1-1-2021

Evaluating the Impact of Federal Mental Health Policy: An Analysis of How Federal Deinstitutionalization Impacted Persons with Severe Mental Illness

Jillian K. Douglas
Seattle University

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Jillian K. Douglas, DNP-PMHNP

A DNP project submitted in partial fulfillment of the requirements for the degree of

Doctor of Nursing Practice

Seattle University

2021

Approved by _____ Date: 6/11/2021

Lauren Valk Lawson, DNP, RN, Advanced Community/Public Health Track Lead

Seattle University College of Nursing

Abstract:

This policy evaluation project evaluated how federal mental health policy changes impact individuals diagnosed with severe mental illness through analyzing how institutionalization and deinstitutionalization policies impact persons with severe mental illness (SMI). In order to determine how federal policy changes impact outcomes for people diagnosed with SMI, psychiatric hospitalization rates per 100,000 from 1850 to 2015 are compared to the life expectancy, incarceration rates per 100,000, and percentage of unhoused population with SMIs in the United States (U.S.) during the same years . Research compiled for this paper found that decreasing the numbers of psychiatric beds correlates with increased rates of homelessness (R-0.71), increased rates of incarceration (R-0.53), and decreased life expectancy (R-0.78) for persons with SMI. From 1980 to 2015, for every time the psychiatric population goes down by 1 person per 100,000, there are 0.8 people with SMI who are incarcerated.

There is a scarcity of psychiatric beds and an overabundance of prison cells. This project demonstrates that periods of increased centralization of mental health policy correlate with improved outcomes for people with SMI. Transinstitutionalization and homelessness are more expensive than providing comprehensive community treatment and housing for people living with SMI. Increased federal funding in programs that provide supportive housing and psychiatric care reduce taxpayer cost and improve outcomes for people living with SMI. Fixing this crisis will involve more than simply changing the locus of care away from incarceration. America needs legislation supporting increased federal financial and programmatic support to improve outcomes for people with SMI.

Keywords: Deinstitutionalization, institutionalization, federal health policy, mental health policy, incarceration, transinstitutionalization, U.S., psychiatric hospitalization, standardized mortality ratio, severe mental illness, mortality, homelessness, psychotic disorders, Schizophrenia.

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Introduction

Imagine a person is diagnosed with cancer. They go to the emergency room for treatment, are given perfunctory examination. While there, they are told that there are no beds available and then discharged without medications or a viable follow-up plan. They must wait until their cancer poses an imminent risk to themselves or wait until their cancer progresses to the point where they are not able to perform basic functions of daily living. This is the situation that people living with severe mental illness, such as schizophrenia, face in the United States (U.S.).

Mentally ill people often come to emergency rooms seeking help, but are discharged without a feasible follow up plan due to lack of available psychiatric beds (Montross, 2020). Dangerousness criteria for involuntary commitment combined with lack of access to affordable community services force sick people to wait until a debilitating disease inhibits their ability to function. Similar to diseases like brain cancer or alzheimers, severe mental illnesses, like schizophrenia, cause measurable abnormalities in brain structure and function. When a person with schizophrenia experiences a psychotic episode, their brain undergoes neuronal and synaptic loss of brain tissue, leading to progressive decline in social and vocational function (Karlsgodt et al, 2010). In contrast to schizophrenia, a patient with cancer would never be incarcerated in order to obtain treatment. Due to lack of mental health services, some consider jail as a treatment option for disadvantaged citizens with SMI. Across the U.S. (U.S.), this phenomenon is called compassionate arrest (Montross, 2020). The fact that such a strategy exists illuminates the unjust treatment of persons with SMI. People with SMI lack access to treatment, food, and housing. Failures in federal policy and lack of adequate funding for mental health services have led to a perennial cycle of adverse outcomes for people with severe mental illness (SMI): unstable housing, incarceration, and premature death.

Throughout American history, policy makers have failed to adequately fund mental health policy, ignoring basic needs of a vulnerable population and blaming politics for poor outcomes. Prior to the

Mental Health Act of 1955, nearly all patients with severe mental illness were housed and treated at state funded mental health hospitals. Unfortunately, patients received inadequate treatment and were often held without their consent for years (Bly, 1887; Maisel, 1946). After deinstitutionalization, the population of people with severe mental illness shifted from hospitals to prisons (Torrey, 1992; Montross, 2021). Today, individuals with severe mental illness (SMI) in the U.S. are more likely to be homeless or incarcerated than receiving care in a psychiatric facility (Fullerton, 2017; Torrey, 2014).

This paper analyzes the correlation between federal policy changes that impact access to psychiatric treatment and outcomes for persons with SMI. The American mental health crisis exists not due to lack of adequate treatment options, but due to lack of access to treatment. There are currently 12.6 public psychiatric hospital beds available for every 100,000 people in the United States. In 1840 there were 20 beds available for every 100,000 people (Torrey et al, 2015). The number of public psychiatric beds available per 100,0000 people in 2020 is less than it was in 1850 (see table 6 and 7 in supplemental materials). Similarly, 20% of individuals in jails and prisons meet diagnostic criteria for severe mental illness (Bureau of Justice Statistics, 2020), more than the 15% that Dorthea Dix estimated when she decried the practice of incarcerating vulnerable populations with mental illness (Torrey, 1997). Even though antipsychotic medication and therapeutic treatment options have drastically improved, the situation faced by people experiencing SMI today mirrors the experiences of people with serious mental illnesses in the 1850. There is a shortage of psychiatric beds and an abundance of jail and prison cells. Fixing this crisis will involve more than simply changing the locus of care away from incarceration. To improve this situation, we need the same thing that Dorthea Dix fought for in 1850. America needs legislation supporting increased federal financial and programmatic support to improve outcomes for people with SMI. This paper aims to identify why these issues continue and to make policy recommendations that will stop this cycle.

Project Purpose

The same issues of lack of autonomy and inhumane treatment of persons with SMI that sparked a public outcry for institutionalization in 1850 and deinstitutionalization in 1955 continue 70 years after the implementation of deinstitutionalization policies that removed psychiatric patients from state funded psychiatric hospitals.This paper aims to identify why these issues continue and to make policy recommendations that will stop this perennial cycle. This project examines how changes in federal mental health policies impact individuals diagnosed with SM through a retrospective analysis of how psychiatric hospitalization rates per 100,000 influence rates of homelessness, incarceration, life expectancy, and access to treatment among the seriously mentally ill population between 1850-2015. To do this a meta-analysis of standardized mortality ratios and incarceration rates over time was completed.

This paper analyzes the correlation between federal policy changes that impact access to psychiatric treatment and outcomes for persons with SMI. The American Psychological Association (APA) defines Severe Mental Illness (SMI)) as a mental or behavioral disorder that causes significant functional impairment, negatively impacting major life activities (APA, 2013). Examples of SMI include schizophrenia, bipolar disorder, and other psychiatric disorders that result in poor self-care or prevent people from engaging in other social and occupational areas of functioning. There are no quick fixes for mental illness. Just as insulin manages diabetic symptoms, psychiatric medications do not cure the illnesses, but control the symptoms. People with mental illness require long term, continued access to mental health support services.

Review of data from the U.S. is critical to understanding policy impact and changes to U.S. populations over time. Most research on the impact of deinstitutionalization was published in the early nineteen nineties. As an example, Torrey (1997) identified a lack of available mental health beds as a core issue in the mental health crises. However, most publications fail to differentiate between long-term supportive housing, non-profit hospitals, and for-profit hospitals. Lack of differentiation between supportive psychiatric facilities and short-term hospitalization has led to a ballooning of for-profit

short-term psychiatric hospitals throughout the U.S. (Gilbert, 2019; National Association of State Mental Health Program Directors, 2014). While construction of for-profit hospitals increases the official number of psychiatric beds available within a state, it fails to address the long-term care needs of people with SMI. Other research has looked broadly at global issues pertaining to mental illness but has not specifically focused on SMI in the U.S.. For example, there are two meta-analysis reports on the global disease burden and mortality of patients with schizophrenia by Olfsen et al. (2015) and Walker et. al. (2015), but none that directly addresses Standardized Mortality Ratios (SMRs) U.S. This is the first meta-analysis analyzing SMR in relation to U.S. policy.

Background and Literature Review

This section reviews the academic literature on the psychiatric practice of civil commitment and provides an overview of the history of involuntary psychiatric hospitalization in the U.S. from the era of institutionalization to deinstitutionalization. Severe and Chronic Mental Illnesses (SMI) are defined by both the SAMHSA (2017) and the Diagnostic and Statistical Manual V (DSM V, 2013) as mental illnesses resulting in functional impairment that substantially impacts major life activities. Current mental health policy penalizes people for mental illness and fails to provide sufficient support, leading to expensive and traumatic outcomes such as incarceration, involuntary hospitalization, and chronic illness. The same issues that sparked a public outcry for deinstitutionalization of SMI continue 70 years after the implementation of deinstitutionalization policies that removed psychiatric patients from state funded psychiatric hospitals. The intention of this study is to identify why these issues continue, even after significant policy changes have been implemented.

This project aims to explain the history of federal mental health policies and their impacts on people with SMI in order to illustrate the importance of implementing comprehensive single-payer mental health policy. A detailed description of each aim is listed below:

1. Explain the differences and identify shortcomings of dangerousness versus right to treat policies and how these policies impact compulsory commitment (CC).
2. Explain history of federal mental health policy and how past policy decisions impact current mental health policy by a) identifying how federal policy shifts, such as institutionalization and deinstitutionalization, impacted rates of homelessness, incarceration, and life expectancy for people with SMI between 1850 and 2020; b) determine if periods of increased centralization of mental health policies correlates with improved outcomes for people with SMI.
3. Identify the financial impact of transinstitutionalization. Compare cost of comprehensive mental health services for SMI versus cost of incarceration and chronic rehospitalization.
4. Utilize findings to make recommendations for improvement to mental health policy at state or federal level.

Conceptual or Theoretical Framework: Policies that fail do so because they try to solve the wrong problems, not because the policies offer the wrong solutions to the right problems (Harrigan & Estes, 2012; Walker, 2000). Therefore, this analysis aims to identify the essential problems of mental health policy and make recommendations accordingly. This literature review systematically analyzes available sources, including published research articles, congressional documents, federal and state policies, and first-person accounts according to specific themes. Literature concerning compulsory commitment, institutionalization, deinstitutionalization, homelessness, incarceration, and life expectancy among the SMI population were included in this review. This paper aims to correctly identify problems with the U.S.' mental health policy in order to make appropriate recommendations for changes to current policies.

The following literature review and background information are organized by research aim and policy era. This paper starts with information regarding aim one, the history of right to treat versus dangerousness legislation. The following section details literature regarding the history of mental health policy. Historical sections are organized chronologically and by research aim. Within each era, mental health policies impacting homelessness and incarceration for persons with SMI are examined. Each section is broken down by historical era and research aim as follows: (1) **1840-1854:** Pre-federal legislation of treatment for mental illness, (2) **1855-1879:** transition to institutionalization, (3) **1880-1954:** institutionalization, (4) **1955-1980:** transition to deinstitutionalization with centralized, federal support, and (5) **1981-2021:** transinstitutionalization without federal financial support of services for people with SMI [See Figure 1, page 60].

AIM 1: Right to treatment versus dangerousness laws and compulsory commitment

This section explains the history of involuntary psychiatric hospitalization in the U.S. and changing legislation regarding right to treatment versus dangerousness policy. Prior to 1955 people with SMI were housed at state funded psychiatric hospitals. Commitment decision making was less legalistic and placed priority on an individual's need or 'right to treatment'(Testa & West, 2010). After 1955 state and federal legislation shifted away from a need-for-treatment model to a dangerousness model.

Prior to deinstitutionalization, federal health policy for involuntary psychiatric hospitalization required only the presence of mental illness and a recommendation for treatment from a mental health professional (Anfang & Applebaum, 2006). Commitment was based on a need for treatment. Commitment standards were based on the doctrine of *parens patriae*, the government's obligation to protect citizens who cannot protect themselves (Testa & West, 2010). No psychiatric medications existed, and policy makers believed that inpatient hospitalization benefitted patients with mental illness. Patients with SMI were presumed incapable of making decisions. During this time, a person's need for mental healthcare was considered above all else. Institutionalization at a psychiatric hospital, then called an asylum, required only the presence of a mental illness with a recommendation of need for treatment;

resulting in loss of liberty, rights, and property (Birnbaum, 1960; Burley, 2015; SAMSA 2019). However, lack of clear admission criteria combined with unprincipled family members, caused some individuals without SMI to be hospitalized unnecessarily (Testa & West, 2010). Furthermore, involuntary psychiatric facilities were often overcrowded and under-staffed, causing public concern for the welfare and autonomy of people living in these institutions (Anfang & Appelbaum, 2006).

