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Leonard D. Schaeffer Center
for Health Policy & Economics

THE COST OF MENTAL ILLNESS:
NEW YORK FACTS AND FIGURES

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NEW YORK

INTRODUCTION

Improving access to high-quality medical and behavioral health care for patients with mental illness remains one of the most vexing problems facing the healthcare system in the United States. These problems can be particularly difficult in a geographically- and culturally-diverse state like New York, with large underserved populations.

This chartbook attempts to quantify the magnitude of the challenges facing New York in terms of the economic burden associated with behavioral health issues. We describe the size and characteristics of the population with mental illness and show the impact on the healthcare system based on high rates of hospitalization. We also note the unmet need in terms of behavioral health care professionals, the rates of opioid abuse and overdoses, and discuss the implications for the criminal justice system in New York.

INTRODUCTION

Key findings include:

- In New York, patients with hospitalizations for serious mental illness have a relatively long hospital stay duration, which imposes a large cost on the health care system, despite the general absence of procedures.
- Whereas New York has a higher per capita number of mental health care professionals, shortages still exist in certain areas and facilities, including correctional facilities.
- People living with mental illness in New York 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 New York exceeds $500 million.
- During the past decades, opioid misuse and dependency have increased steadily in the U.S. and New York, despite a recent reduction in prescription opioid sales. The increase in substance misuse and dependency has resulted in a large increase in fatal overdoses from opioids and heroin in the last several years.

The data presented in this chartbook are all publicly available and represent the most recent numbers to which we had access. The term "behavioral health" is used to describe data related to mental illness and substance abuse, whereas "mental health" does not include substance abuse.

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

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QUANTIFYING THE POPULATION LIVING WITH MENTAL ILLNESS IN NEW YORK 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

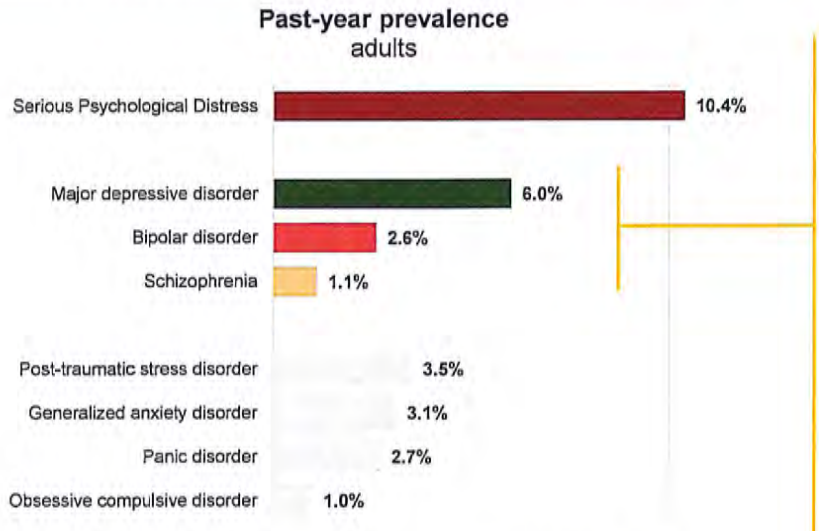
A debilitating mental illness that distorts a patient's sense of reality. Symptoms of schizophrenia include hallucinations, delusions, confusion, cognitive and mood impairments, and extremely disorganized thinking

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.

