results from these six states are not generalizable, but provide insights. For purposes of this review, we based our work on the definition(s) of serious mental illness that are provided by each of the selected federal agencies and selected states' departments of corrections. We analyzed policies and guidance at BOP and the departments of corrections in selected states to determine how, if at all, the agencies define serious mental illness and the processes used to identify incarcerated inmates with serious mental illness. To determine the population of inmates with serious mental illness for the purposes of our work, BOP operationalized its definition of serious mental illness using six criteria, covering the required degree of mental health care, mental illness diagnoses,

and suicide risk.[1] BOP defined "serious mental illness" in accordance with the agency's program statement, BOP Program Statement 5310.16, Treatment and Care of Inmates with Mental Illness, May 1, 2014. On August 15, 2017, in a memorandum for the Comptroller General of the United States from the Acting Director of BOP, BOP defined "serious mental illness" for purposes of section 14016 of the 21st Century Cures Act. BOP officials indicated that BOP's program statement and the six criteria to identify the population of inmates with serious mental illness who were incarcerated in fiscal years 2016 and 2017 would coincide with the definition for "serious mental illness" provided in the memorandum for the Comptroller General of the United States for purposes of the 21st Century Cures Act and identify an identical set of BOP inmates with "serious mental illness" for fiscal years 2016 and 2017. BOP applied these criteria to inmate information in its SENTRY, Bureau Electronic Medical Record (BEMR), and Psychology Data System (PDS) data systems to identify inmates with serious mental illness.[2] To assess the reliability of the these data, we performed electronic data testing for obvious errors in accuracy and completeness, and interviewed agency

[1]BOP operationalized its definition of serious mental illness using the following six criteria: (1) Inmate was evaluated by BOP and assigned a mental health care level 3—an inmate requires enhanced outpatient mental health care, such as weekly psychosocial intervention or residential mental health care; (2) Inmate was evaluated by BOP and assigned a mental health care level 4—an inmate requires acute care in a psychiatric hospital; the inmate is gravely disabled and cannot function in a general population environment; (3) Inmate was assigned a mental health study level 4—indicated that the inmate was subject to a court ordered forensic study that required an inpatient setting; (4) Inmate was diagnosed to have one or more of 74 Diagnostic and Statistical Manual of Mental Disorders diagnoses, both active and in remission, that BOP considers a serious mental illness; (5) Inmate was evaluated by BOP and identified as a chronic suicide risk, due to the inmate having a history of two or more suicide attempts; and (6) Inmate was evaluated by BOP and assigned a psychology alert status, a designation applied to inmates who were evaluated as having substantial mental health concerns and requiring extra care when changing housing or transferring institutions.

[2]BOP's SENTRY is a real-time information system consisting of various applications for processing sensitive but unclassified inmate information and for property management. Data collected and stored in SENTRY include information relating to the care, classification, subsistence, protection, discipline, and committed criminal offense(s) of BOP's inmates. BOP uses the BEMR system to keep track of an inmate's medical, social, and psychological history. It includes information on an inmate's clinical encounters (for care both inside the institution and outside care from contracted providers) and medications prescribed, among other things. BOP's Psychology Services staff uses PDS to manage all documentation relevant to inmate mental health including: psychological evaluations and assessments, drug and alcohol abuse treatment, therapy, counseling, and crisis intervention. PDS also has a treatment group component, which is used to manage the clinical treatment groups within the institution (e.g., drug education, sex offender treatment).

officials knowledgeable about these systems to determine the processes in place to ensure the integrity of the data. We determined that the data were sufficiently reliable for identifying the population of BOP inmates with serious mental illness, for the purposes of this report.

To determine what types of crimes were committed by inmates with serious mental illness who were incarcerated by the federal and selected state governments we analyzed available data from BOP and the departments of corrections in selected states on the most serious types of crimes for which inmates with serious mental illness were incarcerated during fiscal year 2017.[3] BOP officials track and maintain information on the types of crimes for which inmates have been incarcerated via SENTRY. We interviewed officials from BOP's Office of Research and Evaluation, Reentry Services Division, and Correctional Programs Division to discuss the number and types of crimes committed by BOP inmates with serious mental illness. To assess the reliability of BOP's criminal offense data, tracked in BOP's SENTRY system, we performed electronic data testing for obvious errors in accuracy and completeness, and interviewed agency officials from BOP's Office of Research and Evaluation knowledgeable about BOP's inmate tracking system to determine the processes in place to ensure the integrity of the data. We determined that the data were sufficiently reliable for the purposes of this report. We also interviewed and received written responses from officials from the selected state departments of corrections to determine the challenges they faced in recording, tracking, and maintaining data on inmates with serious mental illness, but we did not independently assess the internal controls associated with the selected states' data systems. We provided state level data as illustrative examples of the crimes committed by inmates with serious mental illness in selected states.