Concern for patient autonomy led the U.S. (U.S.) Supreme Court and state governments to shift legislation away from a right to treatment to a dangerousness model. The dangerousness model of mental illness requires the presence of dangerousness (suicidality/homicidality) that is imminent (close future event) or grave disability (inability to provide for necessities for their basic survival) for a mentally ill person to be committed to a psychiatric hospital. The dangerousness model also ensured that people with mental illness had the right to hearing for psychiatric hospitalizations longer than three days (Large et. al., 2008). Even though CC policies are created by individual states, they are all governed by federal case law. In 1975, the U.S. Supreme Court severely limited involuntary treatment and hospitalization in O'Connor v. Donaldson, which ruled involuntary hospitalization and or treatment violates a patient's civil rights. The O'Connor v. Donaldson decision cited the Fourteenth Amendment's rights of citizenship and self-determination, causing all states to adjust CC statutes to ensure individuals held involuntarily must pose an immediate threat to themselves or others and must be assessed for safety within 72 hours of hospital admittance. Therefore, while CC laws vary to some degree from state to state, they are often quite similar due to federal mandates limiting the scope of forced hospitalization.

Dangerousness criteria shifted policy from preventing violence to requiring it. People with SMI and their families must wait until a situation is dire to receive help. Today, families watch their loved ones with mental illness decompensate to the point of being unable to care for themselves before they receive treatment (Torrey, 1992; NAMI 2008). The shift away from, right to treat policy, ignores the fact that SMI can be its own form of imprisonment. Dangerousness criteria prevents people whose decision-making abilities are compromised by their illness and symptoms from accessing treatment (Montross, 2021;

Torrey, 1997). Roughly half of individuals with severe mental disorders have impaired insight. Involuntary hospitalization and treatment are necessary to treat some of these individuals (Torrey, 1997). Since they do not believe that anything is wrong with them, they see no reason to accept hospitalization or medication. They know they are the president, coming to deliver God's message. They *know* the CIA is plotting to hurt their family. They know they are safe from Coronavirus because the FBI planted sanitizing electrodes into their hands. No amount of education or motivational interviewing will change their minds. Oftentimes these individuals need inpatient treatment. Under treatment-driven criteria for commitment, these persons would have gained access to the system through hospitalization, on an involuntary basis if necessary. However, under dangerousness standards, the medical system will not intervene until they become a danger to themselves or others. Non-dangerous patients are required to be released to the least restrictive environment. However, there are inadequate community based supportive services for the severely mentally ill. Therefore, people with SMI who do not pose a threat to themselves, or others are released to the street without access to care (Large et. al., 2008; Montross, 2021).

Current CC policies serve as a Band-Aid, temporarily stabilizing people, releasing them back into the community, and then brief rehospitalization or incarceration when they are considered an active threat to themselves or their community (Torrey, 1997, Montross, 2020). According to a report by the King County Auditor's Office (Poon, Zadeh, & Leary, 2019), people experiencing homelessness represented 25% of all involuntary treatment cases from 2014 through 2018, and nearly half of repeated (three or more within five years) involuntary commitment cases.

When federal lawmakers institute policies (like dangerousness criteria for involuntary admission) in an effort to increase autonomy, but veto supportive legislation, policymakers disenfranchise the populations they seek to help. The transition from right to treat to dangerousness criteria shifted lack of autonomy due to forced long-term psychiatric hospitalization to lack of autonomy due to incarceration, short term involuntary hospitalization, and homelessness; pushing people with SMI further to the margins of society. The current dangerousness model in combination with lack of adequate funding for

community-based services for the SMI have led to a perennial cycle of adverse outcomes: unstable housing, justice involvement, and incarceration via involuntary commitments at psychiatric hospitals or prisons (Tess & West, 2020). Federal dangerousness policy and state civil commitment laws are inadequate, failing to provide necessary treatment duration and support. Inadequate access to supportive, long term mental health contributes to people with SMI receiving infractions for small crimes that make it difficult for them to be successful in communities. Inadequate access to treatment and legal convictions makes it much more difficult to get housing and employment, leading to vulnerability for recidivism (Large et al, 2008).

Aim Two: Explain history of federal mental health policy and how past policy decisions impact current mental health policy

(1) Pre-federal legislation of treatment for mental illness (1840-1854), (2) transition to institutionalization (1855-1879): Prior to reform efforts by Dorthea Dix, people with SMI in the U.S. were relegated to prisons and almshouses and were not offered treatment (Manning). In the 1850s, Dix appealed to federal and state legislatures in an effort to improve living conditions and establish asylums for people with SMI. Her efforts led to the establishment, by 1872, of state funded psychiatric institutions, then called "moral asylums" in every state. (Manning, 1962). Dix lobbied the U.S. Congress seeking to obtain federal funding to build and maintain psychiatric hospitals for the SMI. On February 21, 1854, both the Senate and the House of Representatives voted yes on the Land-Grant Bill For Indigent Insane Persons (U.S. Library of Congress, 1854). President Pierce vetoed the federal Land-Grant Bill For Indigent Insane Persons bill on the premise that care of the mentally ill was a responsibility of individual states. In his presidential veto, Pierce states concern that the federal government "would become responsible not only for the indigent insane" but also "all the poor of the U.S.." This veto established a pattern of federal non-participation in social welfare programs that continues to impact modern mental health policy (Pierce, 1854; Manning, 1962).

While Dix's efforts to obtain federal funding failed, her advocacy efforts resulted in the establishment of 32 state funded 'moral asylums' throughout the U.S. (Manning, 1962). In 1877, more than a decade before Washington State was officially granted statehood, Fort Steilacoom Asylum, which was later renamed Western State Hospital, was established. The first state government funded hospital in the territory of Washington (Pacific Coast Architecture Database, 2020). By the end of the 19th century, similar psychiatric facilities were present in all states, providing state funded housing and mental health care for the "indigent, elderly, and insane". It is estimated that there were upwards of 400,000 residents with SMI living in state psychiatric facilities. 40% of these patients were considered 'long term' with stays of a year or more (Kramer et al, 1955).

Efforts to place mentally ill persons in psychiatric facilities and remove the mentally ill from almshouses and prisons were extraordinarily efficacious. By 1880, there were 75 public psychiatric hospitals in the U.S. for the total population of 50 million people (Torrey, 1994). During this time, the category of insane persons was included in the 1880 census. The 1880 also included information about where people with mental illness lived. This census included letters to all physicians asking them to list all "insane persons" in their community, a question about "insanity" on the census form that went to each listed household, and a canvas of all psychiatric hospitals, jails, and almshouses. The survey identified a total of 91,959 "insane persons", of which 44% lived at home with supportive family, 44% lived in "hospitals and asylums for the insane," 10% resided in almshouses, and less than one percent (397 individuals) were incarcerated. According to this census, the prison population totaled 58,609 people, meaning inmates represented only 0.7 percent of the prison population. None of the "insane persons" were identified as homeless (National Advisory of Mental Health Council, 1993; Torrey, Gorwitz, 1974). More data from this survey is detailed below.

Access to housing: From the birth of America in 1776 to 1840, humans experiencing SMI were most often housed in almshouses for the poor (Grob, 1991). During this era, the societal view in America was that persons with mental illness lacked the capacity to make their own decisions and required housing

and food. Patients at these institutions received food and housing, but the care provided and the facilities were bleak. These facilities were often understaffed with untrained and underpaid employees, leading to perpetual patient abuse and neglect (Ozarin, 2006; Roberts & Kurtz, 1987). After state reforms were implemented, mentally ill persons were transferred from jails and almshouses to psychiatric hospitals. According to 1880 census data, 44% of mentally ill individuals lived at home with supportive family, 44% lived in "hospitals and asylums for the insane," and 10% resided in almshouses. None of the "insane persons" were identified as homeless (National Advisory of Mental Health Council, 1993; Torrey, 1994).

Incarceration: Repeated incarceration for severely ill people was common in the U.S. until the mid 1860s when reform efforts by Dix were enacted (Gorwitz, 1974). Dix's campaign to improve conditions for the mentally ill began in 1941 after she volunteered at a Boston jail. While there, she observed high rates of mentally ill individuals among inmates and that mentally ill inmates received subpar treatment. Subsequently, Dix committed to reforming conditions for the mentally ill. By 1843, she had visited 300 county jails, 18 prisons, and 500 almshouses, documenting elevated incarceration rates and substandard conditions for the mentally ill (Dix, 1843; Torrey, 1994). Among the specific recommendations from her reform efforts were that all mentally ill inmates of jails, prisons, and almshouses be transferred to government funded psychiatric hospitals and that incarceration of mentally ill persons in the state's jails should be made illegal (Manning, 1962; Dix, 1843; Torrey, 1997). While Dix's efforts to institute federal support for the mentally ill failed, her efforts to remove mentally ill people from prisons were successful. Dix successfully petitioned state governments to remove the mentally ill from prisons and transfer them to psychiatric facilities. After Dix's reforms were implemented across all states, initiating the era of institutionalization (1880-1954), the mentally ill population at jails and prisons plummeted. According to 1880 census data, only 397 individuals out of a total of 91,959 "insane" citizens were incarcerated, meaning less than one percent of the mentally ill population in the U.S. was incarcerated. In 1880, mentally ill inmates represented only 0.7 percent of the prison population.

Quality of life: As described by Roberts and Kutz (1989), the time period from 1840 to 1880 represents a transition from incarceration to institutionalization of persons with SMI. This period saw the development of 'moral treatment for the mentally insane' that advocated for humane treatment of mentally ill. Moral asylums were designed to be relatively small so that staff-patient relationships could be developed, and a therapeutic environment sustained. These facilities were intended to have a maximum size of 250 beds and specially trained staff so each patient could receive individualized care.

1880-1954: State funded institutionalization

Impact of Mental Health Policy: The moral asylum movement led to the development of state funded psychiatric hospitals throughout the U.S.. While the intentions of Dix's moral model were good, lack of a sustainable, centralized funding caused states to underfund these facilities. By 1900, psychiatric institutions were at more than double their intended capacity, holding upwards of 600 patients (Roberts& Kurtz, 1987). Public mental asylums were transformed from small facilities into large, custodial mental hospitals understaffed with untrained and underpaid employees, leading to patient abuse and neglect. Furthermore, while patient right to treatment was assumed, there was very little patient autonomy. If deemed "indigent or insane", the patient was admitted and needed family or medical support to be discharged (Ozarin, 2006; Roberts& Kurtz, 1987). During the era of institutionalization between 1880 and 1854 patients were given access to housing, food and some level of mental health treatment. However, due to President Pierce's veto, which established federal non-participation in social welfare policy and placed financial responsibility for psychiatric facilities on individual states, these facilities lacked sustainable infrastructure. Therefore these facilities quickly became unclean, understaffed, underfunded and overcrowded (Manning, 1962).Without sustainable federal legislation and funding, Dix's reforms created different problems.The U.S. movement to institutionalization without a concurrent shift in centralized public infrastructure led to unjust violations of autonomy. In many ways these reforms shifted lack of autonomy from incarceration to forced long-term hospitalization at overcrowded and understaffed facilities.

President Pierce's veto citing state autonomy as a primary reason for federal disinvestment in mental health services continued to impact mental health policy. This veto placed a straight jacket on federally supported social policy for 80 years until New Deal relief measures and the Social Security Act were passed in the 1930s (Manning 1962; Grob, 1991). Between 1853 and 1954, state funded mental institutions continued to house and treat people with SMI without federal infrastructure of support. However, during the Great Depression in the 1930s power shifted to the federal government, expanding centralized infrastructure and creating new systems to support people with SMI. The Great Depression produced bankrupt local governments and overburdened voluntary agencies, forcing increases in federal social welfare policy (Mechanic, 1992). In response to the Great Depression, President Franklin Delano Roosevelt instituted New Deal federal policies for Social Security Income, federal works programs, and labor regulations. The New Deal policies shifted more power to the federal government and garnered increasing public support of federally funded programs. Federally funded programs continued to expand throughout FDR's presidency, expanding government safety nets throughout World War II (Manning, 1962).