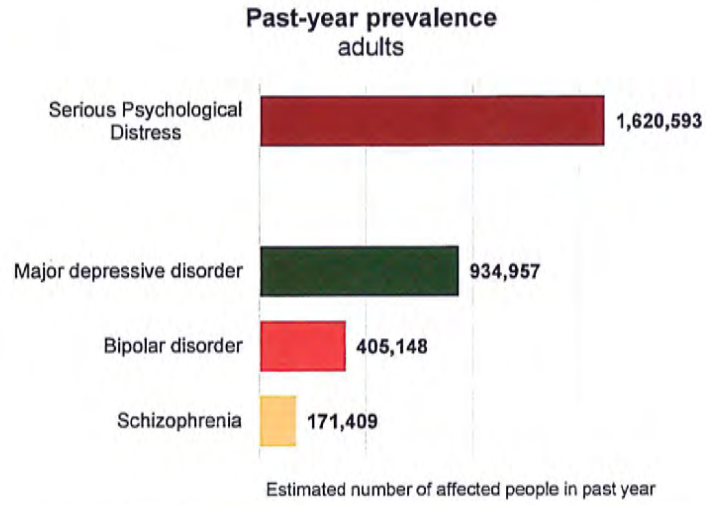
Whereas any of these conditions can severely limit someone's normal daily activities, three disorders are often labeled as ***Serious Mental Illness:*** ***major depressive disorder, bipolar disorder*** *and* ***schizophrenia****. These three disorders will be the focus of this chartbook*

NB: Due to 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

NEW YORK 2015



We estimate that more than 1.6 million adults in New York 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 15,582,624 adults (18 years and over), Census Bureau data (2015)

MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

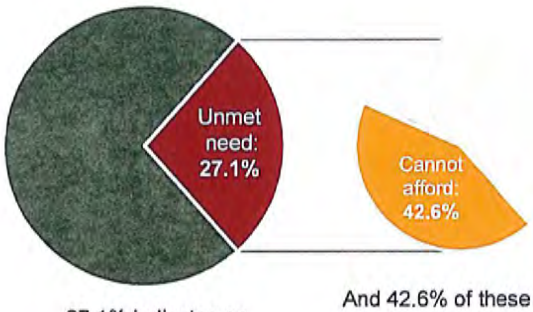
Unmet mental health care needs

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**

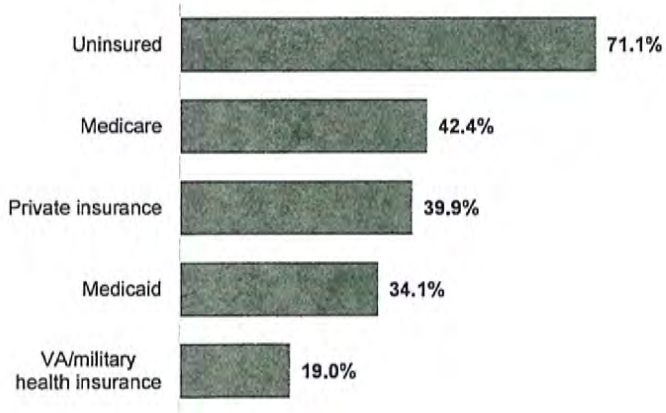
More than a quarter of adults who experienced serious psychological distress in the previous year in the U.S. reported an unmet need for mental health care. Almost half of the people with a perceived unmet need reported that they did not receive treatment because they could not afford it.

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

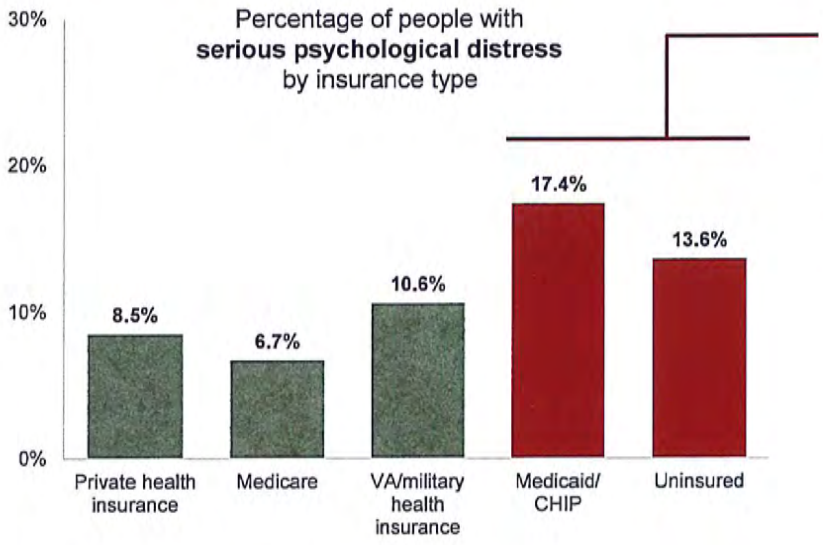
MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

