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Leonard D. Schaeffer Center
for Health Policy & Economics

THE COST OF MENTAL ILLNESS:
CONNECTICUT FACTS AND FIGURES

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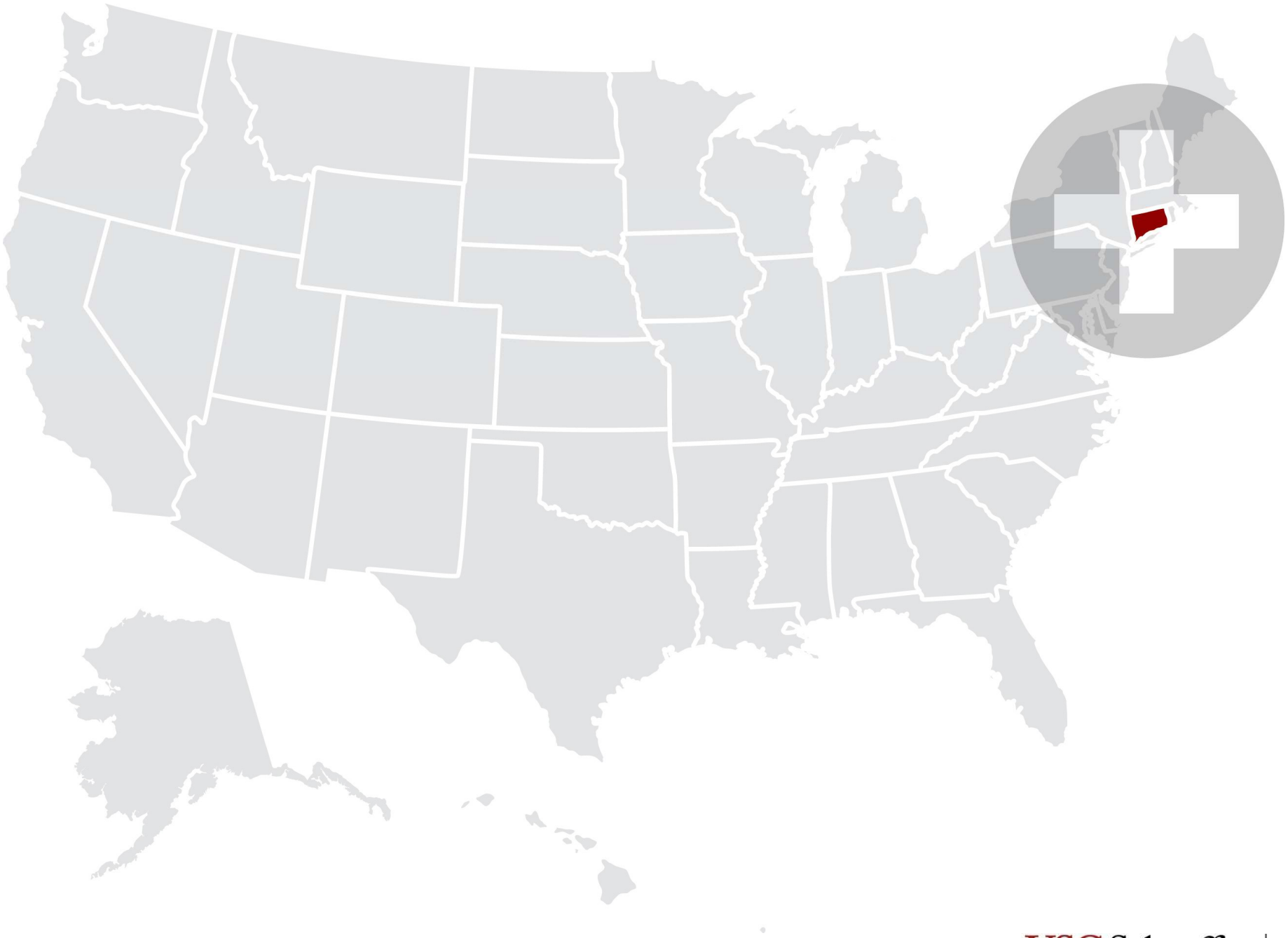
CONNECTICUT



INTRODUCTION

Improving access to high-quality medical care for patients with mental illness remains one of the most vexing problems facing the healthcare system in the United States. While Connecticut's mental health system is considered to be among the nation's top regarding access to care, demand has been rising, and funding cuts are straining the system[1].

This chartbook attempts to quantify the magnitude of the challenges facing Connecticut in terms of the economic burden associated with mental illness. We describe the size of the mentally ill population and show the impact on the healthcare system based on high rates of hospitalization. We also note the unmet need in terms of mental health providers and discuss the implications for the criminal justice system in Connecticut.

[1] http://ctmirror.org/2016/11/07/theres-a-lot-of-anxiety-mental-health-system-braces-for-more-cuts/

INTRODUCTION

Key findings include:

- In the U.S., the hospitalization rate of patients with serious mental illness is very high compared to other hospitalizations, which imposes a large cost on the health care system due to the relatively long length of stay, despite the general absence of procedures.
- Despite the relatively large per-capita number of mental health care providers in Connecticut compared to the rest of the U.S., there is still a shortage of providers, particularly in the criminal justice system.
- People living with mental illness are more likely to encounter the criminal justice system, resulting in a large number of arrests and incarcerations. The overall annual cost of incarcerating people with serious mental illness in state prisons in Connecticut exceeds $140 million.

The data presented in this chartbook are all publicly available and represent the most recent numbers to which we had access.

The data and methods are described in more detail in the appendix that can be found at: http://healthpolicy.usc.edu/Keck_Schaeffer_Initiative.aspx

CONTENTS

QUANTIFYING THE POPULATION LIVING WITH MENTAL ILLNESS IN CONNECTICUT AND THE U.S.

KEY POPULATIONS OF INTEREST

SERIOUS PSYCHOLOGICAL DISTRESS (SPD)

When someone experiences Serious Psychological Distress, he or she may have a diagnosed or undiagnosed mental health condition, such as major depressive disorder, bipolar disorder, or schizophrenia (described below). Serious Psychological Distress is determined by six questions on the Kessler-6 screening instrument, which measures the frequency of symptoms of depression, anxiety, and emotional distress during a specific time period

MAJOR DEPRESSIVE DISORDER

A mental illness that severely impairs a person's ability to function, characterized by the presence of depressed mood, feelings of worthlessness, guilt, or helplessness, reduced concentration, ability to think, sleep problems, loss of interest or pleasure in activities, and/or recurrent thoughts of suicide

BIPOLAR DISORDER

A mental illness characterized by extreme shifts in mood and energy levels. During manic episodes, a patient has abnormally high energy and activity levels that lead to impairment in daily functioning or requires hospitalization to prevent harm to self or others. Delusions or hallucinations can also occur. Manic episodes may be alternated with major depressive episodes

SCHIZOPHRENIA

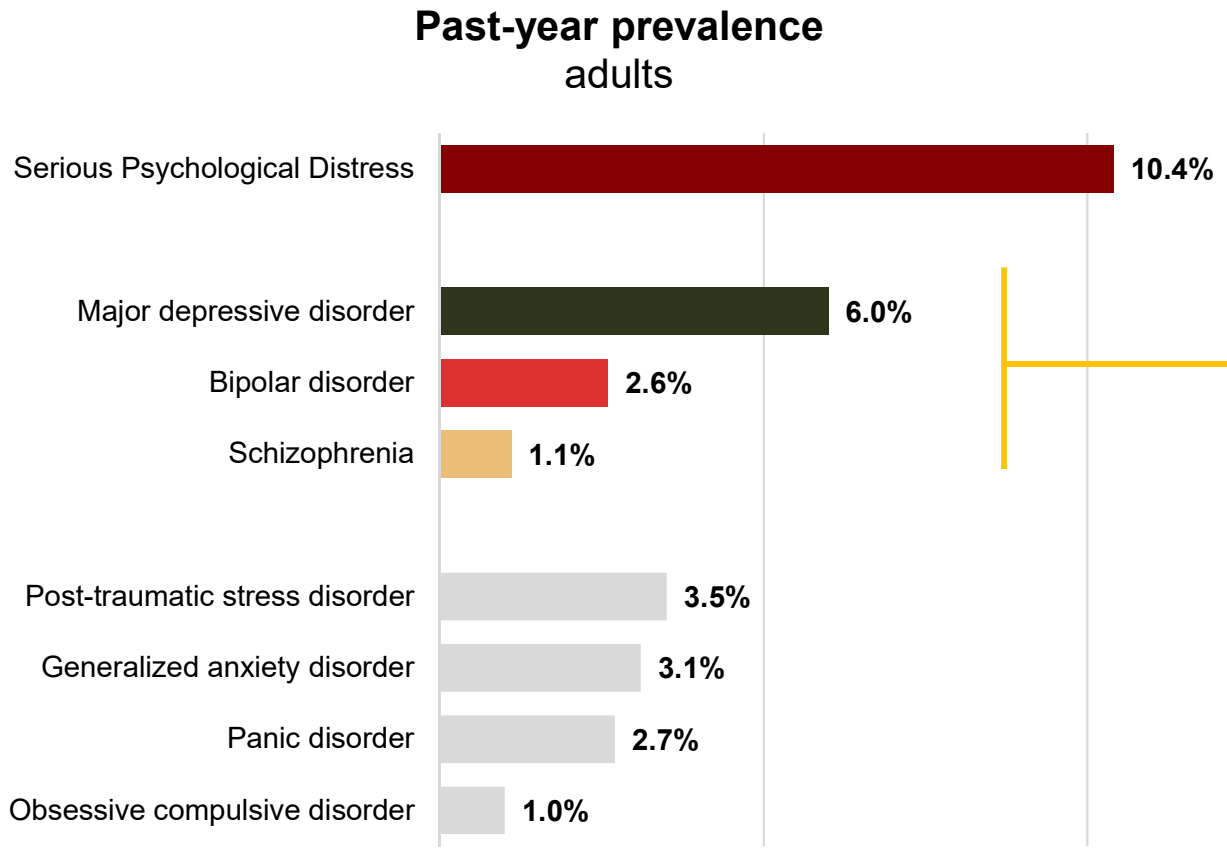
A debilitating mental illness that distorts a patient's sense of reality. Symptoms of schizophrenia include hallucinations, delusions, confusion, cognitive and mood impairments, and extremely disorganized thinking

RISK FACTORS: GENETIC & EXTERNAL FACTORS

Many different genetic factors may increase risk, but no single genetic variation causes a mental illness by itself; Specific interactions between the individual's genes and environment are necessary for a mental illness to develop

Prevalence of mental illness

UNITED STATES 2015



Many mental health conditions are fairly common in the general population.