From 1930-1946 some federal mental health programs were established by President Roosevelt and President Harry Truman. During this period, public opinion and policy begin shifting towards the community care model, but asylum treatment continues to be the norm (Roberts & Kurtz, 1987). Soldiers return from war with various mental health conditions, including mental illness. After Maisel's report comparing psychiatric institutions to Nazi concentration camps, there is a large public outcry about the dearth of services available to these men. Public opinion shifts from supporting long-term psychiatric asylums to supporting community mental health treatment.

In response to these changing social and political tides, in 1946 the National Institute of Mental Health Act was written and presented to Congress by Robert H. Felix, then head of the Division of Mental Hygiene and director of Lexington Narcotics Farm. In writing this bill, Felix sought to shift national

resources away from insane asylums and towards research, in the hope of illustrating effectiveness of community mental healthcare (Roberts& Kurtz, 1987; U.S. Congress, 1946; Weiss, 1990).

Access to housing and treatment: By the end of the 19th century, psychiatric facilities were present in all states, providing state funded housing and mental health care for the "indigent, elderly, and insane" in all states. There were upwards of 400,000 residents living in state psychiatric facilities. 40% of these patients were considered 'long term' with stays of a year or more (Kramer et al, 1955).

Incarceration: Throughout this period incarceration of the mentally ill continued to be rare. People with mental illness were admitted to psychiatric institutions (Grob, 1991). A study conducted in 1930 of mental illness among criminal offenders found that of 10,000 prisoners, less than 1.5% met the criteria for psychosis (Bromberg & Thompson, 1937).

Quality of life (1880-1930): The population of the U.S. swelled due to burgeoning rates of immigration. Population increase led to a sharp increase in need for psychiatric beds. Conditions at these institutions were often bleak. As described by Roberts and Kutz (1989), most mental health facilities were built according to the moral model and were meant to house no more than 250 people. By the early 1900s, most facilities were at more than four times their intended capacity, holding upwards of 1,000 patients. Public mental asylums were transformed from small facilities into large, custodial mental hospitals understaffed with untrained and underpaid employees, leading to chronic abuse and neglect (Grob, 1991; Kramer et al, 1955).

During this period, there were three highly notable primary source accounts that sparked brief public outcry and unsuccessful reform movements. The first was written by journalist Nellie Bly. Bly wrote Ten Days a Madhouse (1887) about her experience at Blackwell Island Insane Asylum, detailing the abuses she witnessed. Bly was originally held consensually at the Asylum after pretending to be 'a lunatic.' However, after being admitted, Bly was unable to leave. When Bly told nurses and psychiatrists, "I do everything I am told, and all the work they give me. I am obedient in every respect, and I do everything to prove to them that I am sane. I must insist on a thorough examination or be released."

However, each time staff would reply, “you and others are insane and suffering from delusions. “While there Bly also documented gross abuses and neglect of patients by staff (Bly, 1887). This report sparked public outcry and a federal investigation followed her report. Changes were eventually instituted at Blackwell Insane Asylum, but systematic reform efforts were unsuccessful (Grob, 1991).

Similarly, in 1908 Clifford Beers, a former asylum patient, published the Mind That Found Itself, an account of his cruel and inhumane treatment as a psychiatric patient at a state psychiatric facility. In response to public outrage after publishing this book, Beers established the "National Committee for Mental Hygiene." Through this he developed a national health reform agenda that centered on improving cleanliness, eliminating abuse, and establishing higher wages for staff at psychiatric institutions. Beers' goal was to improve the conditions (Roberts& Kurtz, 1987; Parry, 2010). Throughout this period conditions at psychiatric facilities continue to decline due to extreme underfunding and lack of federal support.

Beers efforts had little effect on conditions at these facilities, as evidenced by a 1941 expose written by Albert Maisel and published in Life Magazine that compared the atrocities he observed in both State run psychiatric facilities and at federally funded Veterans Administration mental hospitals. In his report, Maisel included detailed court records documenting scores of deaths of patients following beatings by attendants, copious use of physical restraints, and extreme problems with understaffing due to insufficient staff salaries and unsafe work conditions. This report included damning images that shocked the American public and sparked the initiation of the deinstitutionalization movement. Images from this report are included as they were originally in the appendix [See Figure 2, page 60].

1955-1980: Deinstitutionalization and expansion of federal government

Changes to Mental health Policy: Deinstitutionalization began in 1955 with the introduction of effective antipsychotic medication. Antipsychotics, like Thorazine, ignited hope that patients with SMI who had been relegated to spend their lives in institutions could go home, and maybe even be cured (Torrey, 1997; Montross, 2021). Given this optimism, Congress passed the 1955 Mental Health Study Act,

commanding changes to the mental health system and reporting gross injustices in the current state-run system. The report called for establishment of a federally funded mental healthcare system, identifying the need for a "national program" to address inadequacies in the treatment of people with SMI in America (Joint Commission on Mental Illness and Health, 1961). This bill signified the start of the federal deinstitutionalization policy. Over the following decade, 90% of people who once lived in psychiatric institutions were discharged into their communities. (Jones, 2015; Kushner, 2000).

During deinstitutionalization, policy makers originally planned to transfer responsibility for the mentally ill from state run institutions to federally funded community psychiatric treatment centers, but fiscal conservatives repeatedly repealed efforts to initiate federally funded mental health services (Torrey, 1997; Congressional Committee on Mental Health, 1981). Lack of federal funding meant the gross majority of institutionalized individuals were released from psychiatric hospitals with 24/7 inpatient care to their communities with no access to psychiatric treatment or supportive services for the mentally ill. In 1963 Congress passed and President John F Kennedy (JFK) signed the Community Mental Health Act (CMHA, also called the Mental Retardation Facilities and Community Mental Health Centers Construction Act), beginning a new era of federal support for mental health services. NIMH assumed responsibility for monitoring the nation's community mental health centers (CMHC). In his address to Congress, JFK proposed a new approach to mental illness that would use federal resources to increase prevention, treatment and rehabilitation of people with mental illness in the community instead of "confining patients in an institution to wither away" (Kennedy, John, February 5, 1963).

This bill authorized $329 million towards construction of 1,500 centers and aimed to cut the population of those living in state mental hospitals in half. However, the bill did not provide money to operate the centers long-term. The bill required states to fund community mental health facilities after construction. Furthermore, the bill did not specifically name mentally ill patients as being eligible for care. Rather the legislation states, "grants for construction of mental retardation facilities," unintentionally expanding services for individuals with intellectual disabilities and excluding mentally ill from accessing

services (Secretary's Committee on Retardation, 1969). In 1963, Congress passed the Mental Retardation Facilities and Community Mental Health Centers Construction Act, beginning a new era in Federal support for mental health services. NIMH assumed responsibility for monitoring the Nation's community mental health centers (CMHC) programs.

Fragmented policies lacked the unified vision and funding model necessary to meet the needs of individuals with severe and persistent mental illnesses. Therefore, in 1978, President Jimmy Carter established the President's Commission on Mental Health, which was created to identify problems in the mental health system and make recommendations for improving mental health care in the U.S. (Grob, 2015). In response to the funding of the Mental Health Commission, Congress passed the Mental Health Systems Act. This law supported and financed community mental health support systems that coordinated social services, primary care, and mental health services for people with SMI. Carter also enacted programs to support low-income populations, such as Supplemental Security Income (SSI) and formalizing a disability eligibility process (Social Security Act of 1980), granting individuals experiencing mentally illness access to income (Grob, 2005; Community Mental Health Act, 1980). This act laid the path for a coherent and integrated federally funded mental health system that prioritizes care for underserved populations, particularly those with SMI. If it had been able to be implemented, the landscape of American mental health policy would be vastly different today. However, the Mental Health Systems Act had hardly become law when its provisions were rendered moot. Immediately after assuming office in January 1981, President Reagan signed the Omnibus Budget Reconciliation Act in 1981 (Grob, 2015). This repeal eliminated nearly all of Carter's Mental Health Systems Act, except for. section 501, the Patients' Bill of Rights. Per Congressional record, the Congress felt that state provisions were sufficient to provide psychiatric care despite gross deficiencies identified by the Commission of Mental Health (U.S. House of Representatives, 1981). The act redirected mental health financing from the federal to the state level yet again.

Access to housing: Between 1955 and 1981, 90% of individuals previously housed in state asylums would be discharged to their communities. Most of these people were placed directly into low-income housing without access to psychiatric services (Jones, 2015; Kushner, 2000). Within six months of discharge from long term care many persons with SMI were experiencing homelessness. A retrospective analysis by Drake and Wallach (1988) examined records of 187 patients with SMI who had been discharged from institutionalized care. They found that 38% of these patients experienced homelessness within the year following discharge and that 17% became chronically homeless. Similar studies by Markowitz (2006) and Belcher (1988) found that as state hospital capacity decreased, the mentally ill homeless population increased.

Incarceration: Research shows that mentally ill people experienced increased encounters with the police, but rates of long term incarceration among people with SMI did not significantly increase between 1955 and 1980. A study, following mentally ill persons who had been recently discharged from psychiatric hospitals to the community, found that 32% had been arrested in the 6 months following discharge, but were rarely convicted (Belcher, 1988). A regression analysis by Markowitz (2006) found a statistically significant negative correlation between state psychiatric hospital capacity and arrests (Markowitz, 2006). Because most patients who were discharged from institutionalized care were not provided follow-up mental health care, some committed misdemeanor or felony acts, often associated with their untreated mental illness, and were arrested. People released from institutions were arrested for petty crime but not convicted or incarcerated for long periods. In a 2013 study using a panel data set, Raphael and Stoll found no evidence of transinstitutionalization between 1955 and 1980, the period when state-run mental hospitals were closing (Raphael & Stoll, 2013).

Access to treatment: The period of transition to deinstitutionalization from 1955-1980 represents a time of both hope for emerging new pharmacological treatments, as well as uncertainty due to plummeting access to psychiatric support services. In 1949 lithium was introduced as a treatment for bipolar disorder. During this time, pharmaceutical companies began developing other drugs to treat

psychotic symptoms, providing optimism and hope that long term facilities for the mentally ill would no longer be necessary (Kane & Corell, 2010).

According to the President's Committee Report (Johnson, 1968), the number of people being treated in state psychiatric hospitals plummeted by 64% between 1955 and 1968. Less than 10% of the previously inpatient psychiatric population received treatment from community health facilities. Ninety percent of previously institutionalized individuals were released from psychiatric care without access to treatment or supportive housing. A congressional report from the Secretary's Committee on Retardation (1969) states, $178 million of funds from the Community Mental Health Act (roughly half of the $329 million dollar allotment) had been spent in the construction of 272 community mental health centers, far less than the 1,500 centers promised by the Community Mental Health Act. Furthermore, President Johnson's congressional report states these centers served 63,000 people, only 11% of the 558,000 who were treated in psychiatric hospitals prior to deinstitutionalization. Lastly, 38% of clients treated at newly developed community mental health centers had not previously received any mental health services (President's Committee Report, 1968; Sharfstein, 2000). This meant that new community mental health facilities were treating people with less SMI instead of the SMI population they were intended to serve. In short, psychiatric asylums dumped defenseless, seriously ill, psychiatric patients on the streets, while new community health centers devoted resources intended for SMI to clinics for the worried well (Committee on Retardation, 1969; Sharfstein, 2000).

1981- 2021: Movement away from the federal government and dismantling of federal mental health policy

Changes to Mental health Policy: The Reagan administration in 1981 decimated the federal government's social research programs through an aggressive denial of federal responsibility for responding to homelessness, and cut HUD funds by 70% between 1980 and 1987. At the same time, 90% of individuals housed in asylums were discharged to the street (Jones, 2015; Kushner, 2002). . This repeal of federal funding caused history to repeat itself, perpetuating a disjointed system that grossly

underfunded treatment and support systems for people with mental illness, creating a system rife with contradictory policy decisions that jeopardize the autonomy and civil rights of the mentally ill. Policies that aimed to protect the autonomy and rights of mentally ill people, instead criminalized mentally illness.