To identify what is known about the costs to the federal and selected state governments to incarcerate and provide mental health services to incarcerated individuals with serious mental illness, we interviewed and received written responses from officials from BOP's Reentry Services Division, Correctional Programs Division, Administration Division, Program Review Division, and Health Services Division, and the departments of corrections in selected states to discuss and obtain

[3]For information on the types of crimes for which BOP inmates with serious mental illness were sentenced and incarcerated, we obtained a data extract from BOP as of May 27, 2017; from New York as of December 31, 2016; from Virginia as of September 29, 2017; and from Washington as of June 30, 2017.

documentation on the processes and systems used to track the costs to incarcerate and provide mental health services to inmates with serious mental illness, and obtain their perspectives on the challenges faced, if any, in tracking such costs. We analyzed BOP obligation data from fiscal year 2016 for the following budget categories:[4] Psychology Services, psychotropic medications, and Residential Reentry Center mental health care costs.[5] We included these obligation categories as indicators of BOP mental health care costs because our prior work identified that these services were used by inmates with mental illness.[6] To assess the reliability of BOP's obligations data, we performed electronic testing for obvious errors in accuracy and completeness, and interviewed agency officials knowledgeable about BOP's budget to determine the processes in place to ensure the integrity of the data. We determined that the data were sufficiently reliable for the purposes of this report. In response to our inquiries, the selected states provided various data on costs to incarcerate and provide mental health care to inmates under their supervision. We did not independently assess the internal controls associated with the selected states' data systems. We provided state level data as illustrative examples of the manner in which state correctional agencies tracked costs of incarceration and mental health care services for inmates under their supervision.

Additionally, we obtained and analyzed BOP data from PDS on the extent to which inmates interacted with Psychology Services personnel and programs during fiscal year 2016, to calculate the average psychology services interactions (by category) per inmate during fiscal year 2016. To

[4]For information on the costs to incarcerate and provide mental health services to BOP inmates (including inmates with serious mental illness), we focused on BOP obligation data from fiscal year 2016, the most current and complete cost data available at the time of our review.

[5]The BOP contracts with residential reentry centers (RRCs), also known as halfway houses, to provide assistance to inmates who are nearing release. RRCs provide a safe, structured, supervised environment, as well as employment counseling, job placement, financial management assistance, and other programs and services. RRC contractors also provide offenders an opportunity to access medical and mental health care and treatment. The intent is to assist the offender in maintaining continuity of medical and mental health care and treatment. Inmates ordinarily transfer from an institution to an RRC with an initial supply of required medications.

[6]See our prior work on BOP inmate mental health care. *Bureau of Prisons: Better Planning and Evaluation Needed to Understand and Control Rising Inmate Health Care Costs*, GAO-17-379 (Washington, D.C.: June 29, 2017). *Bureau of Prisons: Timelier Reviews, Plans for Evaluations, and Updated Policies Could Improve Inmate Mental Health Services Oversight*, GAO-13-1 (Washington, D.C.: July 17, 2013).

assess the reliability of BOP's psychology services utilization services data, we performed electronic testing for obvious errors in accuracy and completeness, and interviewed agency officials knowledgeable about BOP's psychology services to determine the processes in place to ensure the integrity of the data. We determined that the data were sufficiently reliable for the purposes of this report.

To determine what strategies for reducing recidivism among individuals with serious mental illness have been identified by the federal and selected state governments and in literature, we obtained and analyzed documents and interviewed officials from BOP and the selected states' corrections departments, as well as from DOJ and HHS organizations that support research, training, and programs related to mental health and recidivism. These DOJ organizations included the National Institute of Corrections, within BOP, and the Bureau of Justice Assistance and National Institute of Justice, within the Office of Justice Programs. The Department of Health and Human Services (HHS) organizations included SAMHSA and the National Institute of Mental Health. We also interviewed subject matter experts from the Council of State Governments Justice Center, Pew Charitable Trusts, and the Treatment Advocacy Center, which we selected to obtain perspectives from researchers and mental health and criminal justice organizations.

Literature Review

Further, we conducted a literature review of studies that have sound methodologies and use primary data collection or secondary analysis to assess the impact of programs or interventions during incarceration or reentry on recidivism among adult offenders with mental illness.[7] To identify relevant studies, we took the following steps:

1. A GAO research librarian conducted searches of various research databases and platforms including ProQuest, MEDLINE, PsycINFO, Social SciSearch, and Scopus, among others, to identify scholarly and peer reviewed publications; government reports; and publications by trade associations, nonprofits and think tanks from 2008 through 2017, a period chosen to identify a comprehensive set of relevant and timely research.