Medicaid & behavioral health care needs

Medicaid provides a safety-net for people with low income or qualifying disabilities, and a large percentage of people with Medicaid coverage experience behavioral health issues. Evaluations of the Medicaid expansion in 2014 show that 20% of the more than 1.7 million newly-enrolled individuals in New York received behavioral health treatment in that year.

People with mental illness have greater reliance on the safety net

UNITED STATES 2015

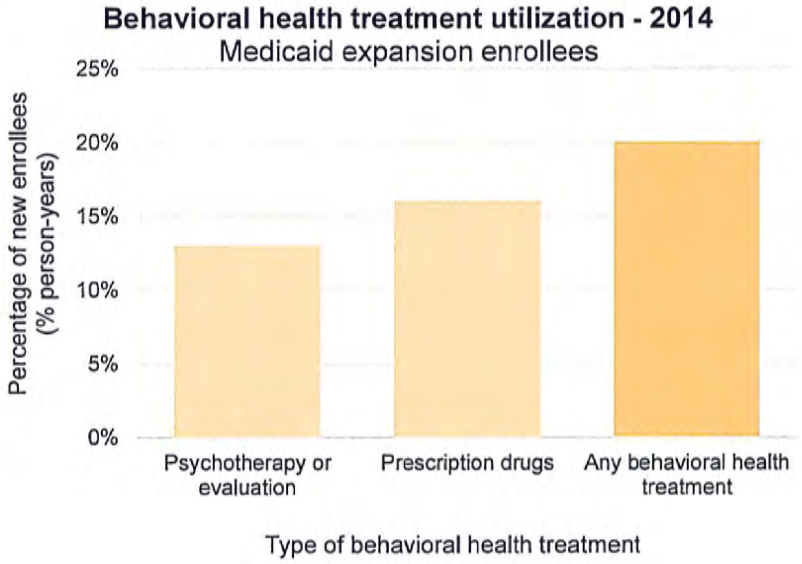


*In the **Medicaid and uninsured population**, a higher percentage of people reported serious psychological distress (SPD) during the past year compared to people with Medicare, VA/military, or private health insurance coverage.*

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

Use of behavioral health treatment among Medicaid expansion enrollees

NEW YORK 2014



After Medicaid expansion in New York, 1,759,414 individuals were additionally enrolled for at least one month in 2014. Many of these individuals received behavioral health services and/or prescription drugs in the year following expansion.

Whereas services (e.g. psychotherapy or evaluations) for the uninsured were previously covered by state-funded programs, prescription drugs were not, and thus newly-enrolled patients had greater access to this type of treatment after Medicaid expansion.

Source: U.S. Government Accountability Office; Medicaid expansion - behavioral health treatment use in selected states in 2014 (GAO-17-529)

MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

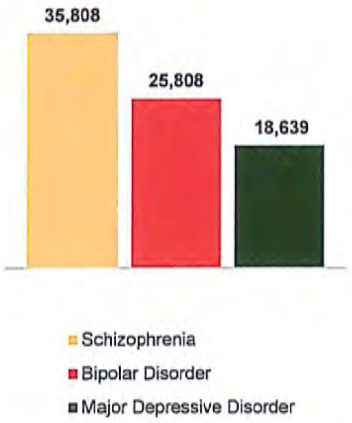
Hospital utilization & costs

For every 100 patients with a serious mental illness, there were approximately 18 hospitalizations in the U.S. and 29 hospitalizations in New York 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.