During the 1980s, federal fiscal conservatives and “law and order" politicians concerned with crime, repealed policies that supported and financed community mental health on the grounds that state provisions were sufficient to provide psychiatric care despite gross deficiencies identified by the Commision of Mental Health (Grobb, 1991; US House of Representatives, 1981). Federal budget cuts to housing and welfare programs dramatically limited options for people with mental illness. Immediately upon taking office, President Reagan signed the Omnibus Budget Reconciliation Act (OBRA) (Grob, 2015), eliminating all federal initiatives for mental health over the previous 18 years, including the Mental Health Systems Act. This repeal eliminated nearly all of President Carter’s Mental Health Systems Act, except for section 501, the Patients' Bill of Rights. Per Congressional record, Congress felt that state provisions were sufficient to provide psychiatric care despite gross deficiencies identified by the Commission of Mental Health (US House of Representatives, 1981). The act redirected mental health financing from the federal to the state level.

With the elimination of psychiatric facilities, programs outside the mental health sector took on key roles to fill in service gaps for the mentally ill. These include major income maintenance entitlements such as Supplemental Security Income and Disability Insurance, as well as medical insurance programs like Medicare and Medicaid that help finance outpatient mental health treatment and inpatient psychiatric care. Emergency rooms and jails have also absorbed increasing numbers of people experiencing SMI (Rochefort, 2003). During the 1980s and 1990s, Presidents Reagan and Clinton instituted cuts to these programs, sometimes specifically targeting elimination of services for the mentally ill. Later in his presidency, President Regan signed the Social Security Disability Benefits Reform Act of 1984, removing benefits to the poor that were granted in the 1980 Social Security Act, preventing people experiencing mental illness and homelessness from receiving benefits (Grob, 2015). These changes continued into the

Clinton era. In 1994 President Bill Clinton signed the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). Proponents of PRWORA aimed to increase accountability and encourage welfare recipients to work. According to Edelman (2001) PRWORA created a punitive system that required recipients to jump through hoops to receive services. Self-sufficiency is often not a reasonable expectation for people with SMI and changes to social safety net programs disproportionately impact individuals and families with mental illness.

Incarceration: In addition to reducing social safety nets for the poor, federal legislators during the Reagan and Clinton administrations supported anti-crime bills with harsher penalties and longer sentencing for crimes. President Reagan passed the Anti-Drug Abuse Act of 1986 and President Clinton enacted the Violent Crime Control and Law Enforcement Act of 1994 (National Research Council, ch. 3, 2014). These "tough-on-crime" policies correlate with increasing rates of transinstitutionalization, meaning movement of mentally ill persons from psychiatric institutions to prisons. Raphael and Stoll (2013) found significant rates of transinstitutionalization starting in 1980. Instead of living in hospitals, the mentally ill started living in prisons. In the period following deinstitutionalization, the rate of prison inmates with SMI skyrocketed from 1.5% during institutionalization (Bromberg & Thompson, 1937), to 6.3% in 1985 (Guy, Platt, Zwerling, & Bullock, 1985; Neighbors et al 1987, Mundy, Robertson, & Greenblatt 1990), and then 19% in 2017 (Bronson & Berzofsky, 2017). Based on these figures, between 1980 and 2017, the percent of the incarcerated population with SMI increased by 322% (from 6.3% in 1980 to 20.2% in 2019) [See Figure 9, page 64]. 21% of individuals in jails and prisons meet diagnostic criteria for SMI[See Figure 8, page 63]. In 2020, individuals living with SMI are more likely to be incarcerated than in a psychiatric hospital. Based on the total inmate population, this means that more than 300,000 individuals with SMI are incarcerated (Bureau of Justice Statistics, 2017), which is twice the number of patients in psychiatric hospitals (National Association of State Mental Health Program Directors, 2014).

Rates of SMI individuals experiencing incarceration and homelessness skyrocketed in response to these policy changes. A 1988 study of 109 new adult admissions to the Washington State prison system and 96 homeless adolescents, using a structured diagnostic interview, found 20.3% prevalence of psychotic symptoms among newly incarcerated adults and 29% prevalence of psychotic symptoms among the homeless teen population (Mundy, Robertson, Robertson, & Greenblatt, 1990). Similar statistics are mirrored in studies on homelessness and incarceration across the U.S. (Torrey, 1997).

Access to housing: Growth of federal welfare policies in the mid-1960s supported previously institutionalized individuals when they were released into their communities during deinstitutionalization, but these policies were eliminated in the 1980s. Diminishing access to public psychiatric hospital beds pushed the problem of mental illness into the streets (Mechanic, 1992). Federal defunding of housing and cash assistance programs to increase personal accountability and decreased reliance on government assistance programs also disproportionately impacted homeless people with SMI. . In addition, Federal housing budgets were cut by 90% (Grob, 2015). Removal of single resident units eliminated already limited housing options for individuals displaced from state asylums. Over 1 million Single Resident Occupancy (SRO) units were lost, and the nation's public housing program was all but abandoned (Mechanic, 1992). Federal authorizations for housing subsidies amounted to 7 percent of the total budget in 1978; but by the late 1980s this proportion had shrunk to 0.7 percent (U.S. Congress,1990; Treatment Advocacy Center, 2016). The loss of previous resources and funding significantly increased the number of people with SMI experiencing homelessness.

Access to treatment: At present, people with mental illness have inadequate access to psychiatric treatment services, regardless of whether they live in the community or are incarcerated. In a 2008 survey published by The National Alliance on Mental Illness (NAMI) of people living with schizophrenia and their caregivers, 96% of caregivers and 82% of people with schizophrenia reported experiencing challenges in accessing mental health services (NAMI, 2008). Instead of receiving care in psychiatric

hospitals or community treatment centers, people with SMI have been transinstitutionalized into jails and prisons.

Lack of funding for community care policies, elimination of inpatient psychiatric facilities, and tough on crime policies correlate with increasing rates of transinstitutionalization. Without access to psychiatric treatment options, Jails and prisons have become the new psychiatric institutions. According to an analysis of state prisons published by the Treatment Advocacy Center, jails and prisons hold three times more severely mentally ill individuals than publicly funded psychiatric hospitals (Torrey et al, 2014).There are currently 12.6 public psychiatric hospital beds available for every 100,000 people in the U.S.. In 1840 there were 20 beds available for every 100,000 people. The number of public psychiatric beds available per 100,0000 people in 2020 is less than it was in 1850 (see table 4 and 3 in supplemental materials). Many of these inmates would have been in hospitals prior to the deinstitutionalization movement.When compared with locked units in psychiatric hospitals, prisons are fundamentally different. In prisons, safety and punishment take precedence over treatment and recovery. Additionally, imprisonment of the mentally ill directly contradicts the intentions of civil rights organizers who advocated for deinstitutionalization from psychiatric hospitals, so that mentally ill persons could have access to autonomy.

Furthermore, in 2009, the. The Senate Committee on the Judiciary's Subcommittee on Human Rights and the Law held hearings titled "Human Rights at Home: Mental Illness in U.S. Prisons and Jails." The subcommittee identified unconstitutional abuses of human rights for incarcerated mentally ill persons under the Fourteenth Amendment. Unconstitutional practices included insufficient staffing, lack of adequate procedures for detecting suicide risk, and excessive use of seclusion or restraint as a substitute for mental health treatment (Bagnetos, 2009). This Senate report notes that entire units were often held in solitary confinement or 'lockdown' due to shortages in staffing. One facility held a total of 337 inmates with psychiatric conditions, 33% (110 inmates) of these detainees were in a unit reserved for inmates with the most serious mental illnesses, who would meet criteria for inpatient hospitalization. The entire facility

had only two part-time psychiatrists on staff, meaning they had a psychiatric provider-to-patient ratio of one provider to 337 patients (Bagnetos, 2009). A 2016 clinical model analysis for state hospital staffing ratios recommends a psychiatric provider-to-patient ratio of one to 15 on inpatient psychiatric wards (Washington State Department of Social & Health Services, 2016). A report published by the U.S. Department of Veterans Affairs endorses a minimum psychiatric provider-to-outpatient ratio of one to 125 (U.S. Department of Veterans Affairs, 2018). To meet minimum staffing guidelines, this prison should have had nine psychiatric providers (seven inpatient providers, two outpatient providers). Lack of adequate staffing makes it impossible for providers to meet the needs of their patients. The Senate report concluded that there were deficiencies in mental health treatment at every phase of incarceration, from initial intake and screening to treatment provided throughout incarceration, however no legislation was enacted to reform these facilities.

Methods

This paper examines how changes to federal policy impact people with SMI over time. Impact of policy on this population is examined through a retrospective analysis comparing psychiatric hospitalization rates per 100,000 to the life expectancy, percent of incarcerated population with SMI, and percent of unhoused population with SMl in the U.S. by decade.The stakeholders for this project are federal and state legislatures, public policy nonprofits, individuals diagnosed with SMI and their families, mental healthcare providers, and American taxpayers. Both quantitative and qualitative processes were utilized.

Data collection: Concurrent quantitative and qualitative data collection took place over a one-year period, from April 2020 to March 2020. Academic literature was accessed using the keywords: mental health, mental health services, deinstitutionalization, institutionalization, compulsory care, involuntary treatment, and federal mental health policy. A search was performed on the databases CINAHL, Google Scholar, JStor, and PubMed. Archival search keywords included, but were not limited to: Dorthea Dix, President Pierce, Bedlam, Life Magazine, and other terms noted in Presidential

Committee reports as impacting congressional opinion. To look at the other archival material related to this topic, Presidential Libraries and materials produced by the NIMH, Treatment Advocacy Center, Pew Research Foundation, and the Substance Abuse and Mental Health Services Administration (SAMHSA) were reviewed.

Federal legislation was included in this analysis. Federal documents were accessed via HeinOnline, Presidential Libraries, Google, congress.gov, and the Disability History Museum Digital Library. Historical and governmental documents were accessed using the keywords: asylum, lunatic, Dorthea Dix, retardation, and mental hygiene. Archival material such as journalism and primary source documents were accessed via Google, the Disability History Museum Digital Library, and University of Pennsylvania Women's Library.

Qualitative methods, sources, and searches: This author utilized integrative methodological review and document analysis techniques drawing on archival material, federal mental health legislation, Washington State mental health legislation, government publications, scientific literature, archival news reports, and mental health policy publications. Federal mental health policy was analyzed via document analysis of primary source materials including congressional committee reports, presidential veto speeches, presidential messages to Congress, and federal legislation. When primary source documents were not available, this author accessed policy information in journal articles via Cinahl, PubMed, Jstor, and Google Scholar. Policy content data was entered into a data extraction matrix (in google documents). The matrix includes date of policy, title of policy, lead government agency, scope (i.e. to whom the policy applied), stated objectives of policy, stakeholders, and policy impact. This matrix is included in supplemental materials.

Quantitative data sources and methods: Quantitative measures assessed include standardized mortality ratio (SMR) of non-veterans versus veterans with SMI in the U.S.. SMR is the ratio between the observed number of deaths in a study population compared to the expected number of deaths in a standard population. If the ratio of observed:expected deaths is greater than 1.0, there are excess deaths in the study

population. Higher SMR correlated with a greater number of excess deaths among a population (Naing, 2000). A chart explaining Pearson Analysis is included in Table 6 of the supplemental materials [See Figure 3, page 61].

Correlation between policy changes and outcomes were measured using Pearson product moment coefficients in the CORREL function in Google Sheets. This function measures the strength of the relationship between variables, ranging from -1 to +1. A positive correlation (value greater than zero) indicates that, as the value of one variable increases, so does the value of the other variable. No correlation (value of zero) indicates no association between variables. A negative correlation (value less than zero) indicates an inverse relationship between variables, meaning as one variable increases, the other value decreases. Values closer to 1 indicate stronger correlation between variables. Values closer to zero indicate weaker correlation between variables. For example, a Pearson correlation coefficient of -0.9 indicates stronger relationship than a coefficient of -0.2. A small correlation is considered to be negligible from 0.1 to 0.299 (or -0.1 to -0.29), medium association from 0.3 to 0.49 (or -0.3 to -0.49), and large from 0.5-1.0 (or -0.5 to -1.0) (Mukaka, 2012).