[7]Given the differences in definitions and terminology for "serious mental illness," we conducted a broad literature review on mental illness to ensure that we captured all relevant publications.

2. We identified and reviewed selected additional studies that were cited within literature reviews, meta analyses and studies referenced on information-sharing websites, including the Council of State Governments' "What Works in Reentry" website, National Institute of Justice's "Crime Solutions" website, and SAMHSA's Registry of Evidence Based Practices and Programs, and other secondary sources published from 2000 through 2017. We chose this time period to ensure we identified key older, reliable studies we may have missed by virtue of our database search timeframe. We identified these secondary resources during the course of our audit through the previously discussed database search, interviews with agency officials and representatives from research, criminal justice, and mental health organizations, and by reviewing websites of relevant agencies.

The literature search produced about 200 publications. To select studies that were relevant to our research objective two reviewers independently assessed the abstracts for each publication using the following criteria:

1. Program studied was implemented in the U.S.
2. Study described in the publication includes original data analysis to assess the impact of a program for adults with mental illness on recidivism.

For those that met the above two criteria we obtained and reviewed the full text of the publication, using the same criteria.[8] We also further categorized the studies that met the two criteria above into the following categories: 1) studies that evaluated programs implemented during the period of incarceration or reentry, 2) studies that evaluated programs meant to divert individuals with serious mental illness from jail or prison (e.g., mental health courts) and 3) other, for those interventions that did not fall into either of these categories. As our review focused on strategies to reduce recidivism during incarceration and reentry, we excluded the studies on diversion programs (the second category). We evaluated the 31 studies that fell into the incarceration and reentry and the other categories using a data collection instrument. The data collection instrument captured information on the elements of the program, the recidivism effects, and the study's methodology. The data collection instrument was initially filled out by one individual and then verified for accuracy by another individual; any differences in the individuals' assessments were discussed and reconciled.

[8]In some cases, particularly for those studies identified through means other than the database search, we reviewed the full text publication without first reviewing the abstract.

To determine if the findings of the 31 studies should be included in our review of the literature, the study reviewers conferred regarding each study and assessed if: 1) the study was sufficiently relevant to the objective; and 2) the study's methodology was sufficiently rigorous. With regard to the study's relevance, we included studies that evaluated:

- a program for individuals with mental illness incarcerated in prison or jail or provided directly upon release from prison or jail; or
- a program for individuals with mental illness that is not provided in a prison, jail, or directly upon release from prison or jail (e.g., in a psychiatric hospital or in the community after a psychiatric hospitalization), but is hypothesized to impact criminal justice involvement and could potentially be applied in a correctional setting.[9]

With regard to methodological rigor, two GAO methodologists used generally accepted social science standards to assess the design and analytic strategy of each study to ensure analyses were sufficiently sound to support the results and conclusions. Specifically, the methodologists examined such factors as how the effects of the programs were isolated (i.e., use of comparison groups and statistical controls); the appropriateness of treatment and comparison group selection, if used; and the statistical analyses used.

As a result of this process, we found 18 studies within the scope of our review that used sufficiently sound methodologies. Some studies used a randomized controlled trial methodology or quasi-experimental research designs, and some studies used non-experimental designs to compare recidivism outcomes for a single population before and after the intervention. These studies used various recidivism measures, and some used more than one measure. For each of the 18 studies, we reviewed the study's findings related to recidivism, and categorized the findings based on statistical significance as follows:[10]

- Statistically significant reduction in recidivism: the study reported that one or more outcome measures indicated a statistically significant reduction in recidivism among program participants; the study may

[9]This category does not include diversion programs. Studies on diversion programs were excluded from the literature review during previous sorting.

[10]We report findings to be statistically significant only if the reported p-value for the finding was .05 or less.

also have one or more recidivism outcome measures that were not statistically significant.

- Statistically significant increase in recidivism: the study reported that one or more outcome measures indicated a statistically significant increase in recidivism among program participants; the study may also have one or more recidivism outcome measures that were not statistically significant.
- No statistically significant effect on recidivism: the study reported only outcomes indicating no statistically significant effect on recidivism among program participants.

For a list of the 18 studies, see appendix VII.

We conducted this performance audit from February 2017 through February 2018, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix III: Federal Information Sharing Mechanisms to Address Recidivism among Individuals with Serious Mental Illness

Federal agencies have established interagency groups and other mechanisms, such as web-based resources, to share information related to correctional mental health and reducing recidivism among individuals with serious mental illness, among other things. Examples of these information sharing mechanisms are described in table 5 below.