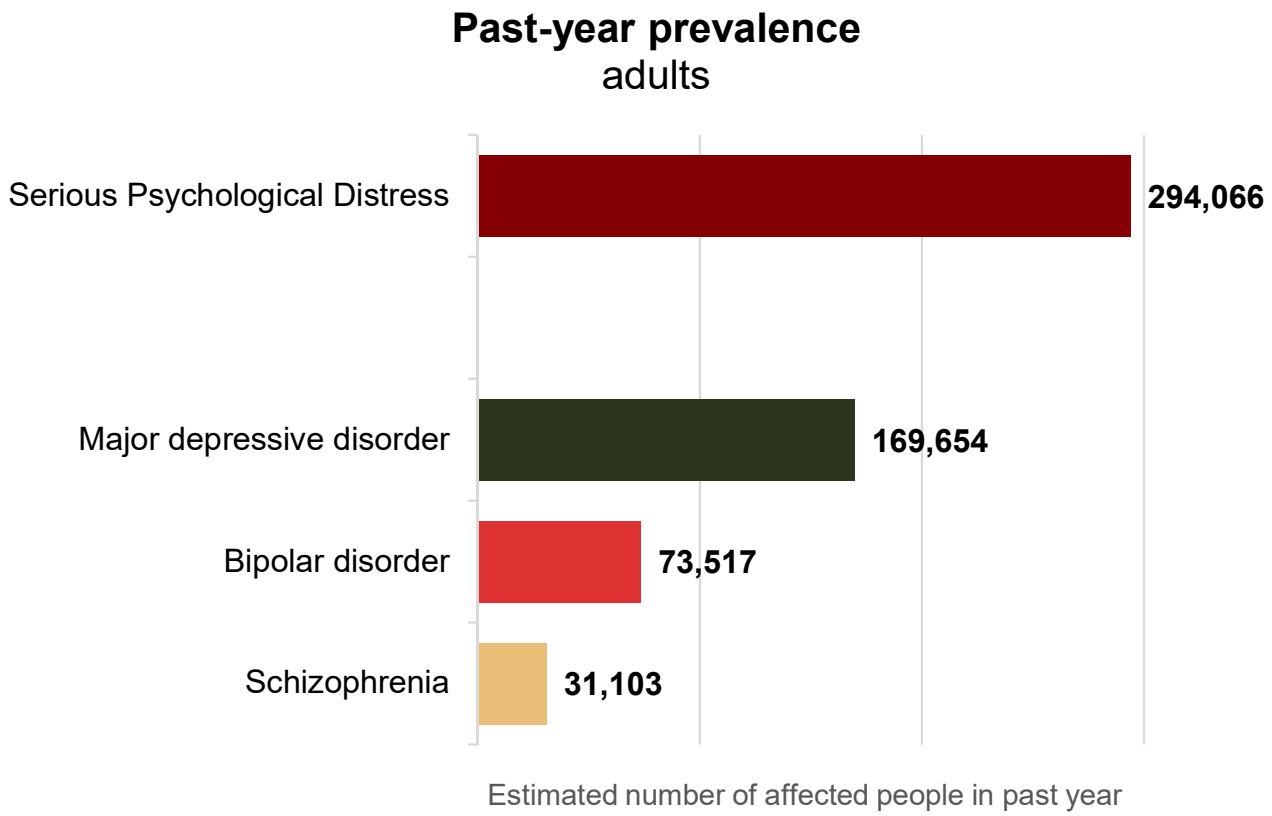
Of the three conditions that are often labeled as Serious Mental Illness (SMI), major depressive disorder is the most prevalent, followed by bipolar disorder and schizophrenia.

NB: Due symptom overlap, diagnoses of mental illnesses are not mutually exclusive

Source: National Survey on Drug Use and Health (NSDUH) 2015 (SPD), NSDUH Mental Health Surveillance Study 2008-2012 (major depressive disorder) and National Institutes of Mental Health (other conditions – see appendix for original sources)

Estimated number of people living with mental illness

CONNECTICUT 2015



We estimate that approximately 300,000 adults in Connecticut experienced Serious Psychological Distress in the past 12 months.

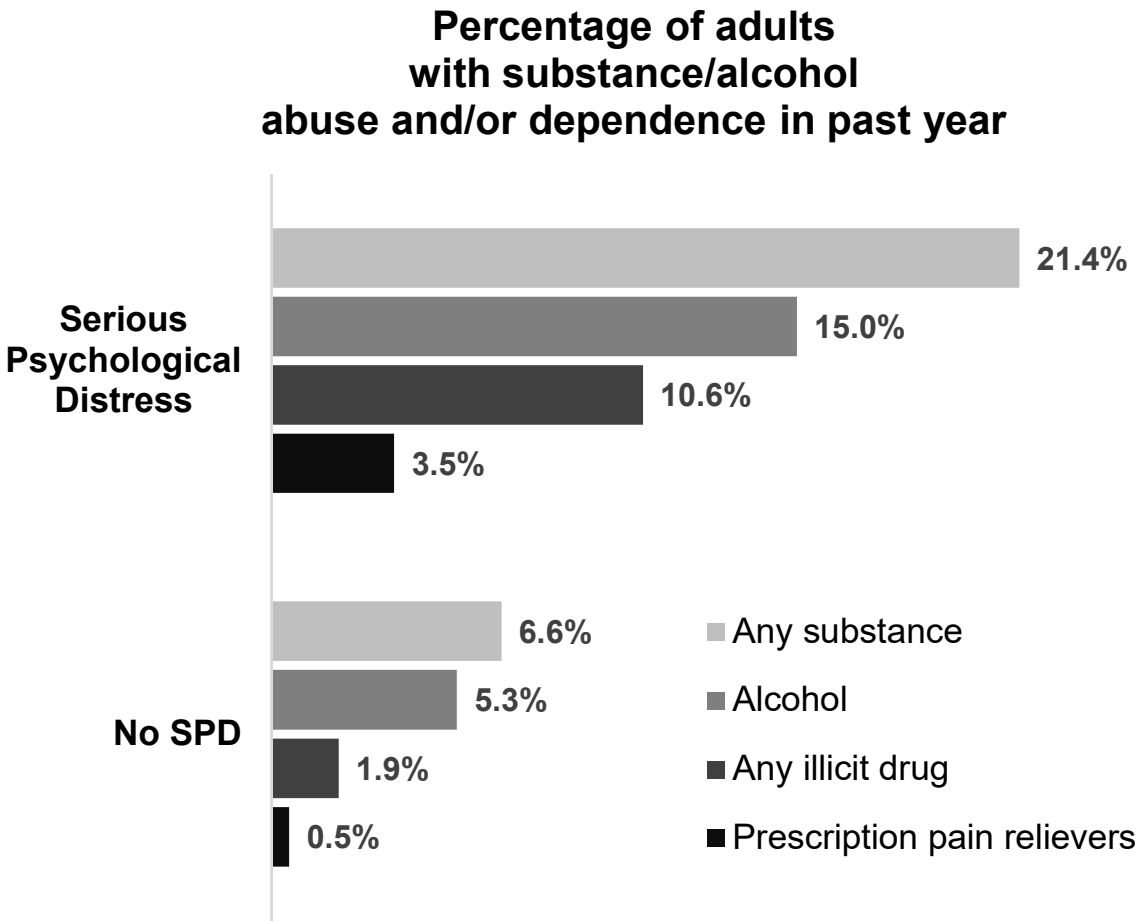
Note that a patient can receive multiple diagnoses of a serious mental illness due to a high degree of overlap between the mental health conditions.

Source: National Institutes of Mental Health, National Survey on Drug Use and Health (NSDUH) 2015, and NSDUH-MHSS 2008-2012.

Estimate of # of people affected using total state population of 2,827,561 adults (18 years and over), Census Bureau data (2015)

Substance abuse in people with Serious Psychological Distress

UNITED STATES 2015



People who experienced Serious Psychological Distress in the past 12 months are more likely to abuse or be dependent on alcohol or illicit drugs during that same time period

Source: National Survey on Drug Use and Health (2015)

MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

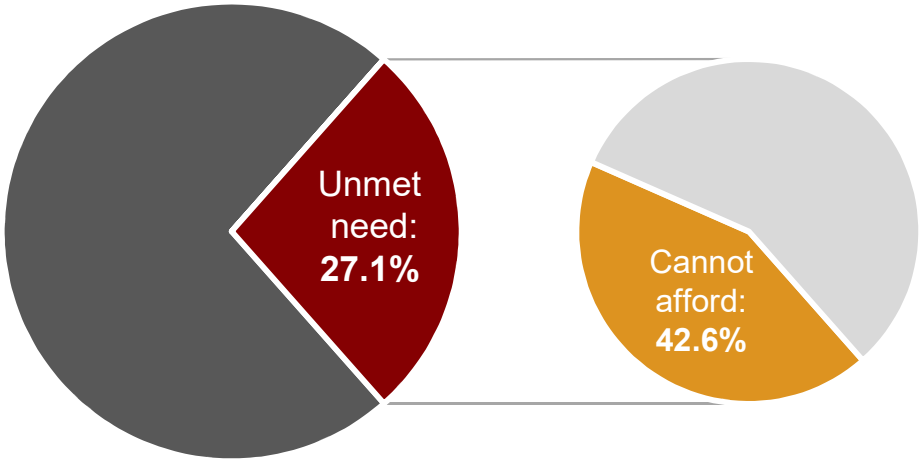
Unmet mental health care needs

More than a quarter of adults with Serious Psychological Distress in the past year reported an unmet need for mental health care. A common reason for not receiving care was the inability to afford mental health treatment, especially for people who do not have health insurance.

There is significant unmet need for mental health care in the U.S.

UNITED STATES 2015

Among adults who experienced **Serious Psychological Distress** during the past year:



27.1% indicates an **unmet need of mental health treatment**

And 42.6% of these people did not receive mental health treatment, **because they could not afford it**

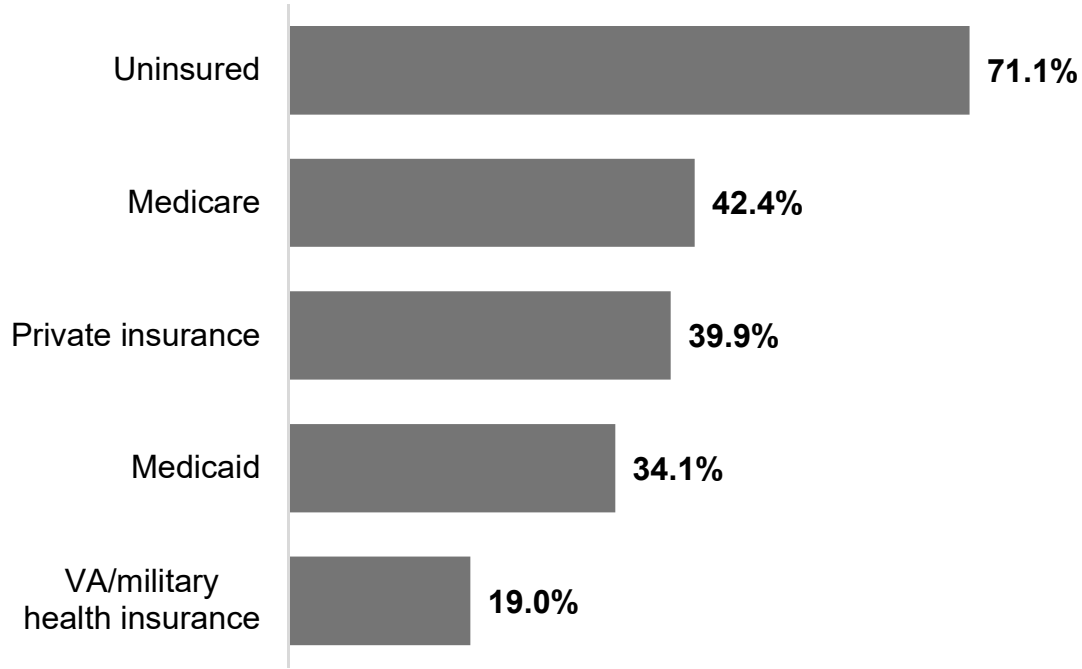
More than a quarter of adults who experienced Serious Psychological Distress in the previous year in the U.S. reported an unmet need for mental health care. Almost half of the people with a perceived unmet need reported that they did not receive treatment because they could not afford it.

Source: National Survey on Drug Use and Health (NSDUH) 2015

Unmet need of mental health treatment due to costs

UNITED STATES 2015

Percentage of adults with past-year Serious Psychological Distress and unmet need of treatment, **who could not afford mental health care**



The extent to which cost was a factor in driving unmet need for mental health care varied by insurance status. People without health insurance were most affected by the inability to afford mental health treatment (71.1%), while those with VA/military health insurance coverage were least affected (19.0%).