Analysis of National Data: A correlational analysis utilizing Pearson-Product-Moment correlation coefficients via the CORREL function in Google Sheets between incarceration rates, psychiatric hospitalization rates, and Standardized Mortality Ratios were calculated using census data shown in Table 4. The data was analyzed from 1850 through 2015, correlating data sets with major changes to the U.S. mental health policy. The Pearson correlation coefficient between the total incarcerated population and the total population in psychiatric hospitals before 1880 (when psychiatric hospitals became widely available after the Dix reform movement), before 1955 (when deinstitutionalization policies were first implemented), and 1981 (when President Ronald Reagan implemented the Omnibus Budget Reconciliation Act, defunding federal mental health and housing programs and initiating mass incarceration policies).

Quantitative methods for matrices : Data Sources and searches: The Meta-analysis Of Observational Studies in Epidemiology (MOOSE) guidelines (Stroop et al., 2000) were utilized for matrices on standardized mortality (see Table 1, Matrix 1, and Matrix 3 in supplemental materials) and rates of SMI among incarcerated persons (see Table 2 and Matrix 4 in supplemental materials). A systematic literature search was done for longitudinal studies of mortality in SMI and rates of SMI among incarcerated and unhoused persons in the U.S.. Searches were conducted using Pubmed, Google Scholar, and Psycinfo. The search included terms for mental disorders (eg, mental disorders, serious mental illness, and SMI), specific diagnoses (eg, schizophrenia and bipolar disorder), and mortality, homelessness, or incarceration in the U.S..

Study selection: The search for the impact of SMI on expectancy produced two comprehensive global meta-analyses quantifying standardized mortality across mental disorders. Most data were extracted from two meta- analyses of global disease burden and mental illness published by Walker et. al (2015) and Lee et. al (2019). The search for rates of SMI among incarcerated persons produced four meta-analyses quantifying rates of SMI across incarcerated populations in the U.S. over time by (Torrey (1997), Lamb & Weinberger (1998), Prins (2014), & Gu (2014). Data from after 2010 was obtained from a national report published by the Bureau of Justice Statistics (Bronson & Berzofsky, 2017).

This author extracted data from matrices provided in these meta analyses that met criteria for this paper. Research that provided too broad a definition of mental illness, such as including generalized anxiety disorder or major depressive disorder were excluded from the matrix. Only data from the U.S. was included. For research that was published over a series of years and did not include annual analysis of standardized mortality ratio (SMR) or years of potential life lost (YPLL) for each year included in the study, the median of the years was used for the results of this research. So, for example, if a paper analyzed the average SMR from 1983-1989, it was added as a datapoint for 1986. Recording data in this way prevented longer studies from skewing results and created a more accurate representation of the data. Studies spanning more than 15 years without annual analysis of SMR and YPLL were excluded from the

matrix. For research included in the matrix, the median year is included in parenthesis below the total years included in each study. The data matrices are available in supplemental materials [appendices, page 63). Data on SMR prior to 1940 was not available, therefore only the period between 1940-2015 was analyzed.

Statistics: For SMR, YPLL, and incarceration rate analyses, the weighted mean was calculated by subgroup using information from the standardized mortality and incarceration rate matrices (see table 1 and 2 in supplemental materials) and Incarceration Matrix (see table 4 and 5). The weighted mean of SMRs were calculated for each decade. For years where there is no data, the average between studies from the year immediately before and after were utilized.

Calculation of rate per 100,000: Rates per 100,000 were calculated for psychiatric hospitalization and incarceration using an incident rate calculation. Incidence rate is a ratio between a study population among a standard population. Calculating incidence rate enables standardized comparison of the incidence rates in different study populations (Mukaka). Information about specific sources is available in Table 4 in the supplemental materials.

Estimated percentage of people experiencing homelessness with SMI: rates of homelessness per 100,000 were originally intended to be included, but there was insufficient data available to complete an accurate analysis. Therefore, Point-in-Time (PIT) information reports of homeless persons with SMI were included for the years 1880, 1930, and 2005-2015 instead. More specific information including data matrices and tables can be found in Matrix 5 of the supplemental materials. Between 1900 and 2005 there is insufficient data available to accurately assess rates of homelessness and rates of mental illness among the population with SMI because there was no uniform method for counting people with SMI who experience homelessness in a given year.

Results

Policy impact was analyzed in reference to 1) impact on patient autonomy via analysis of homelessness, incarceration, and psychiatric hospitalization of people with SMI; 2) policy impact on quality of life for the SMI (through analyzing life expectancy and homelessness rate); and 3) opportunities to improve current policy to improve care for SMI. The complete results of the Pearson Product-Moment analysis are available in the appendices [See Figure 4, page 61]. Results of this analysis are explained in further detail below.

Transinstitutionalization, the correlation between psychiatric hospitalization and incarceration of the mentally ill: Individuals with SMI are over-represented in the criminal justice system when compared with the larger US population. The psychiatric hospital population was compared to the mentally ill incarcerated population. There was a statistically significant moderate correlation between decreased rates of psychiatric hospitalization and increased population of people with SMI who were incarcerated (-0.53) between 1850 and 2019. This inverse correlation is significantly higher during the period between 1850-1880 (period transition to institutionalization) and 1980-2019 (transition from deinstitutionalization with federal safety nets to transinstitutionalization). Between 1850 and 1880, there is a high inverse correlation (-0.81) when access to psychiatric hospitalization increased, the population of incarcerated people with mental illness decreased. Between 1980 and 2019, there is a very high inverse correlation (-0.98), suggesting a strong relationship between decreased access to psychiatric hospitalization and increased incarceration of people with SMI [See Figure 5, page 62].

Between 1850 and 2015 there is a moderate inverse correlation between these variables, meaning as rates of psychiatric hospitalization decreases, the rate of incarceration among people with SMI increases. This correlation has existed since 1880. Prior to the establishment of “asylums” 15-20 percent of people with SMI were incarcerated. However, in 1880, after psychiatric hospitals were established in every state, only 0.7% of the total incarcerated population was mentally ill (Gorwitz, 1974; US Census,

1880). This correlation significantly increases from insignificant (-0.22) prior to 1970 to very significant in 1990 (-0.91) [see supplemental materials, page 64].

Determine if periods of increased centralization of mental health policies correlate with improved outcomes for people with SMI: The correlation between decreased rates of psychiatric hospitalization and increased population of people with SMI who are incarcerated does not exist in the period immediately following deinstitutionalization. Between 1930-1970, the period of transition between institutionalization and deinstitutionalization with centralized support from the federal government, there is a negligible relationship between psychiatric hospitalization rates and incarceration rates of people with SMI (-0.22) and a high positive correlation between psychiatric hospitalization rates and life expectancy (+0.94). In the period immediately following deinstitutionalization, rates of incarceration did not change and life expectancy for people with SMI improved. The significant inverse correlations between psychiatric hospitalization rates and incarceration rates of people with SMI (-0.81) and between psychiatric hospitalization rates and life expectancy (-0.94) until 1985, after the Reagan administration eliminated federal financial support of mental health treatment, redirecting mental health financing from the federal to state level.

Access to housing: Homelessness has existed in some capacity throughout American history. However, the precise number of people experiencing homelessness at varying points in American history is hard to define because the definition and data collection methods have varied rendering inconsistent results. Between 1880 and 2005 there was no uniform method for counting people with SMI who experienced homelessness in a given year, making it impossible to measure impact of federal policy changes on homelessness during specific decades. Therefore, the Pearson Product-Moment Correlation analysis was only completed over the span of Federal Mental Health Policy (1860 to 2015). There is a highly significant (-0.71) negative correlation between homelessness and psychiatric hospitalization rates. On average, from 1860 to 2015, for every time the psychiatric hospital population rate decreases by 10 people, it correlates with roughly seven people with SMI who become homeless.

Life expectancy: Overall, as the rate of people housed in psychiatric hospitals goes down, the life expectancy of people with SMI decreases (measured via calculating rate of excess death compared to average US population). Between 1850 and 2021, there is a strong inverse correlation between variables (-0.74), meaning as rates of psychiatric hospitalization decrease, the SMR increases. However, there are two notable exceptions to this: standardized mortality among U.S. Veterans and SMR in the period immediately following deinstitutionalization. In the period immediately following deinstitutionalization, the SMR decreased from 2.46 in 1945 to 1.27 in 1975, representing a high positive Pearson correlation of +0.94 [See Figure 6, page 62]. During the start of deinstitutionalization when there was limited federal funding for Community Mental Health Centers and federal legislative support for people living with SMI, outcomes for people with SMI improved significantly. SMR does not reach pre-deinstitutionalization levels until 1985, after the Reagan administration instituted the Omnibus Reconciliation Act that eliminated federal financial support of mental health treatment, redirecting mental health financing from the federal to state level, as well as instituting legislation that eliminated funding for low-income housing. In the decades following the Reagan administration's dismantling of federal health legislation, life expectancy outcomes have continued to decline for people with SMI.

Ideally, the SMR among the severely mentally ill population would be 1, meaning people with SMI would die at the same rate as the standard U.S. population. As demonstrated in figure 6 [see figure 6, page 62], this is not the case. From 1955 to to 2015, SMR of the non-veteran population with SMI has increased from 1.27 to 3.67. However, this statistic is not representative of all Americans. Studies exclusively analyzing data of U.S. veterans were analyzed separately due to statistically significant mortality ratios in veteran and non-veteran outcomes. Retrospective representative analyses of Veterans diagnosed with SMI by Boscarino (2008), Kinder, (2008), Chwastiak, Rosenhackm Desai, & Kazis (2010), and Morden (2012) all found correlation between serious mental illness in the U.S. veteran population and increased risk of all-cause mortality. However, the average SMR of veterans diagnosed

with SMI was 1.33, compared to an average 2.97 SMR among the U.S. civilian population for the same time period.

Financial impact of transinstitutionalization. Compare cost of comprehensive mental health services for SMI versus cost of incarceration and chronic rehospitalization Persons with SMI are overrepresented in jailed and unhoused populations. Homelessness and incarceration are expensive public health problems. On average, the federal government spends over $35,000 in taxpayer dollars per capita for each person incarcerated in Federal Prison and on each person experiencing chronic homelessness (Bureau of Prisons, 2019; the National Alliance to End Homelessness, 2019). As demonstrated by figure 7 [see figure 7, page 63], community based mental approaches provide mental health care at lower costs. Supportive housing and community mental health treatment are cost effective programs designed specifically for people with mental illness. Analysis by the National Alliance to End Homelessness (2019) shows that costs are reduced by an average of 49.5% when people experiencing homelessness are placed in supportive housing. This savings increases when incarceration is included in the analysis. The Program for Assertive Community Treatment (PACT), is a team-based behavioral health program designed to help people with SMI by providing housing, medicatin, and employment support for people with high service needs. On average PACT participants increase time spent in community settings rather than institutions such as hospitals and jails (Srebnick, 2012). People with SMI who are enrolled in PACT programs experience reduced hospitalization rates, decreased usage of community crisis services, and lower incarceration rates (Lehman et al, 1999; Rosland, Wong, & Maciejewski, 2018). An analysis by the Washington State Institute for Public Policy (2019) found that this program costs Washington State an average of $19,174 per participant, which is 63% less than the average cost of federal incarceration.

Discussion : analysis of relationship between results and project aims

Aim 1.

Identify shortcomings of dangerousness versus right to treat policy and how these policies impact CC laws: Current civil commitment criteria force relatives to observe loved ones decompensate to the point of being unsafe before they can help. Even though the shift from right-to-treat to dangerousness criteria for civil commitment was intended to protect the autonomy and rights of individuals with mental illnesses, unintended negative consequences of these policies abound. One consequence of the shift toward dangerousness criteria has been reduced access to psychiatric care for non-dangerous individuals with SMI who need but are refusing treatment.

Roughly half of individuals with severe mental disorders have impaired insight. Involuntary hospitalization and treatment are necessary to treat some of these individuals (Torrey, 1997). Expanding the law to include a person whose illness causes them to be unable to understand their need for treatment and who needs care to prevent harmful deterioration and progression of the disease, would protect patients and families from further suffering. Under the legal concept of *parens patriae*, the government holds responsibility to intervene on behalf of citizens who cannot act in their own best interest (Testa & West, 2010, Torrey; 1997). In 1979, the U.S. Supreme Court ruled that "clear and convincing evidence" was sufficient for the commitment of mentally ill individuals (Testa & West, 2010). Current policy needs to adapt so that relevant information for consideration of possible involuntary hospitalization can be entered as evidence towards involuntary treatment.