Table 5: Examples of Information Sharing Mechanisms

Information Sharing Mechanism	Description
Federal Interagency Reentry Council (Reentry Council)	Established in 2011, the Reentry Council is comprised of 20 federal agencies, including the Departments of Justice (DOJ) and Health and Human Services (HHS), among others. The Reentry Council's focus is on removing federal barriers to successful reentry in order to: • make communities safer by reducing recidivism and victimization; • assist those who return from prison and jail in becoming productive citizens; and • save taxpayer dollars by lowering the direct and collateral costs of incarceration. The Reentry Council holds an annual meeting chaired by the Attorney General and is supported by monthly staff-level meetings. Reentry Council efforts have resulted in additional guidance on applying for Social Security and Medicaid benefits prior to inmates' release, which can help individuals with serious mental illness access the services they need in the community in a timely manner.
Interdepartmental Serious Mental Illness Coordinating Committee (ISMICC)	Established in March 2017, in accordance with the 21st Century Cures Act, ISMICC is composed of senior leaders from 10 federal agencies including HHS, DOJ, the Departments of Labor, Veterans Affairs, Defense, Housing and Urban Development, Education, and the Social Security Administration along with 14 nonfederal public members.[a] The Act requires ISMICC to meet at least twice a year. In addition, within a year after the date of enactment of the Act and 5 years after the enactment of the Act, the Committee is required to submit to Congress and any other relevant Federal department or agency a report that generally includes: • A summary of advances in serious mental illness research related to the prevention of, diagnosis of, intervention in, and treatment and recovery of serious mental illness. • An evaluation of the effect Federal programs related to serious mental illness have on public health, including, but not limited to, public health outcomes related to interaction with the criminal justice system. • Specific recommendations for actions that agencies can take to better coordinate the administration of mental health services for individuals with serious mental illness or serious emotional disturbance.
Mental Health Network	The Mental Health Network was established in 2009 with the support of the DOJ's National Institute of Corrections (NIC). It is a national network of mental health directors from the departments of corrections from the 50 states, the five largest urban jails and BOP. The mission of the Mental Health Network is to help define, support, and advance the field of correctional mental health services through research, training and dissemination of knowledge concerning evidenced-based, innovative, and best practices in the field. The Mental Health Network holds an annual meeting and is supported by a number of standing committees and workgroups.

Information Sharing Mechanism	Description
Web-based resources	DOJ and HHS also host or support web-based information sharing resources including: • Council of State Governments Justice Center's *What Works in Reentry Clearinghouse*, a "one-stop shop" for research on the effectiveness of a wide variety of reentry programs and practices, including those related to mental health, that is funded in part by DOJ's Bureau of Justice Assistance; • Substance Abuse and Mental Health Services Administration's National Registry of Evidence-Based Programs and Practices, a searchable online registry of mental health and substance abuse interventions, including those in the criminal justice system; • National Institute of Justice's CrimeSolutions.gov, a web-based clearing house of programs and practices that have been assessed by NIJ for quality on a variety of criminal justice topics, including recidivism among those with mental illness; • NIC's Library, which includes a collection of resources intended to provide a broad overview of current research and trends in the management of mentally ill people in corrections; and • Office of Justice Programs' National Criminal Justice Reference Service, which hosts one of the largest criminal and juvenile justice libraries, including publications on addressing inmate mental health.

Source: GAO analysis of DOJ and HHS information | GAO-18-182

[a]Pub. L. No. 114-255, § 6031, 130 Stat. 1033, 1217-20.

Appendix IV: Federal Bureau of Prisons (BOP) Psychology Services Utilization Data for Incarcerated Inmates, Fiscal Year 2016

Table 6: Federal Bureau of Prisons (BOP) Psychology Services Utilization Data for Incarcerated Inmates, Fiscal Year 2016