Source: National Survey on Drug Use and Health (NSDUH) 2015

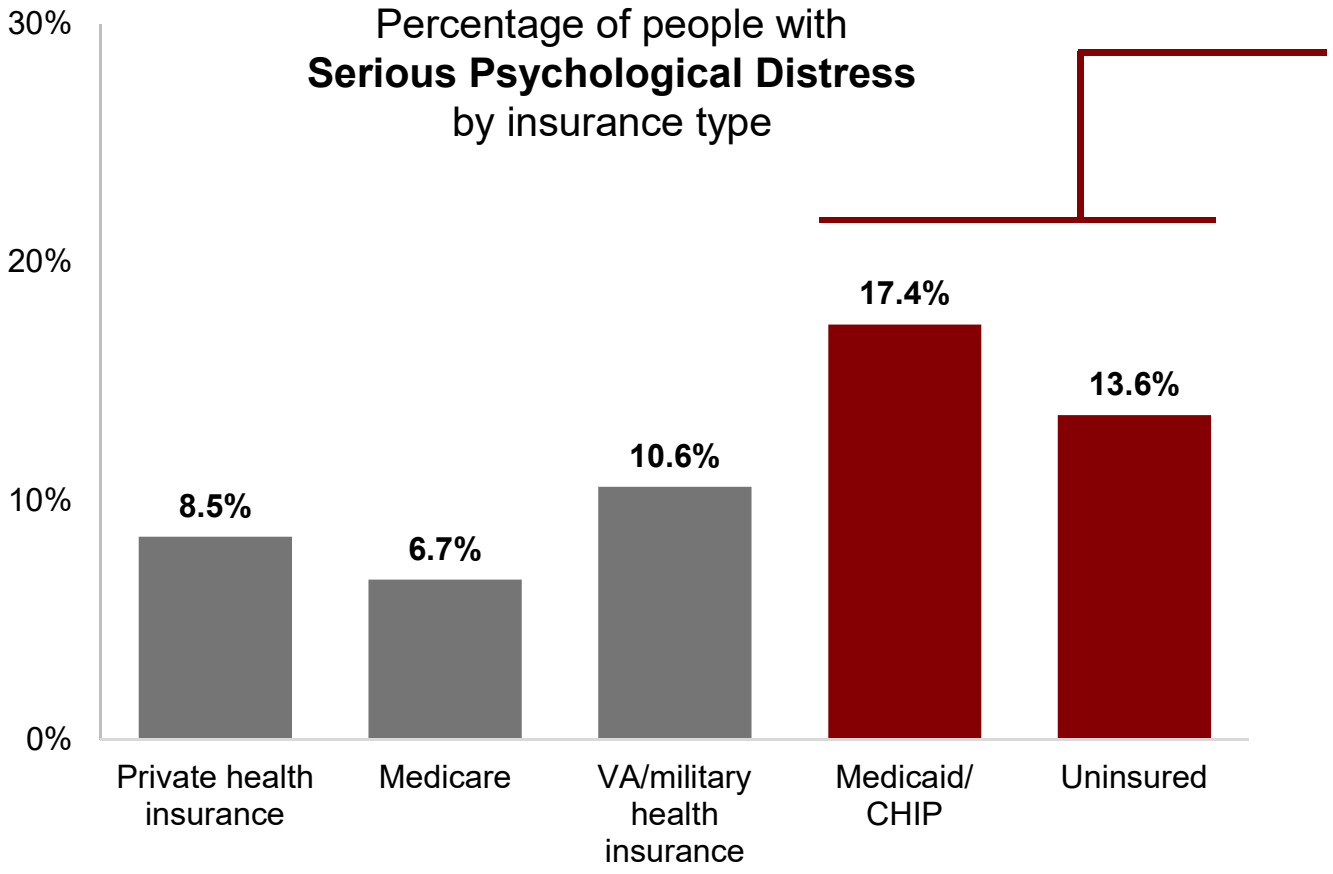
MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

Medicaid & mental health care needs

Medicaid provides a safety-net for people who are living in poverty or have qualifying disabilities, and a large percentage of people with Medicaid coverage experience mental illness. However, it is often a financial burden for physicians to accept Medicaid patients since reimbursement rates are often lower than for other patients. This can lead to access barriers for patients with Medicaid coverage that prevent them from receiving the mental health care they need.

People with mental illness have greater reliance on the safety net

UNITED STATES 2015

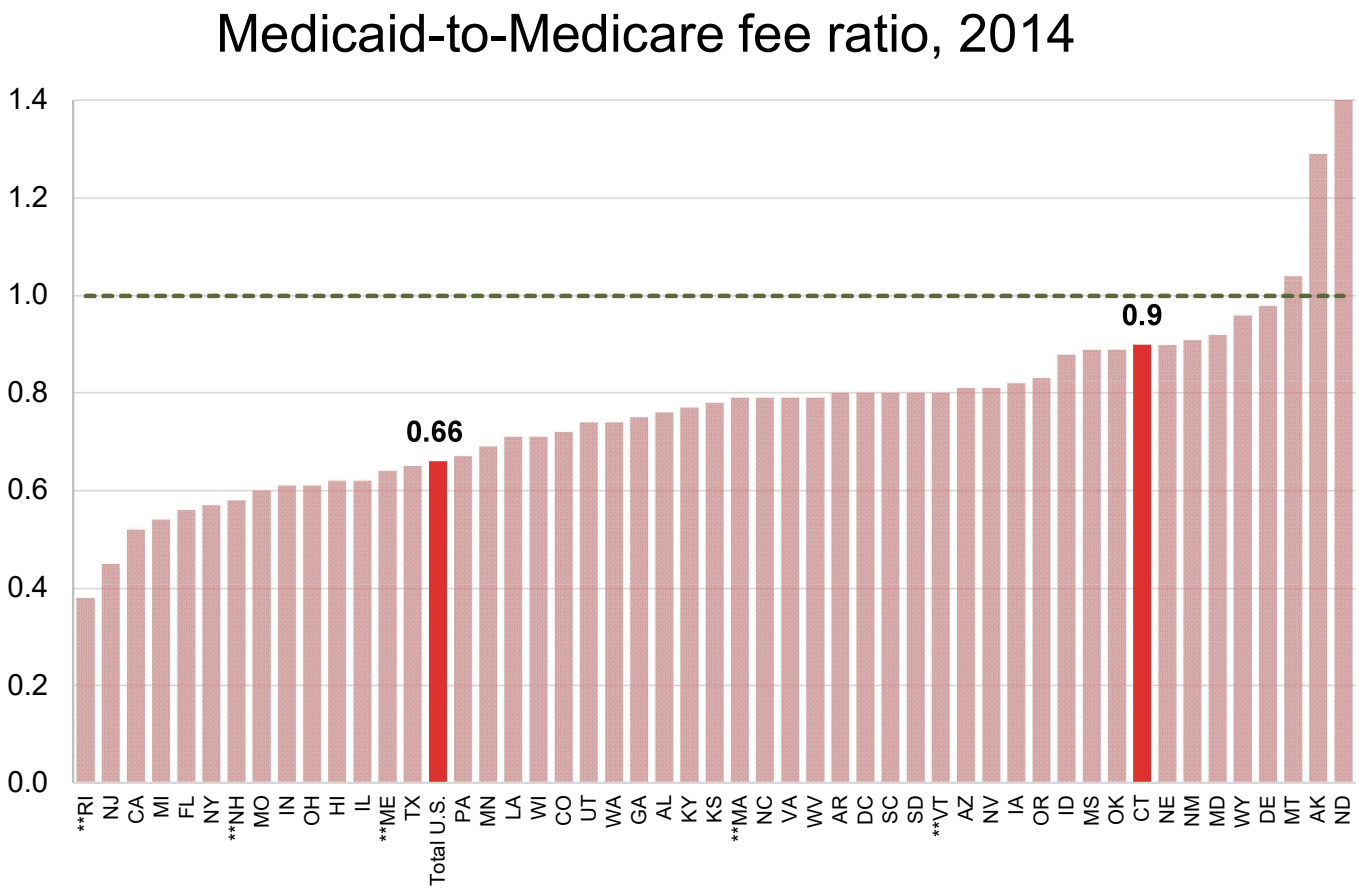


*In the **Medicaid and uninsured population**, a higher percentage of people reported Serious Psychological Distress (SPD) during the past year compared to people with Medicare, VA/military, or private health insurance coverage.*

Source: National Survey on Drug Use and Health (NSDUH) 2015

Medicaid reimbursement rates to physicians are low

CONNECTICUT AND UNITED STATES 2014



Low reimbursement rates *are a disincentive for individual physicians to accept patients with Medicaid coverage and mental health problems. Compared to Medicare fee levels, Medicaid reimbursement rates are low in most states.*

Although Connecticut's fee ratio is one of the highest in the U.S, the Medicaid fees are still below Medicare fees.

This can be a barrier for these patients to obtain access to mental health care.

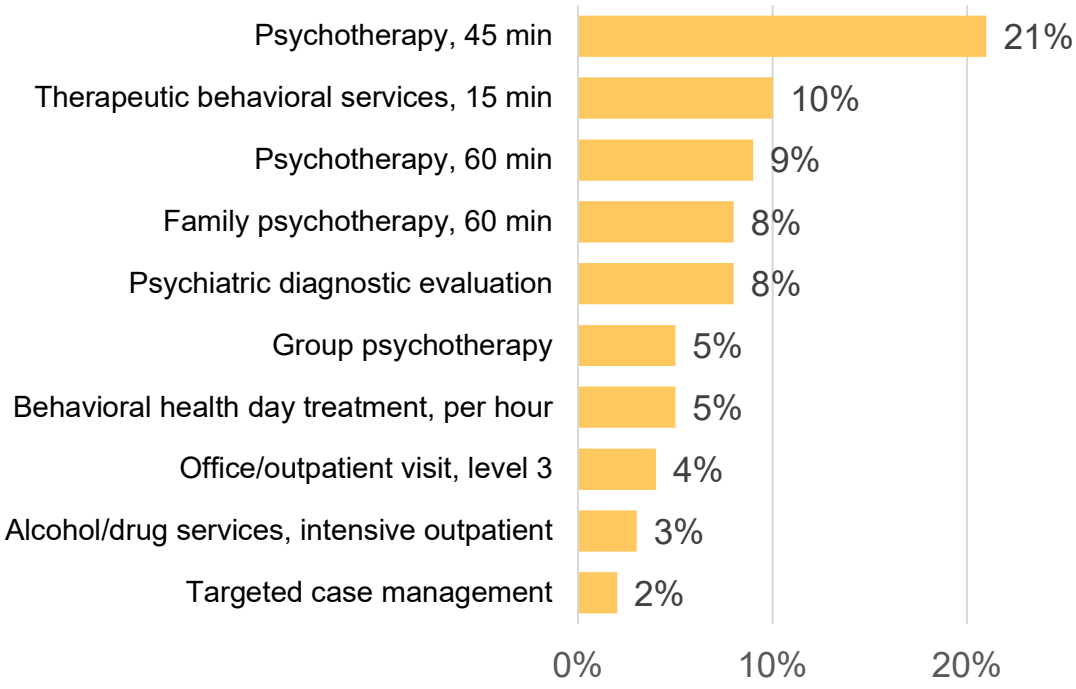
***New England states*

Source: Kaiser Family Foundation, Medicaid-to-Medicare Fee Index, FY 2014

Medicaid reimbursement rates for mental health services by community providers are low

CONNECTICUT 2014

Top 10 procedures by volume
selection of CT community providers serving Medicaid patients



Margin per hour
-$106.86
-$133.25
-$80.86
-$124.75
-$111.98
-$103.12
-$128.58
-$116.66
-$1.76
-$207.51

The 10 most utilized behavioral health services account for 75% of total service hours by community providers.