Aim 2.

Explain history of federal mental health policy and how past policy decisions impact current mental health policy: Emptying America's mental hospitals without ensuring that the discharged patients received appropriate treatment in the community was an egregious mistake. Half of patients discharged from psychiatric institutions during deinstitutionalization experienced homelessness or were incarcerated (Torrey, 1997). Although deinstitutionalization was well intentioned, the failure to provide for the

treatment needs of the patients has turned this policy into one of the greatest social disasters of the 20th century.

In short, the inconsistency of the objectives of institutionalization to a) improve care, b) expand services for a broader population, c) save money and d) the continuation of state mental health hospitals rather than a single federal system guaranteed contradictory policy decisions that prioritized budget cuts over human dignity. In summary, the laudable goal of institutionalization was to provide humane treatment for people with severe mentally illness. However, in response to political forces and cost saving measures, mental health policies went awry, with the federal government forcing states to provide mental health care without providing the means or a plan to pay for these services . Though claiming to limit the power of the federal government over the states, President Pierce actually proposed a cost saving measure that aimed to avoid Federal tax dollars being spent on people with mental illness. The existence of disjointed and underfunded state mental health systems rather than a single national one guaranteed uneven, often contradictory, policy decisions, which led to the perverted landscape of mental health establishments that stripped human autonomy and enabled cruel and inhumane living and working conditions at these facilities.

Over the next seventy years, there was a dramatic shift away from psychiatric institutionalization for people with serious and SMI. However, in the following years policy shifts were being made to address the issues of unethical treatment within psychiatric institutions, with the same laudable goal to provide humane treatment for people with severe mentally illness. However, political efforts to save money prevented federal funding for sustainable mental health reform, causing health policy to go awry. In a new twist of public opinion and political maneuvering, future policies added additional barriers by placing blame on the mentally ill. This creates (3) a punitive system that expects the mentally ill to jump through hoops to receive services, leaving mentally ill people untreated and unhoused. This leads to criminalization and transinstitutionalization of humans experiencing SMI. Finally leading to a perverted landscape of mental health establishments that strip vulnerable individuals of autonomy. Future policies

must be adequately funded. Lack of unified policies and utterly inadequate funding have fueled a perpetual crisis within the American mental health system.

b. Identify how federal institutionalization and deinstitutionalization have impacted rates of homelessness, incarceration, and life expectancy: Individuals with mental illness are currently eight times more likely to be incarcerated than receiving treatment at a state psychiatric hospital (Morrissey,Meyer & Cuddeback, 2007). Since the deinstitutionalization movement, psychiatric patients have moved from one type of institution to another, a process known as transinstitutionalization (Schildbach, 2018). Institutionalization is associated with decreased rates of homelessness (R-0.71), decreased rates of incarceration (R-0.49), and improved life expectancy (R-0.73) for persons with SMI. Institutionalization dramatically reduced rates of incarcerated people with mental illness. Between 1850 and 1880, the rate of persons with SMI dropped from 15% in 1850 to 0.7% in 1880 (Gorwitz, 1974; Dix, 1853, U.S. Census Bureau, 1880). Institutionalization also correlates to lower rates of homelessness for people with SMI. Over the course of American history, there is a strong inverse correlation (0.71) between homelessness and psychiatric hospitalization, meaning as rates of psychiatric hospitalization decrease, the rate of homelessness among people with SMI increases.

Life expectancy for the average American increased by over 10 years in the decades following deinstitutionalization, from 65 years in 1955 to 76 years in 2020 (Center for Disease Control, 2021). However, these gains are not reflected among Americans with serious mental illness. Americans with schizophrenia and bipolar I disorder die 15 to 30 years before those without mental illness, a disparity larger than for race, ethnicity, geography, or socioeconomic status (Colton & Manderscheid, 2007). Hopefully, these disparities in life expectancy will not continue to increase.

The data on SMR among the veteran population provides insight into interventions that policy makers can implement to improve mortality across mentally ill populations. It is possible to improve life expectancy for persons with SMI, the U.S. is already doing a great job for certain populations. One surprising find of correlational analysis was improved outcomes among the veteran population. Countries

with centralized mental health services and supportive housing have lower rates of suicide completion and improved standardized mortality ratios for people with SMI. For example, an 11-year follow up of the complete schizophrenia population in Finland (n = 66,881) compared mortality rates with the total Finnish population (5.2 million) during 1996–2006 (Tiihonen et al., 2009).The overall SMR (1.22) among veterans with mental illness is more similar to the SMR of Finnish people with schizophrenia (1.34) (Tiihonen et al., 2009). While 1.34 is still an elevated mortality ratio compared to the general population, veterans living with SMI have outcomes on par, or better than, individuals with SMI from countries with .

A key difference between U.S. veterans and other Americans with mental illness is veterans have access to federal military health benefits that provide healthcare, housing, and hospitalization services, similar to the services provided by nations with the nationalized health systems and lower SMR. Furthermore, U.S. veterans with SMI have access to Patient Aligned Care Teams (PACT) that provide structured treatment using collaborative care models with integrated housing and psychiatric support teams. Furthermore, U.S. veterans with SMI have access to Patient Aligned Care Teams (PACT) that provide structured treatment using collaborative care models with integrated housing and psychiatric support teams.

B. Periods of increased centralization of mental health policy correlate with improved outcomes for people with SMI. There has never been a period of American history where the federal government financially supported mental health policy. However, periods of increased centralization of federal government safety nets correlate with improved outcomes for people with SMI. Increased access to federally funded social services keeps persons with SMI alive and out of prison. These findings suggest that increasing access to psychiatric hospitalization alone is not enough. Outcomes for people with SMI are best when they have access to federal safety nets and inpatient hospitalization when needed.

In the period immediately following deinstitutionalization, rates of incarceration did not change and life expectancy for people with SMI improved. During the period immediately following deinstitutionalization when there was limited federal funding for Community Mental Health Centers and

federal legislative support for people living with SMI, rates of incarceration did not change and life expectancy for people with SMI improved. The standardized mortality ratio (SMR) does not reach pre-deinstitutionalization levels until 1985, after the Reagan administration instituted the Omnibus Reconciliation Act that eliminated federal financial support of mental health treatment, redirecting mental health financing from the federal to state level, as well as instituting legislation that eliminated funding for low-income housing. In the decades following the Reagan administration's dismantling of federal health legislation, life expectancy outcomes have continued to decline for people with SMI. This number illustrates the impact of federal disinvestment in social safety nets on people with SMI. As federal policies protecting people with mental illness were eliminated, more people with SMI were incarcerated.

The standardized mortality ratio for persons with SMI significantly improved after deinstitutionalization, decreasing from 2.46 in 1950 to 1.20 in 1970. Similarly, rates of incarceration of people with mental illness drastically decreased from 1850-1880 (before and after implementation of institutionalization), but rates of mental illness among incarcerated populations did not steadily increase until 25 years after deinstitutionalization. In a 2013 study using a panel data set, Raphael and Stoll found no evidence of transinstitutionalization between 1955 and 1980, the period when state-run mental hospitals were closing. Analysis for this paper yielded similar results. Outcomes for the mentally ill did not begin to plummet until Reagan signed the Omnibus budget reconciliation act of 1981, decreasing federal funding for Housing and Urban Development (HUD) and mental health services by over 90% (Grob, 2015). The Reagan administration's attack on the federal government welfare programs, including a 70% decrease in funds for Housing and Urban Development (HUD) between 1980 and 1987 correlated directly with increasing incarceration and mortality for people with SMI (Jones, 2015). Outcomes continued to worsen throughout the 1990s as the Clinton administration pursued welfare reform and legislation in support of Broken Windows policing. It is hypothesized that access to housing and supportive services not directly linked to mental health services (such as low-income housing and social security income) provided a needed safety net for the mentally ill during the period following

deinstitutionalization. When social safety nets for the poor are cut, people with SMI are disproportionately impacted.

Aim 3:

Identify the financial impact of transinstitutionalization. Compare cost of comprehensive mental health services for SMI versus cost of incarceration and chronic rehospitalization:

Community mental health programs and supportive housing do more than save money, they save lives. Transinstitutionalization and homelessness are more expensive than providing comprehensive community treatment and housing for people living with SMI. Behavioral health capacity should depend on federal, not private or state finance. State and private insurance model fails to provide adequate psychiatric care. The federal government must develop finance strategies to increase availability and affordability of mental health care. Economically, the mental health market is fundamentally different from the general health market. The federal government is vital to mental health because people with chronic psychiatric needs rarely have the means to afford their own care. Around the world, regardless of whether the rest of a country's health sector is publicly or privately financed, federal governments most often pay for mental health services. An analysis by Perera (2016) found that increased government spending in mental health care is associated with more and better mental health care, but not more general health care. Federal investment in mental illness saves lives. People living with SMI require complex resources that state governments and private companies cannot afford. Although private financing plays an important role in pharmaceutical coverage, federal funding of community based behavioral health services and psychiatric hospitals is common and necessary.

Recommendations

Aim 3. Recommendations for improvement to mental health policy related to findings:

Policy recommendation: Encourage passage of federal legislation establishing need-for-treatment standards to provide a legally viable means of intervening in psychiatric deterioration prior to the onset of dangerousness or grave disability. Ultimately, when federal lawmakers institute policies (like dangerousness criteria for involuntary admission) in an effort to increase autonomy, but veto supportive legislation, policymakers disenfranchise the populations they seek to help. Effective reform requires sustainable infrastructure and funding. Without sustainable supportive legislation and funding, policy reforms simply create different problems.The U.S. movement of deinstitutionalization during the civil rights era, with concurrent shift in involuntary commitment policy, was meant to protect psychiatric patients from unjust violations of autonomy. However, these reforms simply shifted lack of autonomy caused by forced long-term psychiatric hospitalization to lack of autonomy due to incarceration, short term involuntary hospitalization, and homelessness; effectively pushing people with SMI further to the margins of society

Policy recommendation: Strengthen federal coordination and financial support to improve care. Encourage passage of federal legislation that would increase federal funding and support government run psychiatric hospitals and community based mental health services. Community based care and hospital care are complements, not substitutes. Historically, policy makers have supported increases of psychiatric community services only when psychiatric hospital beds decrease. Hospitals and community care have a mutually beneficial relationship. Countries that tend to provide high levels of psychiatric hospital services also tend to provide high levels of community care (Perera, YEAR). This fact is evidenced in the U.S. by improved mortality of veterans with mental illness compared to the general population with SMI. U.S. veterans with SMI receive access to PACT services, housing, and hospitalization when necessary (Leung, 2019). All Americans, regardless of their military status, should have access to these resources.

Policy recommendation: Include questions relating to mental illness in federal census data collections: From 1840-1890, U.S. Census data included questions about the housing status of people with mental illness. In fact, the 1880 census was the most complete census of mentally ill persons conducted to date in the U.S. (Gorwitz, 1974, Torrey, 1994). There is no current national census data with information pertaining to the incarceration and housing status of the SMI. This lack of research made compiling accurate information incredibly difficult. Not having access to accurate data makes it hard to quantify policy impact. The federal census has not included questions about mental illness since 1880 (Gorwitz, 1974). The 1880 census counted the numbers of people with SMI living in almshouses, jails, with family and in asylums, providing an accurate assessment of where people experiencing SMI lived and the impact of recent institutionalization policies (Gorwitz 1974; Torrey, 1996). National census data would provide federal and state governments the tools to assess the financial, health, and housing outcomes for people living with SMI. Without this information, it is impossible to fully embrace the scope and tragedy of America's mental health crisis or gain comprehensive understanding of policy impacts. Including this in the upcoming census is a small, manageable step towards obtaining consistent, reliable information about the lives of people living with SMI.