Interaction	Description	Interactions with Inmates with Serious Mental Illness	Average per Inmate with Serious Mental Illness	Interactions with Inmates without Serious Mental Illness	Average per Inmate without Serious Mental Illness	Ratio of Averages of Inmates with to Inmates without Serious Mental Illness
Clinical Interventions	Involving the provision of direct clinical services to inmates, including both crisis-oriented and routine clinical interventions.	67,191	9.60	44,185	0.24	40.11
Screenings and Reviews	Policy driven events such as intake screenings.	18,700	2.67	215,163	1.17	2.29
Administrative Notes	Document non-clinical contacts involving little or no face-to-face contact with inmates, such as administrative contact with an inmate, consent form, and missed appointment.	12,651	1.81	20,908	0.11	15.96
Evaluations	Psychologists may be called upon to conduct evaluations for a number of reasons. Examples include institution disciplinary process report, medication evaluation, and intellectual evaluation.	8,392	1.20	23,649	0.13	9.36
Residential Drug Abuse Treatment	The Violent Crime Control and Law Enforcement Act of 1994 requires the BOP, subject to the availability of appropriations, to provide appropriate residential substance abuse treatment for 100 percent of inmates who have a diagnosis of substance abuse or dependence and who volunteer for treatment.[a]	5,230	0.75	143,150	0.78	0.96
Forensic Examinations	A psychological or psychiatric evaluation of an inmate committed to BOP custody for pretrial and post-trial detention during the pre-sentence stage of trial.	3,955	0.56	493	0.00	211.60
Consultations and Referrals	Professional communication between staff and referrals for additional services.	2,822	0.40	4,437	0.02	16.78
Adjunctive Services	Services provided in support of clinical interventions. According to BOP policy, the demand these services place on staff resources is minimal.	2,459	0.35	24,904	0.13	2.60

Interaction	Description	Interactions with Inmates with Serious Mental Illness	Average per Inmate with Serious Mental Illness	Interactions with Inmates without Serious Mental Illness	Average per Inmate without Serious Mental Illness	Ratio of Averages of Inmates with to Inmates without Serious Mental Illness
Step Down Program	Program provides intensive treatment for inmates releasing from psychiatric hospitalization and may include clinical contact, diagnostic interviews, and treatment plans.	2,434	0.35	2	0.00	32,100.40
Sex Offender Management Programs	Multi-component program that includes the Sex Offender Treatment Program, assessment, specialized correctional management, and population management. These include high intensity residential programs and moderate intensity non-residential programs.	1,841	0.26	11,185	0.06	4.34
Steps Toward Awareness, Growth, and Emotional Strength (STAGES)	Program designed to treat inmates who have a diagnosis of Borderline Personality Disorder and have a history of behavioral problems and/or self-harm.	1,520	0.22	340	0.00	117.92
Non-Residential Drug Abuse Treatment	Program designed to provide maximum flexibility to meet the needs of offenders, particularly those individuals who have relatively minor or low-level substance abuse problems.	1,084	0.15	24,403	0.13	1.17
Resolve Program	Non-residential trauma treatment program for inmates.	928	0.13	3,602	0.02	6.80
Challenge Program	Residential cognitive-behavioral treatment program for high security inmates with a history of substance abuse and/or mental illness.	814	0.12	6,966	0.04	3.08
Commitment and Treatment Program	BOP's Sex Offender Certification Review Branch reviews releasing sex offenders for possible certification as sexually dangerous persons.	720	0.10	381	0.00	49.85
Skills Program	Program designed for inmates with significant cognitive limitations and social skills deficits that create adaptive problems in prison and in the community.	587	0.08	160	0.00	96.77

Interaction	Description	Interactions with Inmates with Serious Mental Illness	Average per Inmate with Serious Mental Illness	Interactions with Inmates without Serious Mental Illness	Average per Inmate without Serious Mental Illness	Ratio of Averages of Inmates with to Inmates without Serious Mental Illness
Drug Education	Course participants receive factual information on the relationship between drug use and crime – the impact substance abuse has on the inmate psychologically, biologically and socially – while also motivating inmates to volunteer for the appropriate drug abuse treatment programs.	478	0.07	8,510	0.05	1.48
Inmate Companion Program	Program for monitoring potentially suicidal inmates, it focuses on provision of training/services to inmate companions, rather than to inmates in need of direct clinical intervention. While the inmate companion program is time consuming for staff, it does not involve direct clinical services for inmates, hence it is considered an adjunctive service.	98	0.01	2,445	0.01	1.06
Community Treatment Services	Services for inmates who completed a Sex Offender Treatment Program or Residential Drug Abuse Program. Provides a network of community-based treatment providers such as psychologists, psychiatrists, and social workers.	76	0.01	391	0.00	5.13
Bureau Rehabilitation and Values Enhancement (BRAVE) Program	Program for young offenders serving lengthy sentences, addresses institutional adjustment, antisocial attitudes and behaviors, and motivation to change.	10	0.00	1,323	0.01	0.20