*The service delivery cost for these procedures is higher than the revenue under Medicaid rates, resulting in **negative margins** and providers operating at a loss.*

*The **annual loss** for these procedures is more than $27 million for approximately 250,000 service hours.*

Source: Prioritizing Community Based Services in CT, CT Community Providers Association, February 2015

MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

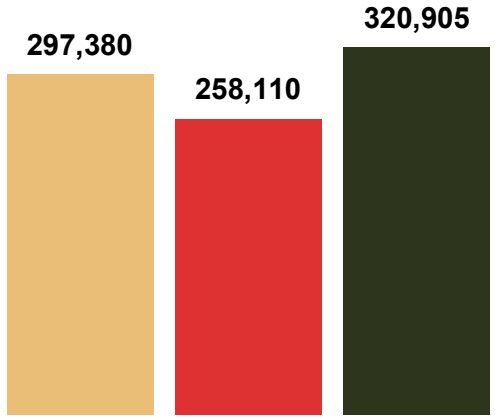
Hospital utilization & costs

For every 100 patients with a serious mental illness, there were approximately 18 hospitalizations in the U.S. in 2014. The average length of stay for these hospitalizations is long compared to other hospital stays. Relatively little progress has been made in reducing the length of stay for a serious mental illness over the last decade. This imposes a large financial cost on the health care system and potentially diverts resources away from other sites of care.

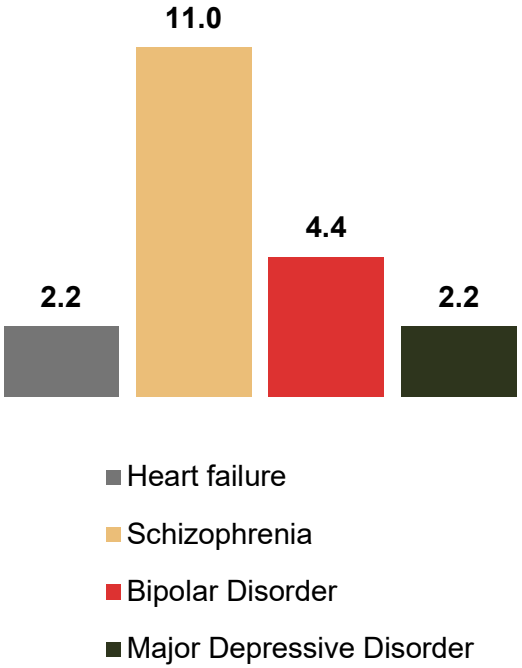
Hospitalizations for mental illness

UNITED STATES 2014

Hospitalizations
adults



Hospitalization rate
per 100 patients - adults



In the U.S. the number of hospitalizations is highest for adult patients with a principle diagnosis of major depressive disorder. However, patients with a schizophrenia diagnosis have a much higher rate of hospitalizations.

In the U.S. there are approximately 18 serious mental illness-related hospitalizations for every 100 adult patients. The rate for each SMI is up to five times as high as for patients with heart failure as principle diagnosis.

2.5% of all hospitalizations are due to SMI

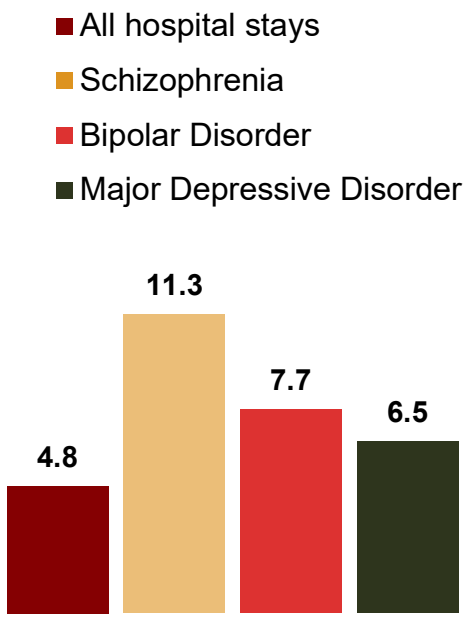
Source: Health Care Utilization Project (HCUPnet) 2014

Estimate of hospitalization rate: based on total state population (Census bureau data, 2014) Prevalence estimates reported previously, and from Heart Disease and Stroke Statistics 2016 Update: A Report From the American Heart Association

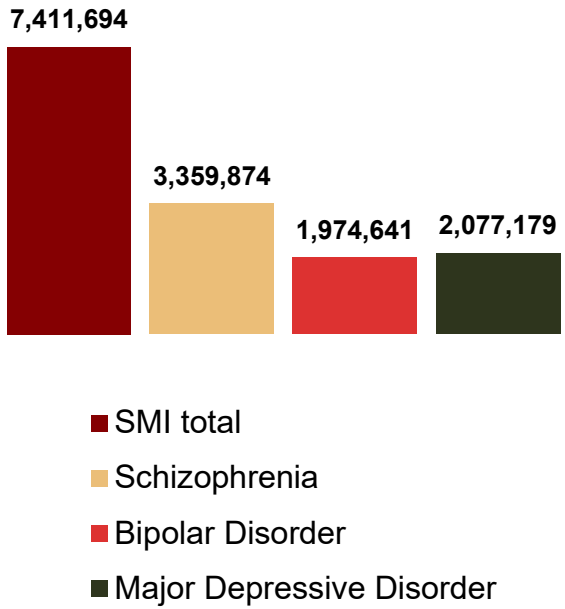
Length of stay for mental illness hospitalizations

UNITED STATES 2014

Average duration of hospital stays (days)
adults



Total number of hospital days in 2014
adults



In the U.S., the average hospital stay duration for adult patients with serious mental illness is high compared to all hospital stays, especially for patients diagnosed with schizophrenia.

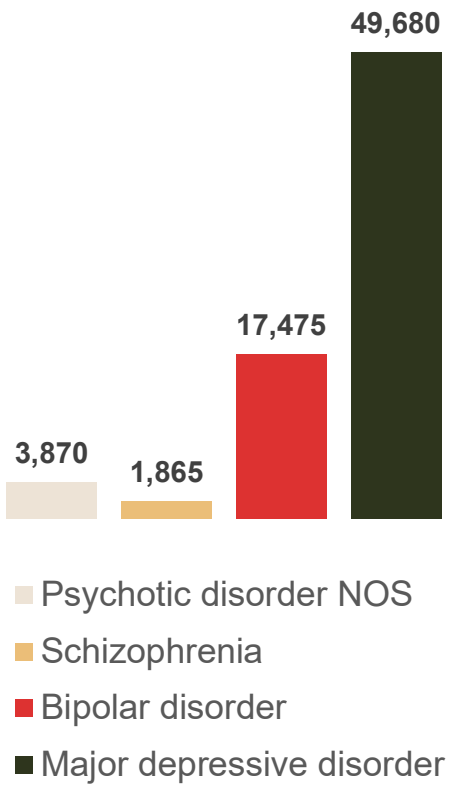
The total time spent in the hospital by adults with a primary diagnosis of schizophrenia, bipolar disorder or major depressive disorder exceeds seven million days each year in the U.S.

Source: Health Care Utilization Project (HCUPnet) 2014

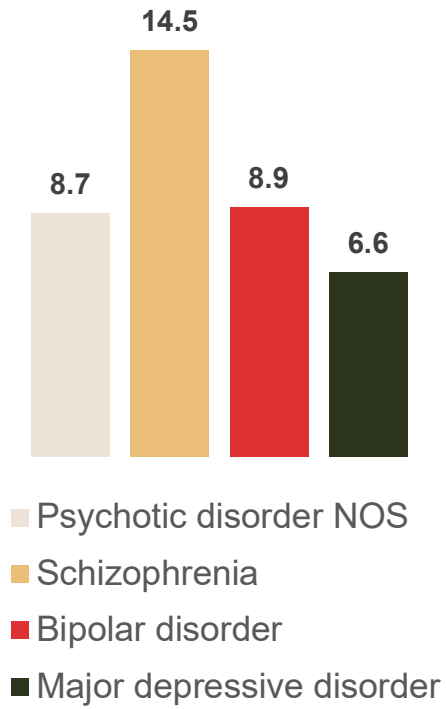
Length of stay for youth mental illness hospitalizations

UNITED STATES 2014

Hospitalizations
youth, 1-17 yrs



Average duration of hospital stay (days)
youth, 1-17 yrs



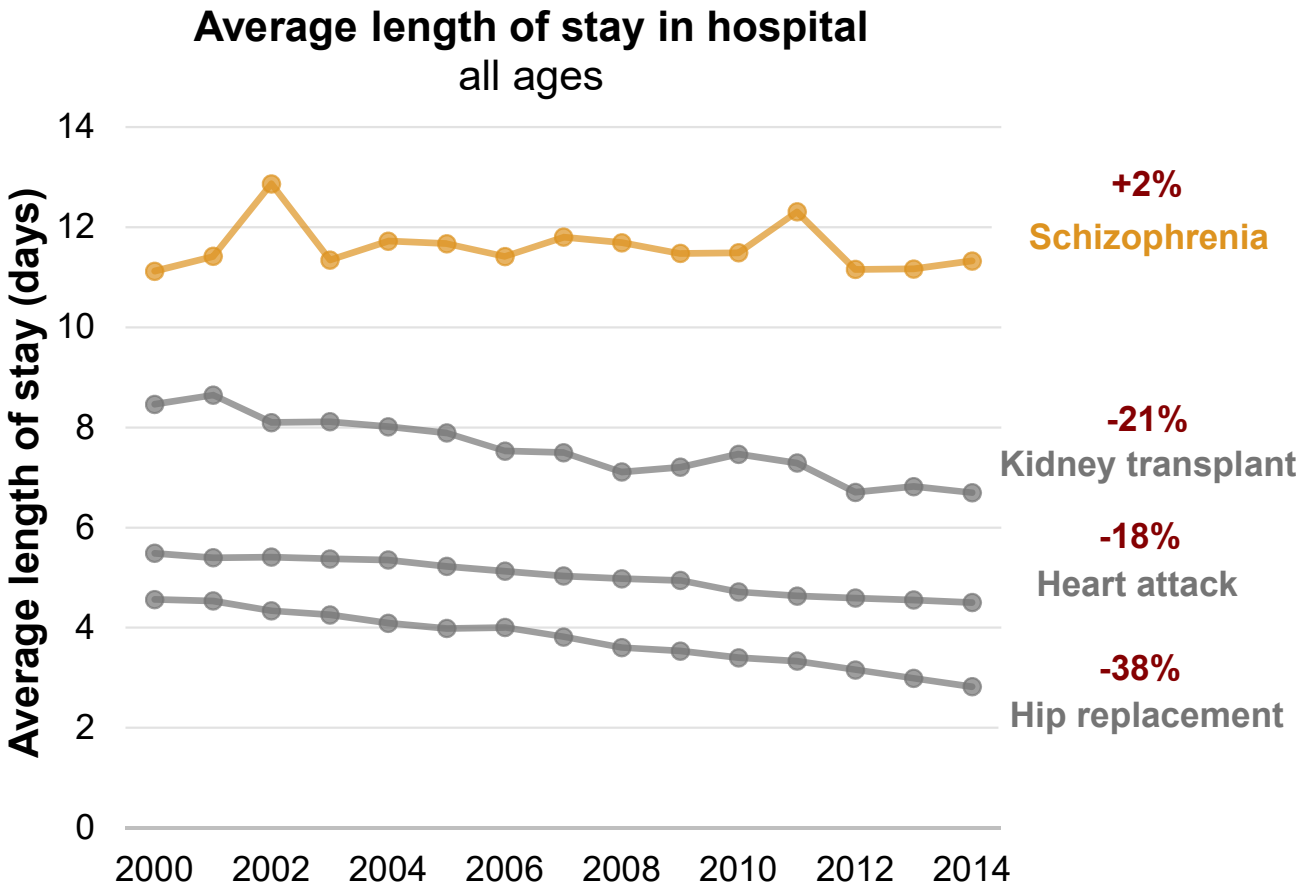
In contrast to adults, "psychotic disorder, not otherwise specified (NOS)" is diagnosed more often than schizophrenia in the younger population (1-17 years) during hospitalizations, possibly to prevent stigmatization.