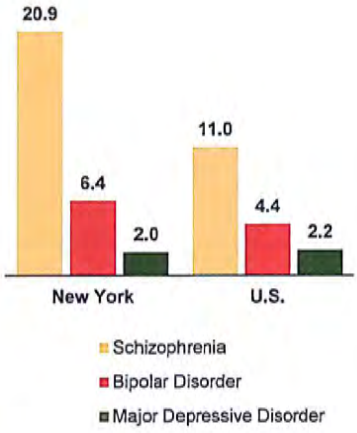
Hospitalizations for mental illness

NEW YORK AND UNITED STATES 2014

Hospitalizations
New York - adults



Hospitalization rate
per 100 patients - adults



In New York, the number of hospitalizations is highest for adult patients with a principle diagnosis of schizophrenia, and these patients also have a much higher rate of hospitalizations than patients with bipolar disorder or major depressive disorder.

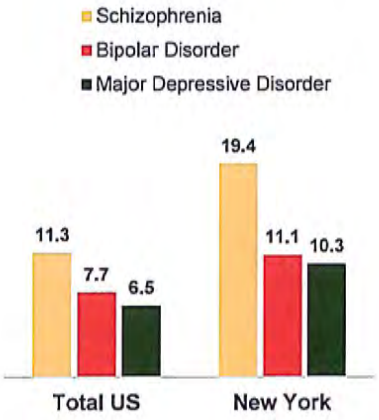
Furthermore, the hospitalization rates in New York for adults with schizophrenia and bipolar disorder are higher compared to the U.S. average.

4% of all hospitalizations in New York are due to SMI
Source: Healthcare Cost and Utilization Project (HCUPnet) 2014
Estimate of hospitalization rate: based on total state population (Census bureau data, 2014) and prevalence estimates reported previously

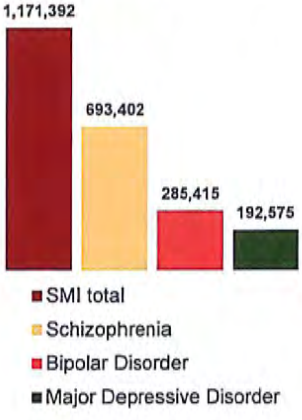
Length of stay for mental illness hospitalizations

NEW YORK AND UNITED STATES 2014

Average duration of hospital stays (days)
adults



Total number of hospital days in 2014
New York - adults



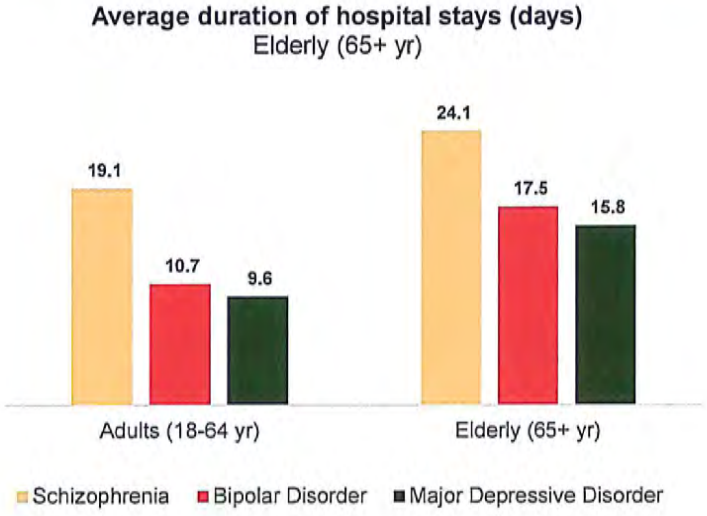
The average hospital stay duration for adult patients with serious mental illness is relatively high in New York compared to the rest of the U.S., especially for patients diagnosed with schizophrenia.

The total time spent in the hospital by adults with a primary diagnosis of serious mental illness exceeds 1.1 million days each year in New York.