Source: GAO analysis of BOP data. | GAO-18-182

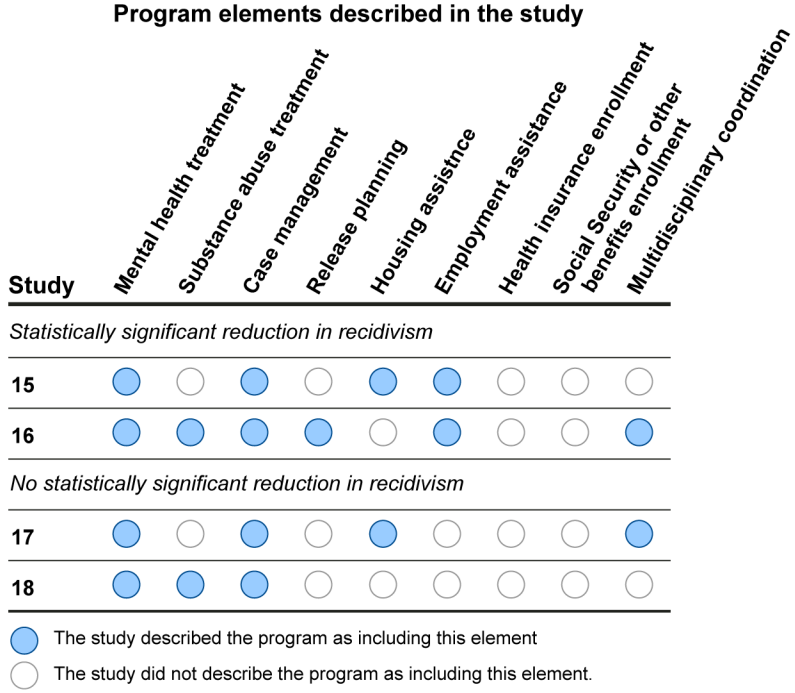
[a]18 U.S.C. § 3621(e).

Appendix V: Findings of Studies Examining the Recidivism Effects of Non-Correctional Programs for Individuals with Mental Illness

Our literature review also identified four studies that met the criteria of (1) containing quantitative analyses of the effect of a program for individuals with mental illness on recidivism, and (2) using sufficiently sound methodologies for conducting such analyses; but were in non-correctional settings, such as in a psychiatric hospital or in the community after a psychiatric hospitalization. While the findings from these studies may not be generalizable to a correctional setting, they may offer insights on effective strategies for reducing recidivism, as many of the program participants had a history of involvement with the criminal justice system.

As shown in figure 7, half (2 of 4) of the studies found statistically significant reductions in recidivism. The non-correctional programs that were found to reduce recidivism included some of the same elements as the correctional programs that reduced recidivism, including mental health treatment (2 of 2 studies), substance abuse treatment (1 of 2 studies), case management (2 of 2 studies), release planning (1 of 2 studies), employment assistance (2 of 2 studies), housing assistance (1 of 2 studies), and multidisciplinary coordination among mental health providers, substance use specialists, social workers, and/or peer support specialists, for example (1 of 2 studies). However, similar to the literature on correctional programs, there were also studies that found that programs that offered multiple support services did not reduce recidivism, suggesting other factors may affect recidivism; such factors may include the extent to which participants used services, as previously noted, as well as other unique programmatic factors. We further discuss examples of programs that did and did not reduce recidivism below.

Figure 7: Study Findings and Elements of Non-Correctional Programs Examined



Source: GAO analysis of studies. | GAO-18-182

Note: The studies' statistical significance findings are based on the examination of the program as a whole and do not indicate if or how individual elements of the program, such as those listed above, affected recidivism. Multidisciplinary coordination may include coordination between mental health providers, criminal justice agencies, substance use specialists, social workers, and/or peer support specialists, among others.

For example, study 15 evaluated New York's Assisted Outpatient Treatment, a court-ordered treatment program for individuals with mental illness and a history of multiple hospitalizations or violence toward self or others. Individuals entering the program are assigned a case manager and prioritized for enhanced services that include housing and vocational services. Researchers found that the comparison group who never received Assisted Outpatient Treatment had nearly double the odds (odds ratio of 1.91) of being arrested than program participants during and shortly after the period of assignment to the program.

The programs that were found not to reduce recidivism also provide some insights into factors that affect recidivism. For example, study 18 evaluated a Pennsylvania-based modified outpatient therapeutic community treatment program for individuals with co-occurring substance

use disorder and emotional distress or mental illness and found that it had no significant effect on recidivism. Researchers attributed this finding to the program's emphasis on substance use rather than on addressing criminogenic risks.