When schizophrenia is the primary reason for a hospitalization, the average length of stay for younger people is more than three days longer than in adults, illustrating the severity of symptoms in these patients.

Source: Health Care Utilization Project (HCUPnet) 2014

Trends in length of stay for schizophrenia hospitalizations

UNITED STATES 2000-2014

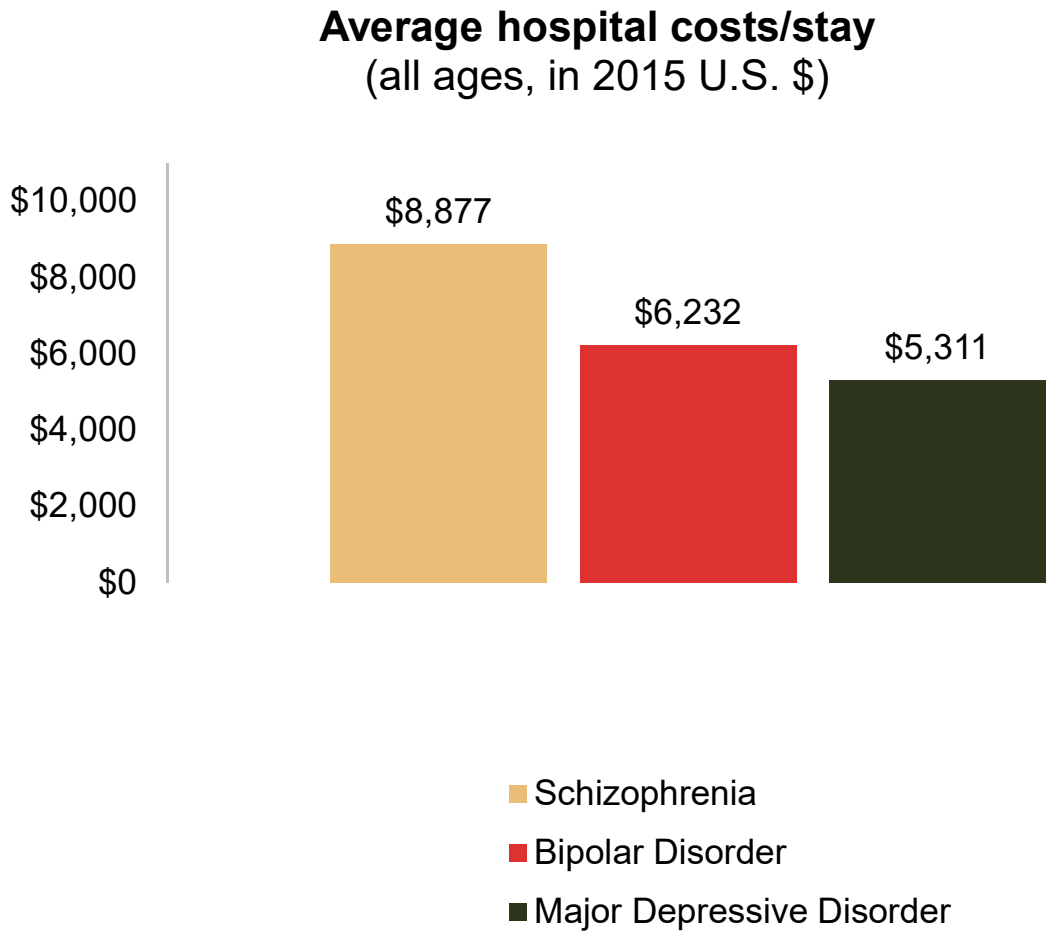


The average length of stay for a schizophrenia hospitalization was longer than those for kidney transplants, heart attacks or hip replacement surgeries. Moreover, the average duration for these other conditions all declined by at least 18% from 2000 to 2014 while for schizophrenia the duration increased slightly.

Source: Health Care Utilization Project (HCUPnet) 2014

Average hospital costs for mental illness hospitalizations

UNITED STATES 2014

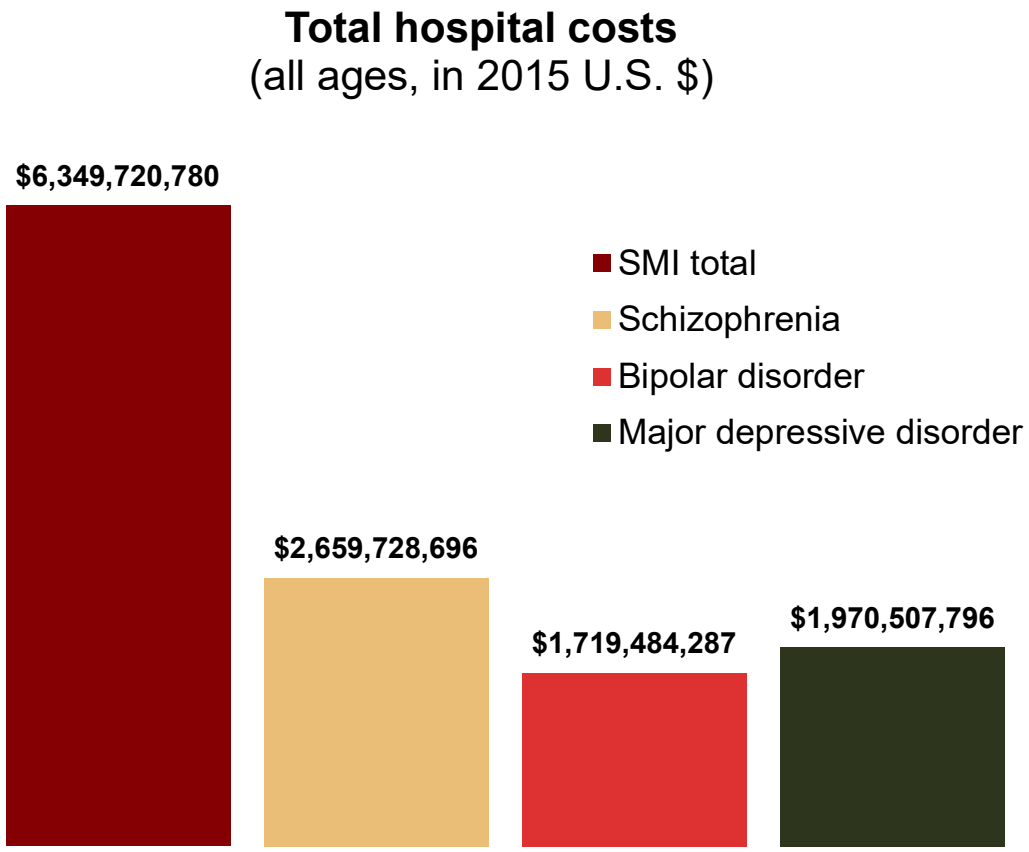


The average costs for a hospitalization in the U.S. ranged from more than $5,000 to almost $9,000 per stay for patients with serious mental illness. This is despite ***a general absence of procedures or surgeries*** *during a hospitalization for symptoms of serious mental illness.*

Source: Health Care Utilization Project (HCUPnet) 2014

Total hospital costs for mental illness hospitalizations

UNITED STATES 2014



The total costs for serious mental illness hospitalizations exceeded six billion dollars in the U.S. in 2014.

Source: Health Care Utilization Project (HCUPnet) 2014

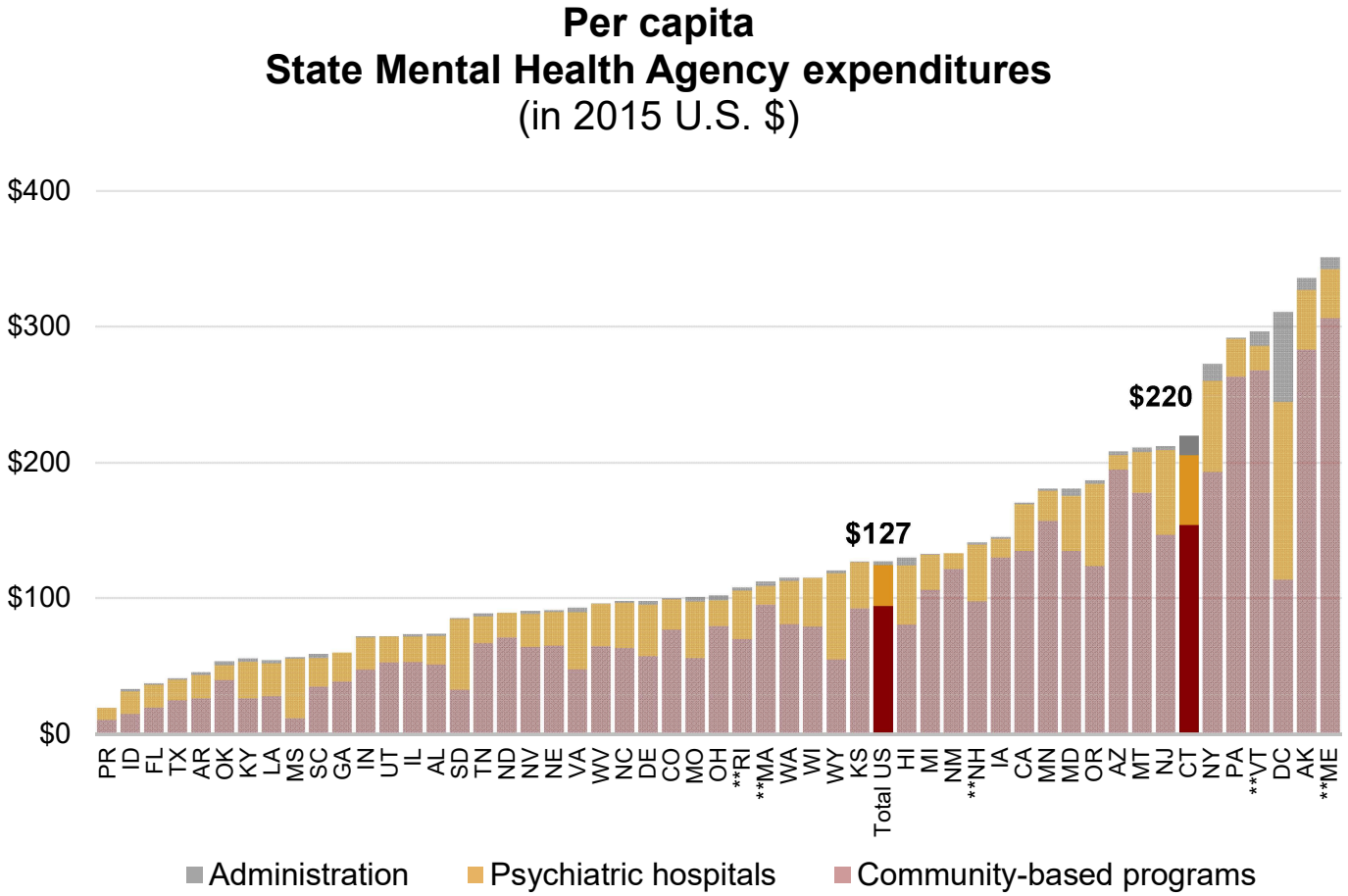
MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

Investment in community-based programs

For several decades, a shift from hospital inpatient care towards community-based clinic outpatient treatment has taken place, as is exemplified by the budget trends of State Mental Health Agencies. On average, approximately 72% of their budgets is now spent on community-based programs, compared to 33% in the early 1980s. Compared with other states, the Connecticut state mental health agency spends a high amount per capita on community-based programs.

State Mental Health Agency spending

CONNECTICUT AND UNITED STATES 2013



The Connecticut Department of Mental Health and Addiction Services spends a higher per capita amount on mental health services compared to state mental health agencies in the rest of the U.S.

Of the agency's clients in 2016, 52.4% have a diagnosis of serious mental illness, and 67.5% a substance use/abuse disorder.

On average, 89.7% of their 2909 available inpatient and residential beds were in use in 2016.