Policy recommendation: Establish minimum psychiatric-provider-to patient ratios for outpatient facilities, inpatient psychiatric units, and for jails and prisons: A 2016 clinical model analysis for state hospital staffing ratios recommends a psychiatric provider-to-patient ratio of 1:15 on inpatient psychiatric wards (Washington State Department of Social & Health Services, 2016). A report published by the U.S. Department of Veterans Affairs endorses a minimum psychiatric-provider-to-outpatient ratio of 1:125 (U.S. Department of Veterans Affairs, 2018). As reported by the Subcommittee on Human Rights and the Law, incarcerated mentally ill persons experience unconstitutional human rights abuses, primarily due to lack of adequate staffing (Bagnetos, 2009). The establishment of requirements for psychiatric provider-to patient ratios would help persons with SMI obtain access to treatment.

Policy recommendation: Increase funding and access to programs that improve outcomes and quality of life for people with SMI. Encourage introduction of federal bills that increase federal funding for coordinated care programs, such as PACT and supportive housing. Investment of federally funded specialty programs for people with SMI is needed to remove requirement barriers to these programs. All individuals who meet diagnostic criteria for SMI should be given the opportunity to participate in PACT. In order to live successfully in the community, people with SMI need specialized supportive housing and long-term facilities that cater to their unique needs.

Recommendation: Increase opportunities for diversion and improve care for people with SMI involved in the criminal and justice systems. Universal screening and treatment for mental disorders, substance use disorders, and behavioral health needs for each person incarcerated must be implemented. Inmates must have access to psychiatric care while in and out of prison. The carceral system is not a therapeutic environment. Policy makers must reimagine systems to reduce rates of incarceration overall, but particularly for people living with SMI Federal disinvestment in mental health care has caused budget cuts to psychiatric services across the U.S., causing police to take on a greater role in dealing with the mentally ill. If a patient has an emergency psychiatric issue, it should be dealt with by trained mental health professionals, not police.

Recommendation: Stop investing in private for-profit behavioral health hospitals. Ethics and impact of the expansion of private for-profit-psychiatric hospitals: Over the past decade, legal pressure from the U.S. Supreme Court to add more psychiatric beds combined with the expansion of Medicaid coverage and mental health benefits has created a lucrative opportunity for health care companies, causing a steep increase in private for-profit psychiatric facilities. Washington State payments to five private psychiatric hospitals nearly tripled over five years, totaling almost $67 million in 2018. After Washington State legislation passed to increase mental health beds in 2012, seven psychiatric hospitals have been built or expanded, adding more than 850 inpatient beds. All but one of the facilities are for-profit. In 2020, during the COVID-19 pandemic two state funded facilities will be permanently

closed. While there is limited academic research on private mental health hospitals, there are several extensive articles published in Buzzfeed (Adams, 2016) and Seattle Times (Gilbert, 2019), detailing how these facilities profit over patients.

While construction of for-profit hospitals increases the official number of psychiatric beds available within a state, it fails to address the long term care needs of people with SMI. Lack of differentiation between supportive psychiatric facilities and short-term hospitalization has led to a ballooning of for-profit short-term psychiatric hospitals throughout the U.S.. In 2017, a study published by the National Association of State Mental Health illustrated that less than 37 percent of inpatient psychiatric beds were located in public hospitals (Lutterman et. al., 2017). For-profit hospitals provide lower quality of care. More research needs to be done concerning how for-profit hospitals impact treatment of people with SMI.

Limitations

Barriers to project implementation included lack of available data and changing definitions of homelessness made accurately analyzing available statistics implausible. Therefore, only data for 1880, 1930 and 2005 through 2017 were included in the analysis. Total estimates of the SMI experiencing homelessness from 2005-2015 are likely underrepresented because this number only represents people with SMI experiencing homelessness on a given night. Furthermore, PIT collection requires direct contact with individuals being counted. The nature of SMI makes these individuals more likely to be suspicious and less likely to answer census taker questions. 1880 census data likely more accurately assessed the housing situation of the severely mentally ill because this census included data on mental illness from local physicians and community members (Gorwitz, 1974; Torrey, 2010).

Lack of national data on standardized mortality ratios and about incarceration rates of people with SMI likely skewed data for some years. For example, there are only two available studies on SMI and standardized mortality in the U.S. between 1940 and 1955. Both studies were conducted at University of Iowa Psychiatric Hospital and Dr. Tsuang was an author on both papers. This author could not find any

available data relating to life expectancy of people with SMI prior to 1940. Availability of accurate data on the lives and housing status of people with SMI would enable policy makers to accurately assess policy impact and make policy recommendations that would more directly benefit the lives of people with SMI.

Scientific merit, dissemination, and potential contributions to practice:

This paper will be sent to Dr. Elizabeth Sinclair, the Director of Research for the Treatment Advocacy Center. The Treatment Advocacy Center is a national nonprofit that advocates for more effective policies for people with SMI. Information gathered in this paper will be used to educate policymakers and judges about mental illness and criminal justice reform. The goal of this paper is to promote laws, policies and practices that will improve psychiatric care for people with severe and persistent psychiatric illnesses, such as schizophrenia and bipolar disorder.

Provider-led systematic assessment of health policy enables medical providers who directly interact with policy to influence the decision-making process. Psychiatric healthcare providers and their patients constantly observe and interact with the consequences of federal deinstitutionalization and civil commitment policies. While providers are charged with prescribing medications, diagnosing, and treating patients, every provider must operate under the rules, regulations, and restrictions of health policy. Providers face a conflict between medical knowledge and the practice of medicine when systemic barriers prevent patients from receiving services that are critical to their health. To prioritize the needs of patients, providers need to utilize prevention. This means advocating for political, economic, and social policy that can improve outcomes for patients.

Conclusion

This project consisted of four aims: (1) To explain the impact of dangerousness versus right to treat policies The shift from right-to-treat to dangerousness criteria for civil commitment reduced access to psychiatric care for non-dangerous individuals with SMI who need but are refusing treatment. (2) Explain the history and impact of federal mental health policy from 1850- present. When social safety nets for the poor are cut, people with SMI are disproportionately impacted. Increased centralization of

federal government safety nets correlate with improved outcomes for people with SMI. The era of institutionalization from 1880-1954 is associated with decreased rates of incarceration (R-0.53). Increased government spending on housing and social safety nets between 1930 and 1970 correlate with improved life expectancy (R+0.94) for persons with SMI. (3) Analyze the financial impact of deinstitutionalization. Transinstitutionalization and homelessness are more expensive than providing comprehensive community treatment and housing for people living with SMI. It costs 63% more tax dollars to incarcerate a person than it does to provide a person experiencing SMI housing and wraparound support services. (4) Utilize findings to make recommendations for improvement to federal mental health policy. Due to the above findings, both state and federal governments should stop investing in private, for-profit behavioral health hospitals and increase opportunities for diversion of people with SMI involved in criminal justice systems. Federal policy makers should introduce bills that increase federal funding for government-run psychiatric hospitals and community based mental health services and include questions relating to mental illness in federal census data collections

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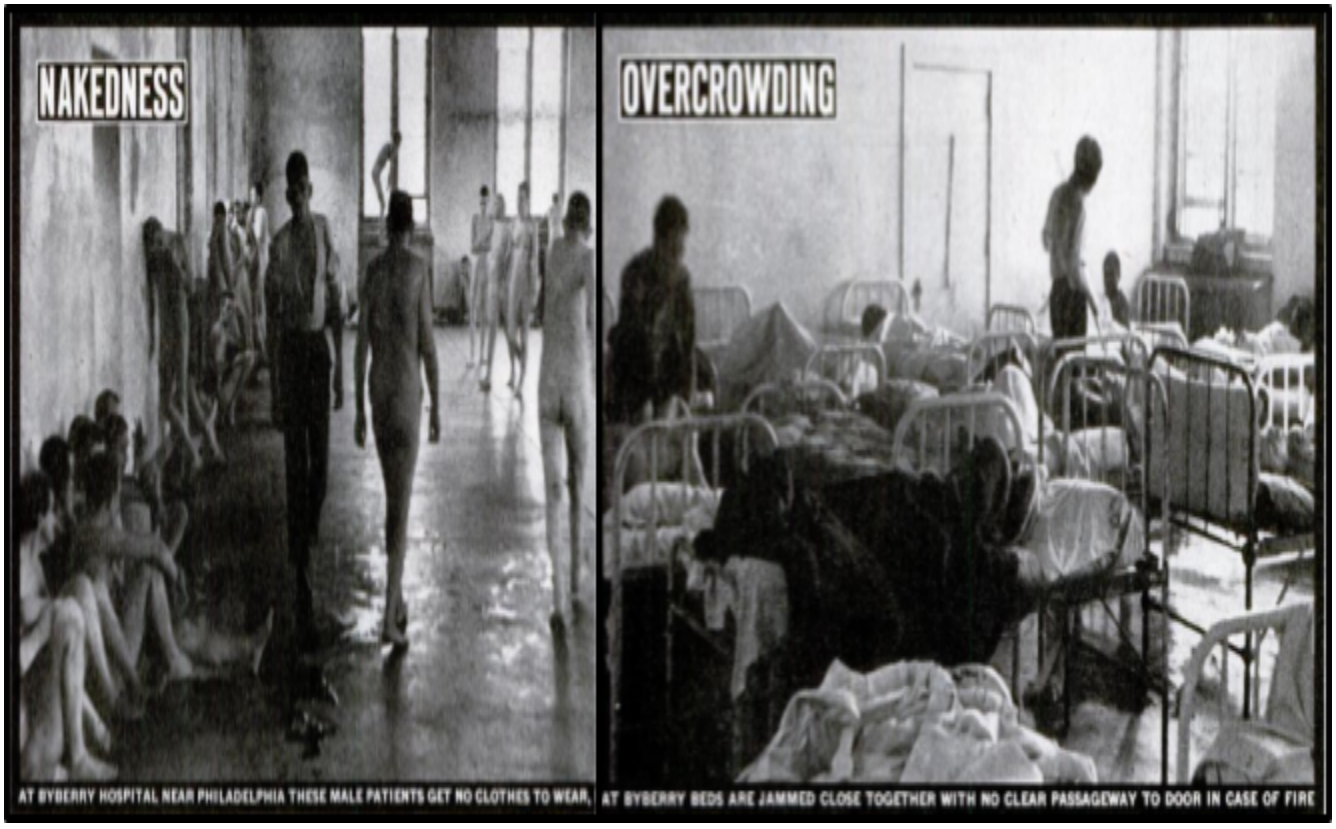
Appendices

Click here for a link to the Supplemental Materials: matrices and tables for quantitative data analysis

Figure 1: Eras of federal mental health policy:	
Pre-federal legislation of treatment for mental illness	1840-1854
Transition to institutionalization	1855-1879
Institutionalization	1880-1954
Transition to deinstitutionalization with centralized, federal support	1955-1980
Transinstitutionalization without federal financial support of services for SMI	1981-present

Figure 2: Images Bedlam article in life magazine that were published in 1941



Note: photos captured by Alfred Eisenstaedt at U.S. Mental Hospitals in 1946 for Albert Maisel's Life Magazine expose (Eisenstaedt & Maisel, 1941)

Figure 3:
Pearson Product-Moment Correlation Coefficients (PMCC) Interpretation and Results

How to Interpret PPMCC Correlation Data				
	Coefficient, r		**Meaning Positive Negative**	
Strength of Association	Positive	Negative	As the value of one variable increases, so does the value of the other variable. The closer the R value is to 1, indicates a stronger relationship between variables.	Indicates an inverse relationship between variables. As one variable increases, the other variable decreases. The closer the R value is to -1, indicates a stronger relationship between variables.
Very High	0.9 to 1	-0.9 to -1		
High	0.7 to 0.9	-0.7 to - 0.9		
Moderate	0.5 to 0.7	-0.5 to -0.7		
Low	0.30 to 0.5	-0.30 to -0.5		
Negligible	0.00 to 0.3	-0.00 to -0.3	Values closer to zero indicate weaker correlation between variables. Negligible values are considered insignificant correlation when analyzing for cause and effect.	