Appendix VI: Literature Review Findings for Selected Recidivism Measures

The 14 studies we identified through our literature review that (1) assessed correctional institution or reentry programs for offenders with mental illness implemented in the United States (2) contained quantitative analyses of the effect of a program on recidivism, and (3) used sufficiently sound methodologies for conducting such analyses, used a number of different recidivism outcome measures, and some assessed more than one recidivism outcome measure. Tables 7, 8, and 9 below show the recidivism results for studies that measured reincarceration rates, reconviction rates, and number of days in jail or prison, which were reported by multiple studies. These do not represent all recidivism findings; some studies used other recidivism measures such as the number of arrests or convictions, odds ratio or hazard ratio of reincarceration, and self-reported criminal activity.

Table 7: Differences in Reported Reincarceration Rates between Program Participants and Comparison Group Members

	Statistically significant percentage point difference in rate of reincarceration where reported, and time frame covered			
Study	**3 months**	**6 months**	**12 months**	**Varied[a]**
Statistically significant reduction in recidivism[b]				
1	-	-14	-	-
3	-	-	-22[c]	-
	-	-	-19[d]	-
6	-	-	-24[c]	-
	-	-	-28[d]	-
7	-	-	Not significant	-
No statistically significant effect on recidivism[b]				
11	-	-	-	Not significant
12	Not significant	-	Not significant	-
13	-	Not significant	-	-

Legend: - Not applicable

Source: GAO analysis of studies. | GAO-18-182

[a]The time frame at which recidivism was measured varied by participant.

[b]This indicates our overall categorization of the study findings, which is based on all reported recidivism measures, not just the reincarceration measure reported here.

[c]This is the reported difference between the prison program participants and the comparison group.

[d]This is the reported difference between the participants in post-release reentry program and the comparison group.

Table 8: Differences in Reported Reconviction Rates between Program Participants and Comparison Group Members

Study	Statistically significant percentage point difference in rate of reconviction where reported, and time frame covered			
	12 months or less	2 years	4 years	Varied[a]
Statistically significant reduction in recidivism[b]				
2	-	-	-	Not significant
4	Not significant	Not significant	-	-
8	-	-19[c]	-	-
	-	-22[d]	-	-
9	-	-	-20[c]	-
	-	-	-9[e]	-
No statistically significant effect on recidivism[b]				
11	-	-	-	Not significant
14	Not significant	-	-	-

Legend: - Not applicable

Source: GAO analysis of studies. | GAO-18-182

[a]The time frame at which recidivism was measured varied by participant.

[b]This indicates our overall categorization of the study findings, which takes into account all reported recidivism measures, not just the reconviction measure reported here.

[c]This is the reported difference in felony reconviction rates between program participants and the comparison group.

[d]This is the reported difference in reconviction rates for any offense between program participants and the comparison group.

[e]This is the reported difference in violent felony reconviction rates between program participants and the comparison group.

Table 9: Differences in Reported Number of Days in Jail or Prison between Program Participants and Comparison Group Members

	Statistically significant percentage point difference in the number of days in jail or prison where reported, and time frame covered			
Study	**6 months or less**	**12 months**	**2 years**	**Varied[a]**
Statistically significant reduction in recidivism[b]				
1	-10	-	-	-
2	-	-	-	Not significant
4	-	Not significant	Not significant	-
Statistically significant increase in recidivism[b]				
10	-	13[c]	-	-
	-	7[d]	-	-
No statistically significant effect on recidivism[b]				
14	Not significant	Not significant	-	-

Legend: - Not applicable

Source: GAO analysis of studies. | GAO-18-182

[a]The time frame at which recidivism was measured varied by participant.

[b]This indicates our overall categorization of the study findings, which takes into account all reported recidivism measures, not just the number of days in jail or prison measure reported here.

[c]This is the reported difference in jail days between program participants and the comparison group.

[d]This is the reported difference in prison days between program participants and the comparison group.

Appendix VII: Bibliography

This bibliography contains citations for the 18 studies we reviewed regarding programs for individuals with mental illness that may affect recidivism. (See appendix II for more information about how we identified these studies.) Following the citation we include the study numbers that we used to reference the study earlier in this report.

Burke, C. and S. Keaton. *San Diego County's Connections Program Board of Corrections Final Report.* San Diego, CA: SANDAG, June 2004. (Study 1)

Chandler, D.W. and G. Spicer. "Integrated Treatment for Jail Recidivists with Co-occuring Psychiatric and Substance Use Disorders." *Community Mental Health Journal*, vol. 42, no. 4 (2006):405-425. (Study 2)

Compton, M.T., M.E. Kelley, A. Pope, K. Smith, B. Broussard, T.A. Reed, J.A. DiPolito, B.G. Druss, C. Li, and N.L. Haynes. "Opening Doors to Recovery: Recidivism and Recovery Among Persons With Serious Mental Illnesses and Repeated Hospitalizations." *Psychiatric Services*, vol. 62, no. 2 (2016): 169-175. (Study 17)