Expenditures include (U.S. average):

- *72% Community-based mental health programs funded and/or operated by state mental health agencies*
- *26% Mental health services in state psychiatric hospitals*
- *2% Administration/training/ research/evaluation to support these services*

***New England states*

Source: State Mental Health Agency-Controlled Expenditures for Mental Health Services, FY 2013 National Association of State Mental Health program Directors Research Institute, Inc (NRI)

Connecticut Department of Mental Health and Addiction Services, Annual Statistical Report 2016

AVAILABILITY OF MENTAL HEALTH CARE PROVIDERS

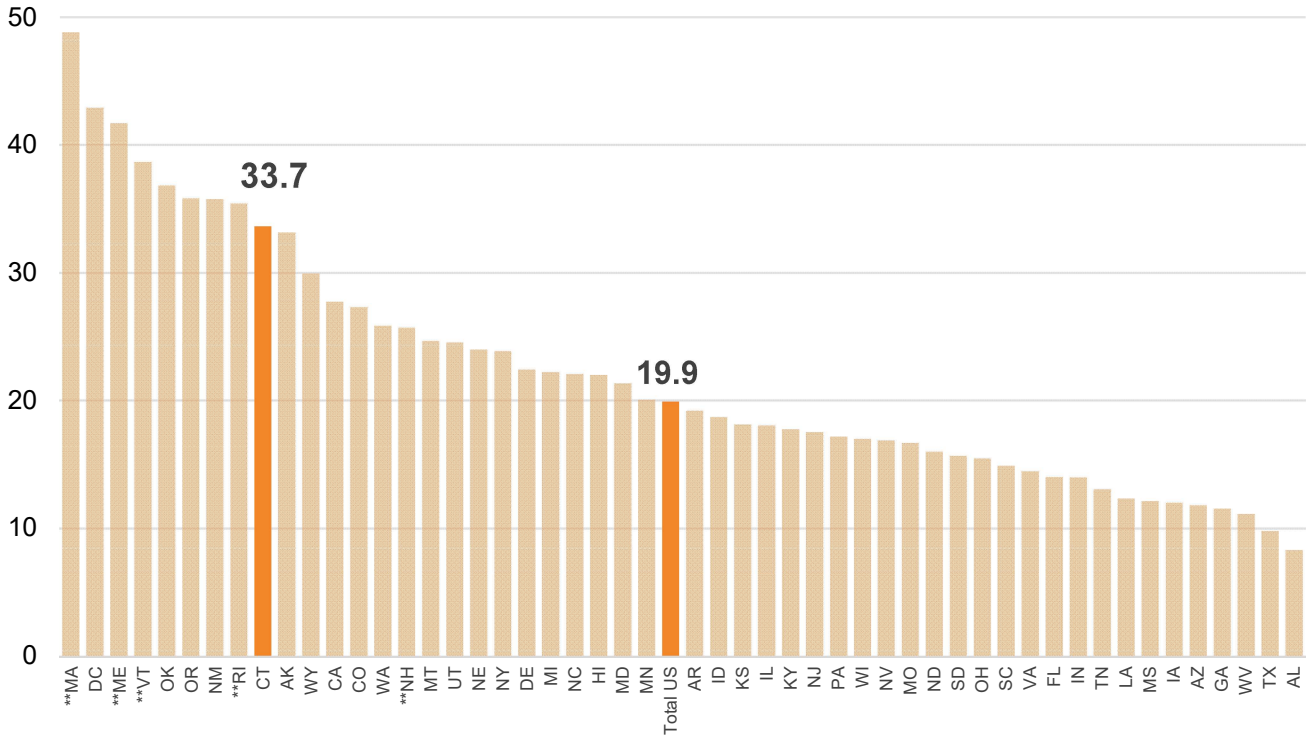
Connecticut has a larger number of hospital beds and providers per capita compared to the rest of the U.S. However, the number of mental health care providers is not sufficient to serve the population with mental health needs. In Connecticut alone, 95 full-time providers are needed in addition to the current workforce in designated "shortage areas" to reach an acceptable provider-to-patient ratio.

This shortage is particularly acute in the criminal justice system, where many people are in need of mental health treatment.

Availability of mental health care providers

CONNECTICUT AND UNITED STATES 2016

Number of mental health providers
per 10,000 residents



There are 33 mental health providers for every 10,000 residents in Connecticut, which is higher than the national average.

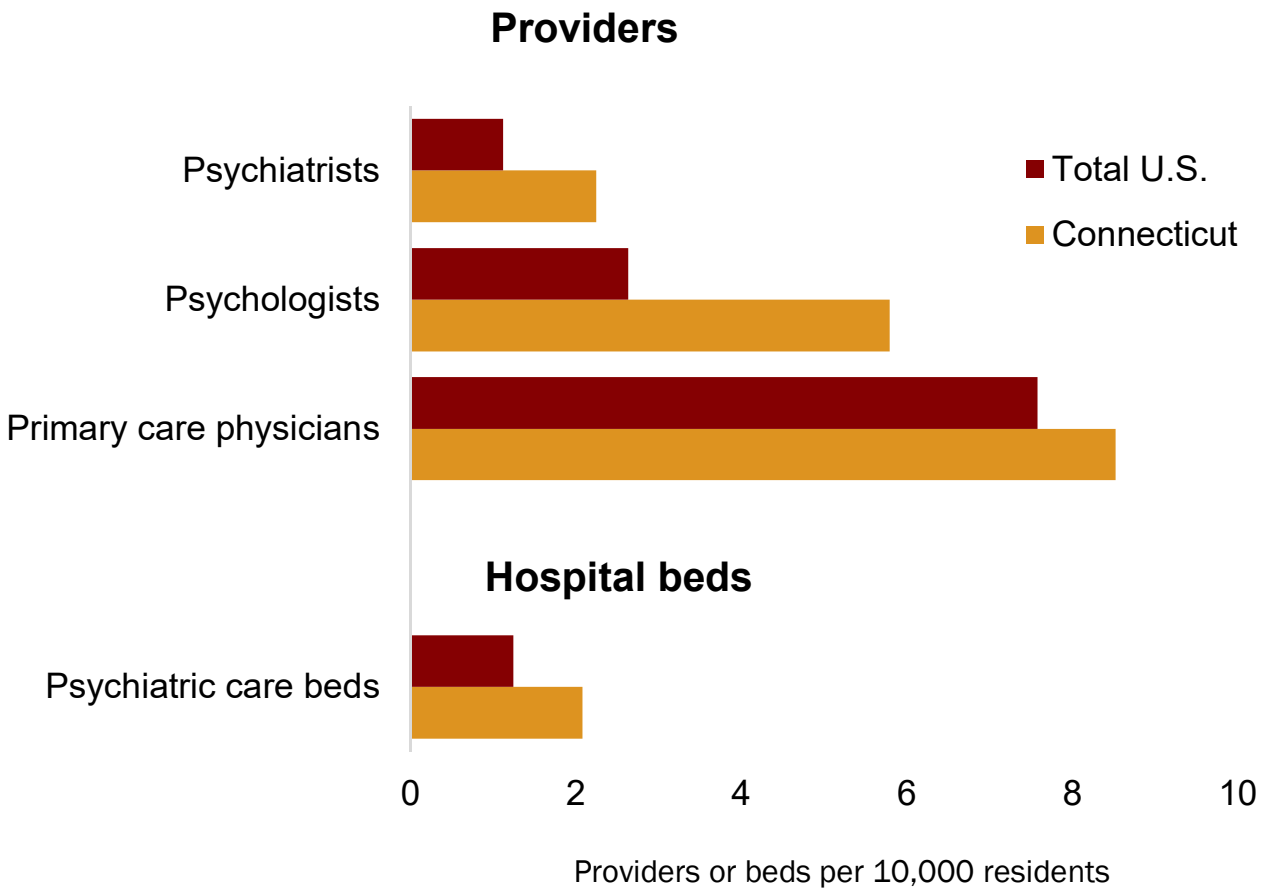
***Mental health providers include**: psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and advanced practice nurses specializing in mental health care*

***New England states*

Source: County Health Rankings & Roadmaps, by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

Availability of mental health care providers and hospital beds

CONNECTICUT AND UNITED STATES 2013

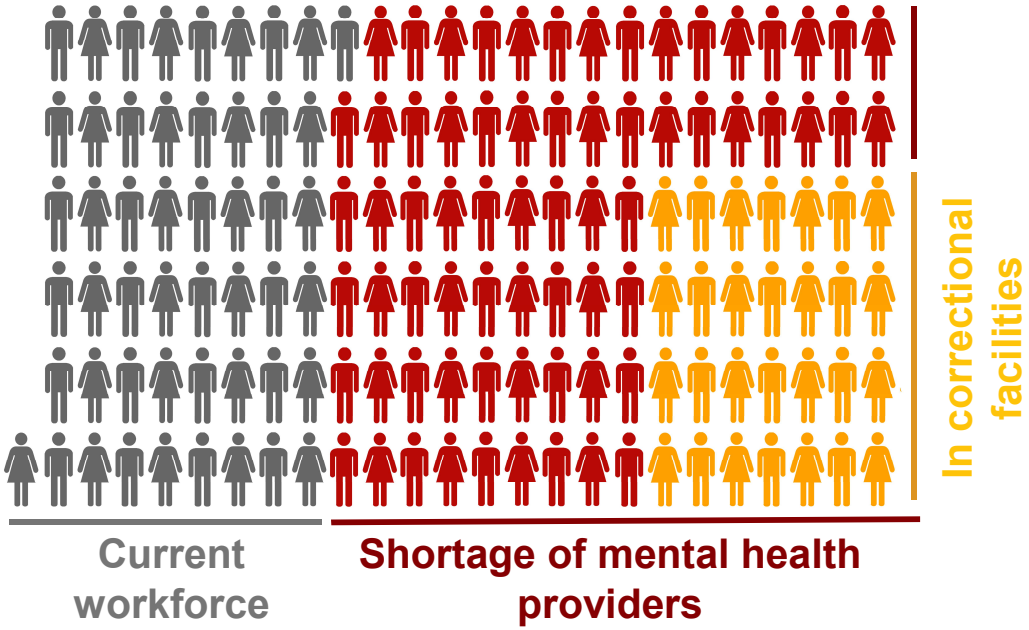


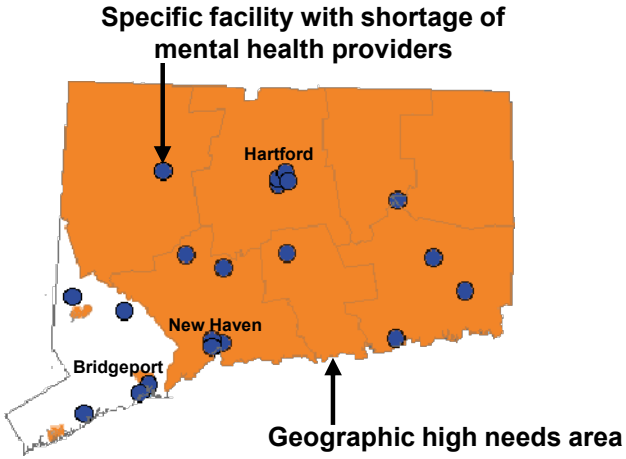
Per resident, Connecticut has more primary care physicians, mental health care providers, and hospital beds dedicated to psychiatric care compared to the US average.