Note. This table describes how to interpret Pearson Correlation Analysis. Source: (Mukaka, 2000)

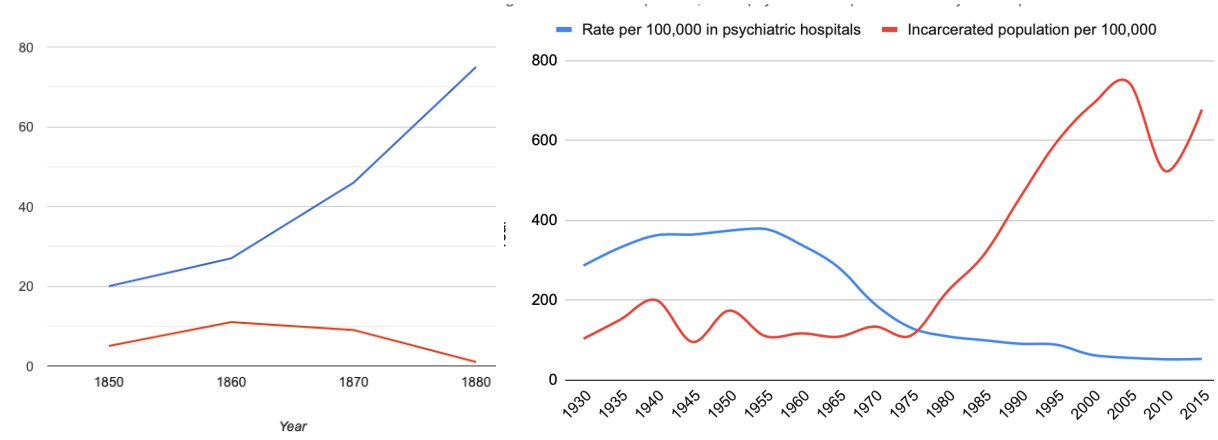
Figure 4: Pearson Product-Moment Correlation Coefficients Results by policy era and transition era

Year	**Homelessness:** Rate per 100,000 in mental hospitals versus percentage of homeless population with SMI *	**Incarceration overall:** Psychiatric hospitals beds per 100k versus overall incarcerated population per 100k	**Incarceration among SMI population:** Psychiatric hospital beds per 100k versus incarcerated population with SMI per 100k	**Incarceration among SMI population:** Psychiatric hospital population per 100k versus percent of incarcerated population with SMI	**Life Expectancy/SMR:** Psychiatric hospital beds per 100k versus Standardized Mortality Ratio (SMR) of non-veteran population with SMI.
1850-1880	*Insufficient data	0.96	-0.81	-0.99	*Insufficient data
1880-1955	*Insufficient data	0.30	**-025	-0.58	*Insufficient data
1955-1975	*Insufficient data	-0.32	-0.86	-0.91	-0.73
1980-2015	*Insufficient data	-0.81	-0.98	-0.67	-0.94
Overall: 1850-2015	-0.7104	-0.401	-0.53	-0.67	-0.78
Transition Eras: Pearson Correlation in the years preceding and following major changes to federal mental health policies (to show impact of specific policy changes)					
1850-1880: pre federal legislation for SMI to institutionalization		+0.96	-0.81	-0.99	*Insufficient data
1935-1970: Transition to deinstitutionalization with centralized government		+0.21	-0.22	+0.07	+0.52
1945- 2015: Institutionalization to transinstitutionalization		-0.75	-0.69	-0.75	-0.64

Note**.** table shows Pearson Correlations of data analysis. For sources see table 4 from the supplemental materials and this Google Sheets document. *not enough consecutive years of data to assess PMCC calculation by era, **For years where there is no data, the average between studies from the decade before and after were utilized.

Figure 5:

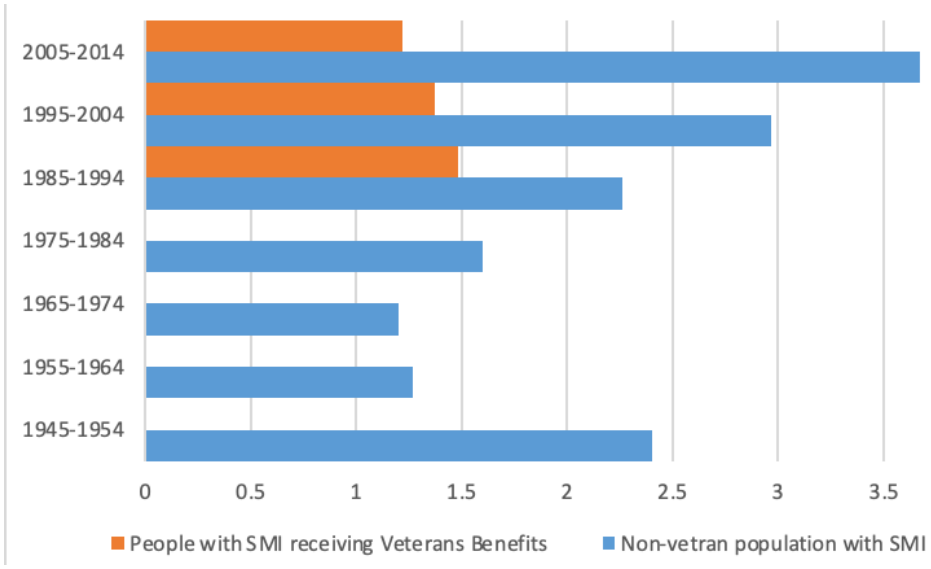
Rate per 100,000 of those with severe mental illness in psychiatric hospitals versus incarcerated.



Note: Figure demonstrates the inverse relationship between incarceration and hospitalization of SMI between 1850 and 2015. The vertical axis shows rate per 100k. The X axis represents the year. For information pertaining to citations and abbreviations see supplemental material file.

Figure 6:

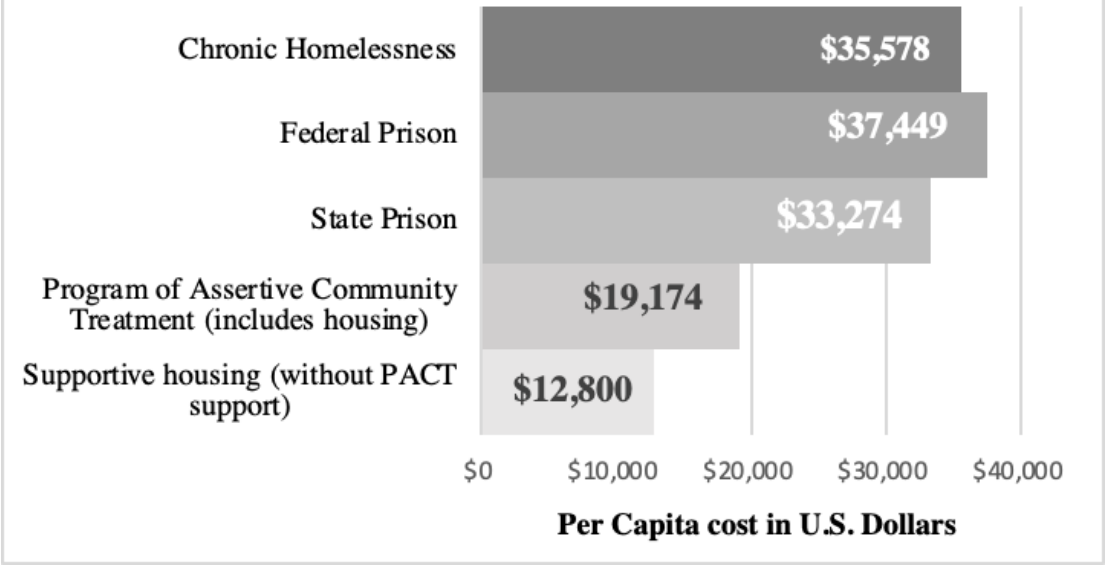
Federal policy impact on life expectancy of people experiencing SMI



Note: This table demonstrates the changes in mortality ratios among people with SMI. For sources, see tables 1 and 2 in supplemental materials

Figure 7:

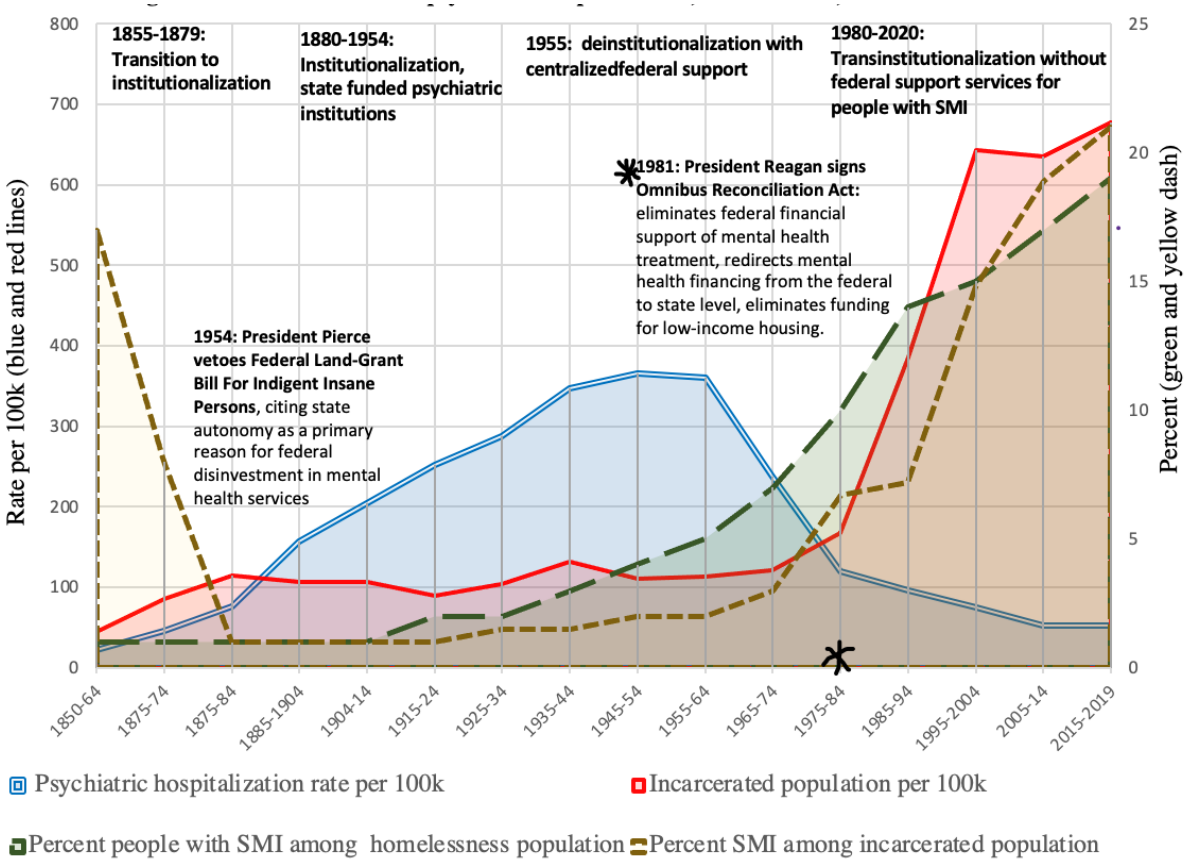
Average taxpayer cost of incarceration and homlessness to comprehensive mental health services



Note. This table compares taxpayer dollars spent per capita. Homelessness data from National Alliance to End Homelessness (2019). PACT cost obtained from Washington State Institute for Public Policy (2019). Federal and state prison data from the Bureau of Prisons (2019) and Mai & Subramanian (2017).

Figure 8:

Correlation between psychiatric hospitalization, incarceration, and homelessness



Note. Line graph showing correlations between policy changes and rates of hospitalization, incarceration, and homelessness among people with SMI. Source: See matrix 5 in supplemental materials.

Figure 9.
Summary of Rates of Severe Mental illness among the incarcerated persons in the U.S. by decade

Decade	Weighted estimate of incarcerated population with SMI	Decade	Weighted estimate of incarcerated population with SMI
1845-1854	17%	**1935-1939**	1.5%
1855-1874	15%	**1940-1944**	*3%
1864-1874	Data not available	**1945-1950**	*3%
1875-1884	0.07	**1955-64**	*3%
1885-1894	Data not available	**1965-74**	4.5%
1895-1904	Data not available	**1975-84**	6.3%
1905-1914	Data not available	**1985-94**	7.12%
1915-1924	Data not available	**1995-2004**	14.8%
1925-1930	1.5%	**2005-14**	18.9%
1930-1934	1.5%	**2015- present**	20.2%

Source: See matrix 4 , Statistics: For analyses of Rates of Severe Mental Illness among the incarcerated persons in the U.S., the weighted mean was calculated by subgroup using information from the Table 5 matrix. The weighted mean was calculated for each decade.