Cusack, K.J., J.P. Morrissey, G.S. Cuddleback, A. Prins, and D.M. Williams. "Criminal Justice Involvement, Behavioral Health Service Use, and Costs of Forensic Assertive Community Treatment: A Randomized Trial." *Community Mental Health Journal*, vol. 46 (2010): 356-363. (Study 4)

Duwe, G. "Does Release Planning for Serious and Persistent Mental Illness Offenders Reduce Recidivism? Results From an Outcome Evaluation." *Journal of Offender Rehabilitation*, vol. 54, no. 1 (2015): 19-36. (Study 11)

Link, B.G., M.W. Epperson, B.E. Perron, D.M. Castille, and L.H. Yang. "Arrest Outcomes Associated with Outpatient Commitment in New York State." *Psychiatric Services*, vol. 62, no. 5 (2011): 504-508. (Study 15)

Mayfield, J. *The Dangerous Mentally Ill Offender Program: Four-Year Felony Recidivism and Cost Effectiveness*. Olympia, WA: Washington State Institute for Public Policy, February 2009. (Study 9)

Morrissey, J.P., G.S. Cuddeback, A.E. Cuellar, and H.J. Steadman. "The Role of Medicaid Enrollment and Outpatient Service Use in Jail Recidivism Among Persons with Severe Mental Illness." *Psychiatric Services*, vol. 58, no. 6 (2007):794-801. (Study 5)

Morrissey, J.P., M.E. Domino, and G.S. Cuddeback. “Expedited Medicaid Enrollment, Mental Health Service Use, and Criminal Recidivism Among Released Prisoners With Severe Mental Illness.” *Psychiatric Services*, vol. 67, no. 8 (2016): 842-849. (Study 10)

Sacks, J.Y., K. McKendrick, and Z. Hamilton. “A Randomized Clinical Trial of a Therapeutic Community Treatment for Female Inmates: Outcomes at 6 and 12 Months After Prison Release.” *Journal of Addictive Diseases*, vol. 31, no. 3 (2012): 258-269. (Study 7)

Sacks, S., M. Chaple, J.Y. Sacks, K. McKendrick, C.M. Cleland. “Randomized Trial of a Reentry Modified Therapeutic Community for Offenders with Co-Occuring Disorders: Crime Outcomes.” *Journal of Substance Abuse Treatment*, vol. 42 (2012): 247-259. (Study 3)

Sacks, S, K. McKendrick, J.Y. Sacks, S. Banks, M. Harle. “Enhanced Outpatient Treatment for Co-Occurring Disorders: Main Outcomes.” *Journal of Substance Abuse Treatment*, vol. 34 (2008): 48-60. (Study 18)

Sacks, S., J.Y. Sacks, K. McKendrick, S. Banks, and J. Stommel. “Modified TC for MICA Offenders: Crime Outcomes.” *Behavioral Sciences and the Law*, vol. 22 (2004): 477-501. (Study 6)

Taylor, N. *An Analysis of the Effectiveness of Santa Clara County’s Mentally Ill Offender Crime Reduction Program*. Anne Arbor, MI: ProQuest Information and Learning Company, May 2005. (Study 14)

Theurer, G. and D. Lovell. “Recidivism of Offenders with Mental Illness Released from Prison to an Intensive Community Treatment Program.” *Journal of Offender Rehabilitation*, vol. 47, no. 4 (2008): 385-406. (Study 8)

Van Stelle, K.R., and D.P. Moberg. “Outcome Data for MICA Clients After Participation in an Institutional Therapeutic Community.” *Journal of Offender Rehabilitation*, vol. 39 no.1 (2004): 37-62. (Study 12)

Yates, K.F., M. Kunz, A. Khan, J. Volavka, and S. Rabinowitz. “Psychiatric Patients with Histories of Aggression and Crime Five Years after Discharge from a Cognitive-Behavioral Program.” *The Journal of Forensic Psychiatry and Psychology*, vol. 21, no. 2 (2010):167-188. (Study 16)

Zlotnick, C., J. Johnson, and L.M. Najavits. “Randomized Controlled Pilot Study of Cognitive-Behavioral Therapy in a Sample of Incarcerated Women with Substance Use Disorder and PTSD.” *Behavior Therapy*, vol. 40 (2009): 325-336. (Study 13)

Appendix VIII: GAO Contact and Staff Acknowledgments

GAO Contact

Diana Maurer, (202) 512-8777 or maurerd@gao.gov

Staff Acknowledgments

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