Source: Area Health Resource Files 2013 (psychiatrists, physicians and psychiatric care beds), and 2005-2013 Demographics of the U.S. Psychology Workforce, American Psychological Association (psychologists)

Shortage of mental health care providers

CONNECTICUT 2016





Mental health care providers:
psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage & family therapists

Facilities:
Federal & state correctional institutions, state & county mental hospitals, community mental health centers, and other public or nonprofit private facilities

Geographic high needs area based on population-to-provider ratio, poverty levels, elderly and youth ratio, alcohol and substance abuse prevalence, and travel time to nearest source of care outside area

Currently, Connecticut has 50 full-time equivalent mental health providers in designated shortage areas. In order to address the shortage issue, 95 more full-time providers are needed in these areas, 28 of whom in correctional facilities. 76% of the total population of Connecticut resides in designated shortage areas (2,709,490 people)

Source: Health Professional Shortage Areas (HSPA), HRSA Data Warehouse data as of 7/31/2016

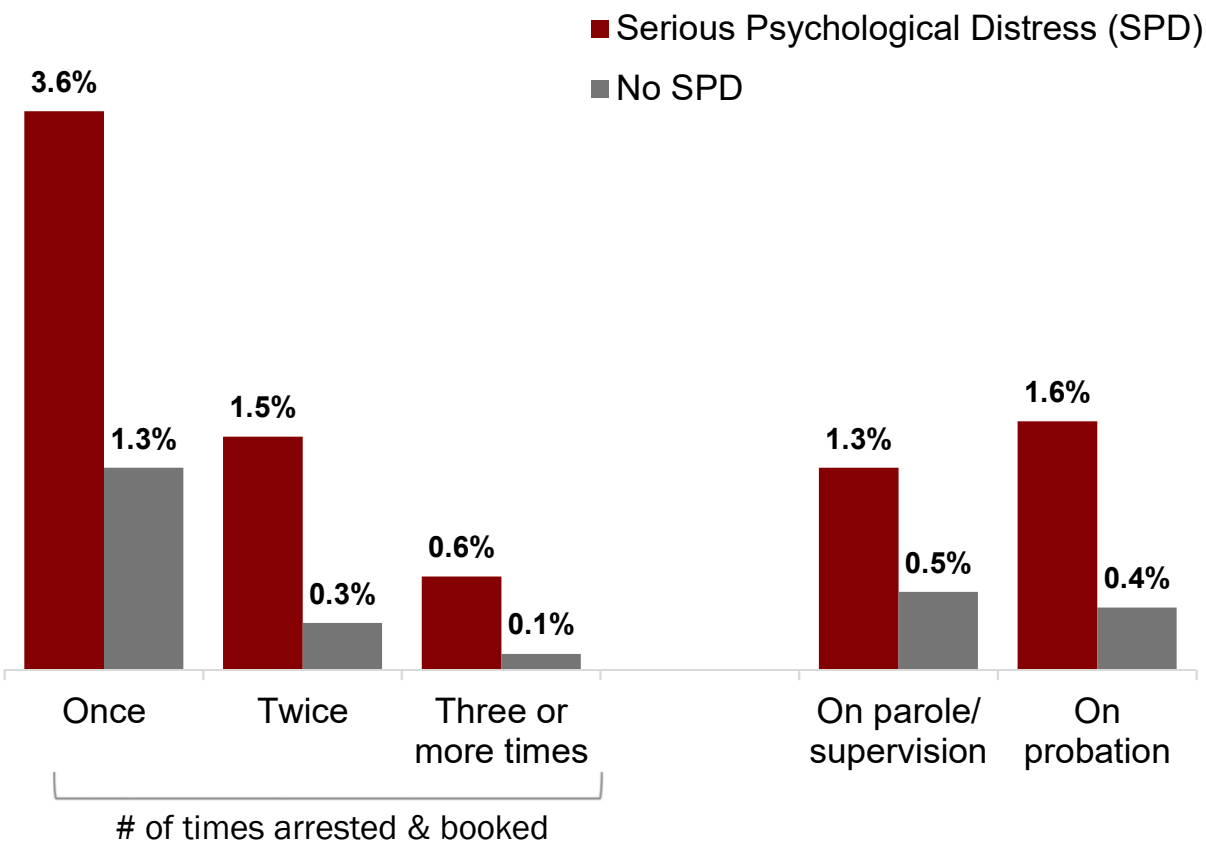
MENTAL HEALTH CONDITIONS & THE CRIMINAL JUSTICE SYSTEM

People living with mental illness are more likely to encounter the criminal justice system and to be arrested, suggesting that mental illness is a factor in incarceration risk. Whereas state and federal prisons have resources to provide mental health care to prisoners who were not receiving this before incarceration, local jails appear particularly unable to meet the health care needs of people with mental illness.

The overall cost of incarceration of the 3,500+ prisoners with serious mental illness in the state of Connecticut is approximately 150 million U.S. dollars per year.

Contact with Criminal Justice System

UNITED STATES 2015

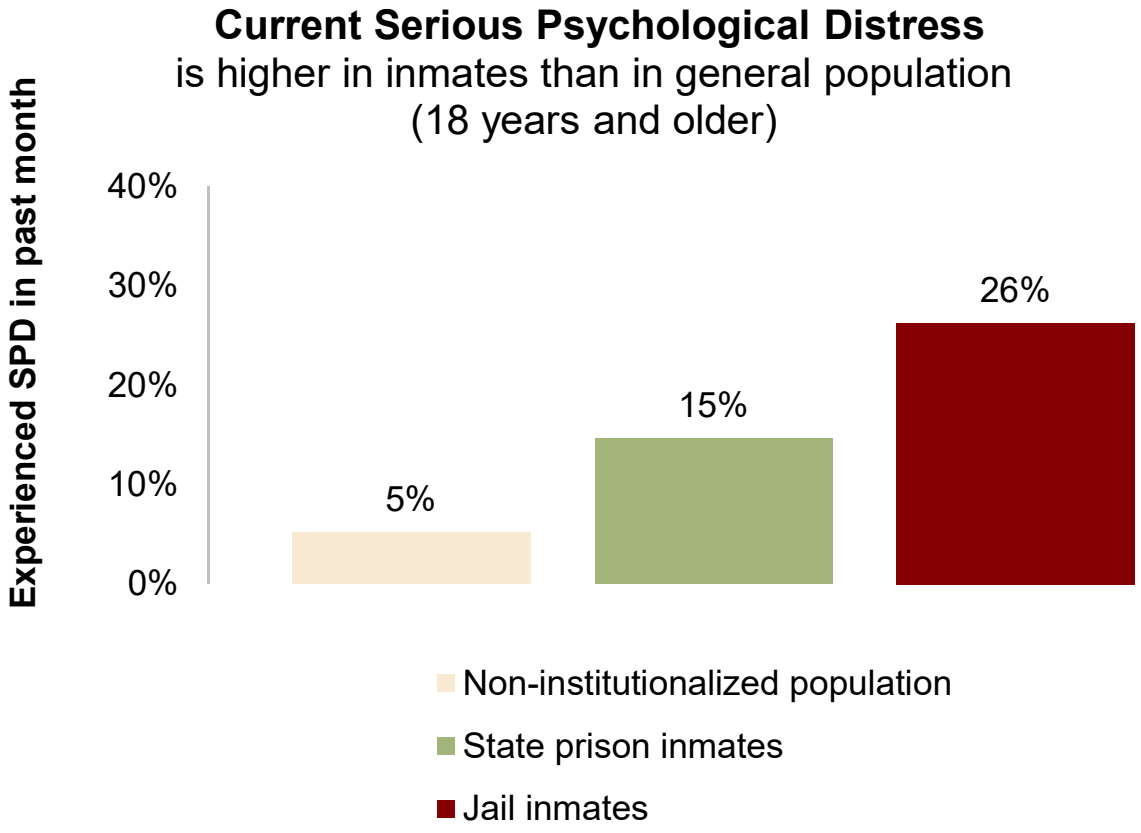


People who experienced Serious Psychological Distress (SPD) are more likely to have been arrested or be on parole or probation in the past year.

Source: National Survey of Drug Use and Health (NSDUH) 2015
Survey does not include current institutionalized population

Mental health issues in prison and jail populations

UNITED STATES



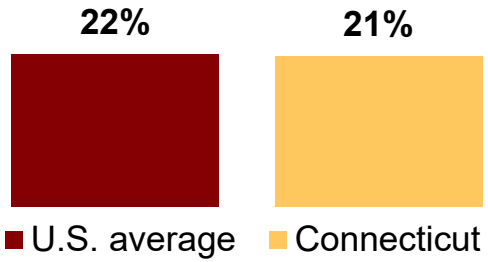
A large percentage of the U.S. adult prison and jail inmate population currently experiences Serious Psychological Distress compared to the non-institutionalized population.

Additionally, these mental health issues are observed at higher rates in local jails than in prisons.

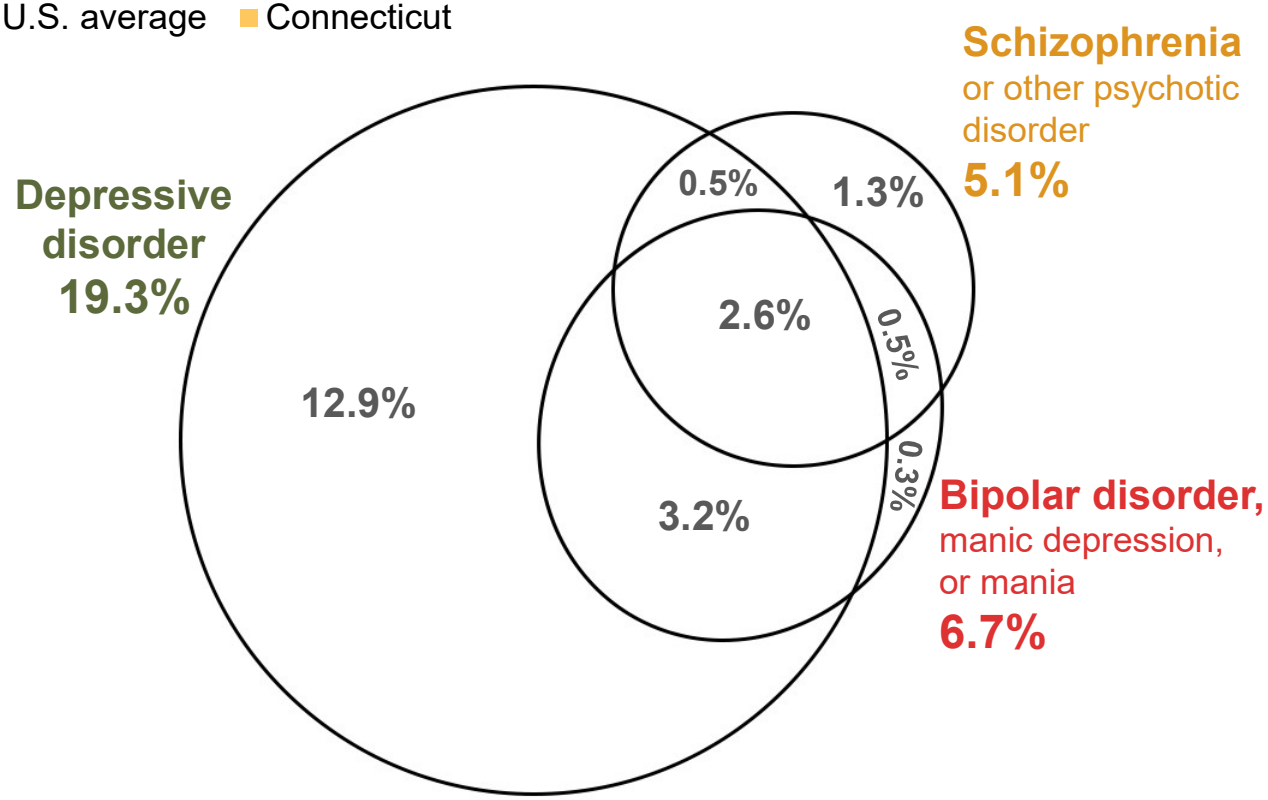
Source: National Survey of Drug Use and Health (NSDUH) 2015
Bureau of Justice report: Sexual Victimization in Prisons and Jails Reported by Inmates, 2011-12, based on data from the National Inmate Survey

State prison population with Serious Mental Illness

CONNECTICUT



Connecticut state prison inmates previously diagnosed with a serious mental illness:



In Connecticut state prisons, approximately 21% of prison inmates previously have been diagnosed with a serious mental illness, which is similar to the overall U.S. prison population. Many patients have been diagnosed with two or three mental illnesses, confirming the presence of overlap in symptoms in this population.

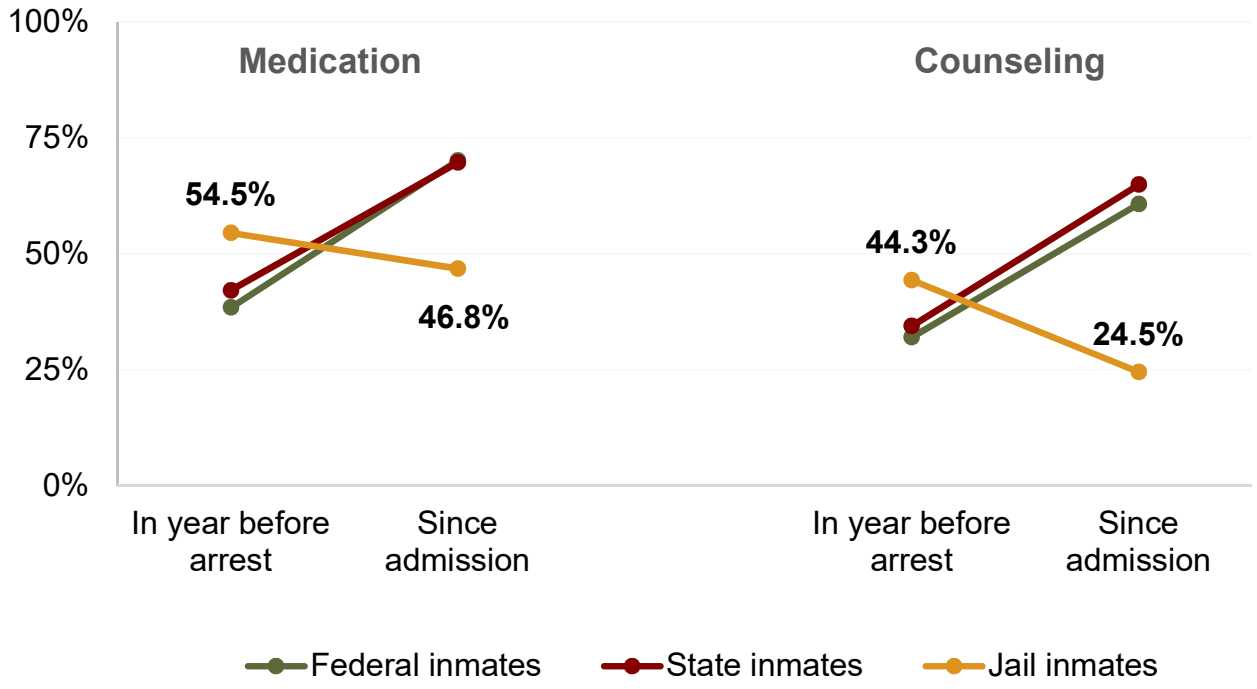
Source: Survey of Inmates in State Correctional facilities, BJS, 2004. Includes juveniles
Due to rounding, percentages of separate parts may not add up to the total percentage

Change in treatment before and during incarceration in prison and jails

UNITED STATES

Lack of access to mental health treatment in local jails

Among inmates with a previously diagnosed serious mental illness and who have ever received respective treatment before incarceration



The increase in mental health care treatment in federal and state prisons after admission to prison suggests that these institutions are making up for the gaps in mental health treatment in the regular health care system.

At the same time, local jail inmates do not have the same access to medication and counseling while incarcerated as federal and state prisoners.

Mental health conditions include prior diagnosis of depressive disorder, bipolar disorder, and/or schizophrenia. Medication and counseling data includes treatment for any mental illness.

Source: SISFCF (Survey of inmates in states and federal correctional facilities) 2004 & SILJ (Survey of inmates in local jails) 2002

Number of **Connecticut state prison inmates** previously diagnosed with serious mental illness:

3,542

Overall annual costs:

$ 149,781,030

(in 2015 US$)

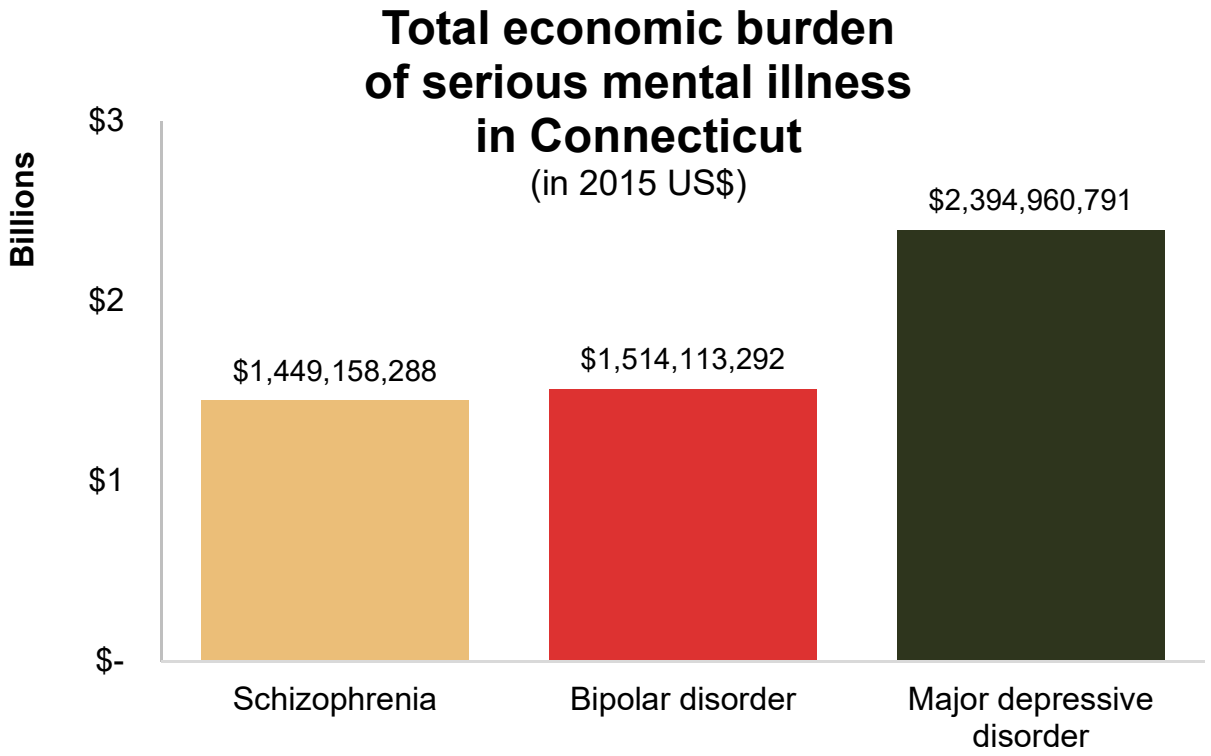
Overall annual costs based on 2014 average of all state prison inmates in Connecticut
Source: Annual Survey of State Government Finances 2014
Survey of Inmates in State/Federal Correctional facilities, BJS, 2004
Connecticut Department of Correction website – Incarcerated Population by Status and Gender

TOTAL ECONOMIC BURDEN OF SERIOUS MENTAL ILLNESS

The economic burden of each serious mental illness in adults is estimated to be at least 125 billion dollars for the U.S. and 1.4 billion dollars for Connecticut per year

Economic burden of serious mental illness

CONNECTICUT 2015



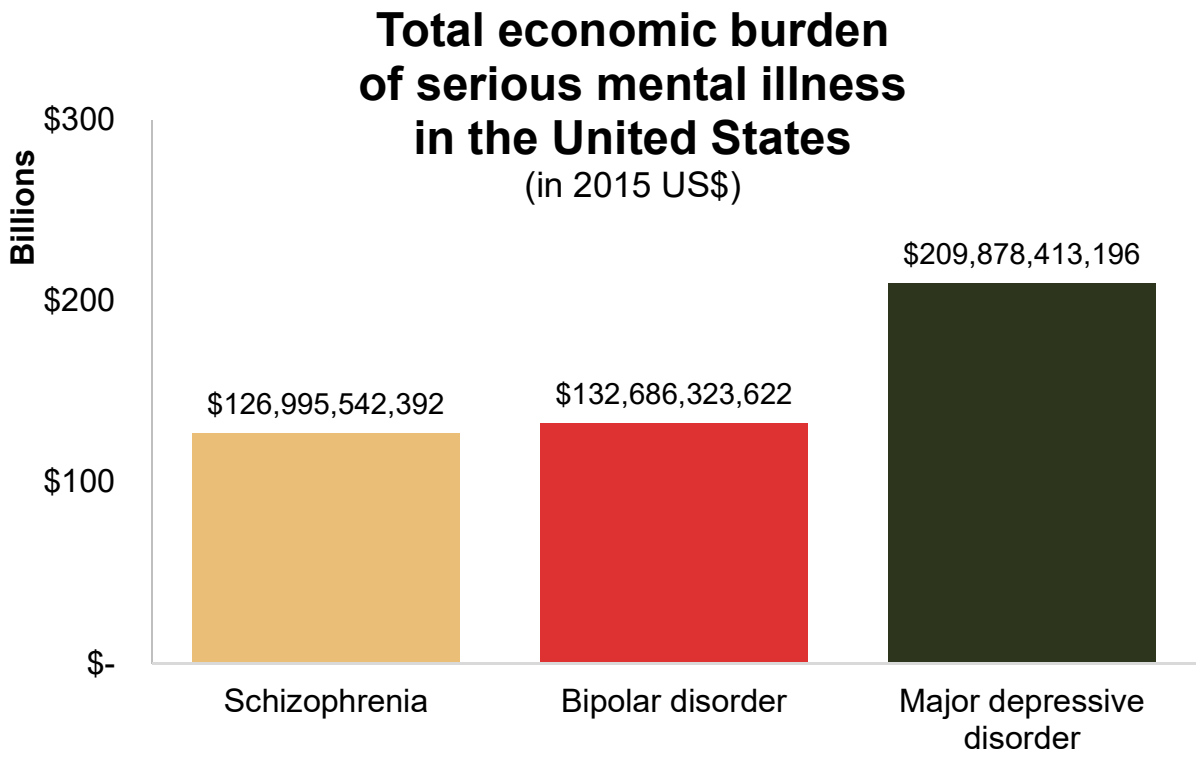
The economic burden of schizophrenia, bipolar disorder, and major depressive disorder in adults in Connecticut is estimated to be at ***least 1.4 billion dollars for each serious mental illness***

Due to symptom overlap, diagnoses of mental illnesses are not mutually exclusive, therefore, patients with two or more diagnoses may be represented in multiple categories.

Source: MacEwan JP, Seabury S, et al. Pharmaceutical innovation in the treatment of schizophrenia and mental disorders compared with other diseases. Innov Clin Neurosci. 2016 Aug 1;13(7-8):17-25. See appendix for original sources

Economic burden of serious mental illness

UNITED STATES 2015



The economic burden of schizophrenia, bipolar disorder, and major depressive disorder in adults in the U.S. is estimated to be at least ***125 billion dollars for each serious mental illness***

Due to symptom overlap, diagnoses of mental illnesses are not mutually exclusive, therefore, patients with two or more diagnoses may be represented in multiple categories.

Source: MacEwan JP, Seabury S, et al. Pharmaceutical innovation in the treatment of schizophrenia and mental disorders compared with other diseases. Innov Clin Neurosci. 2016 Aug 1;13(7-8):17-25. See appendix for original sources

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References, data sources and methods are described in more detail in the online appendix.
This chartbook and the appendix can be downloaded at:
http://healthpolicy.usc.edu/Keck_Schaeffer_Initiative.aspx

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