Source: Healthcare Cost and Utilization Project (HCUPnet) 2014

Hospitalizations of elderly patients with serious mental illness

NEW YORK 2014

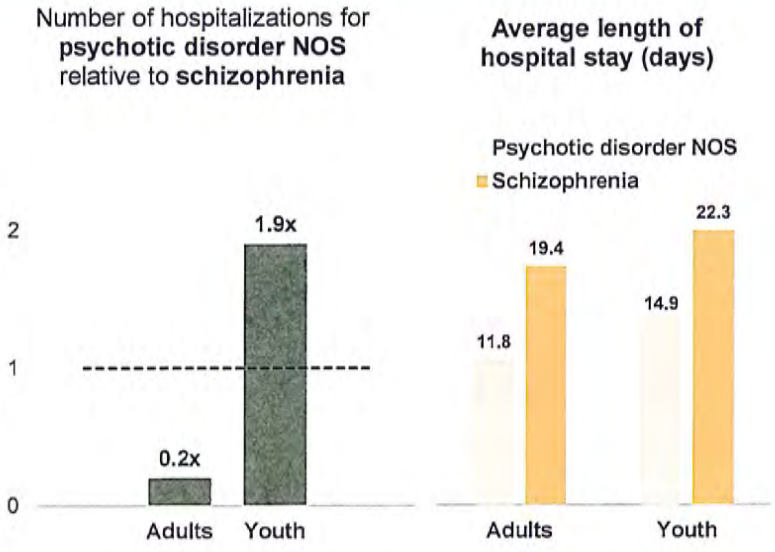


The length of stay in the hospital for serious mental illness in elderly patients is at least 60% higher on average than for younger adults with a similar diagnosis. Treatment of medical comorbidities due to aging, as well as difficulty finding long-term care environments may be at the root of this disparity.

Source: Healthcare Cost and Utilization Project (HCUPnet) 2014

Hospitalizations of young patients with psychosis

NEW YORK 2014



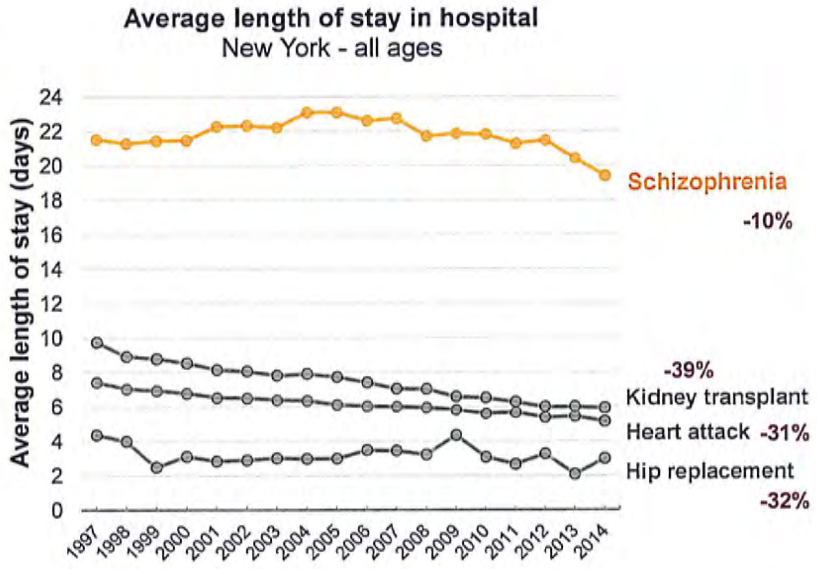
In contrast to in adults, "psychotic disorder, not otherwise specified (NOS)" is diagnosed more often than schizophrenia in the younger population (1-17 years) during hospitalizations, possibly to prevent stigmatization.

Regardless of the primary reason for a hospitalization, the average length of stay for younger people in New York is approximately three days longer than for adults, illustrating the challenges in treating and establishing an environment with appropriate follow-up care for this especially vulnerable population.

Source: Healthcare Cost and Utilization Project (HCUPnet) 2014

Trends in length of stay for schizophrenia hospitalizations

NEW YORK 1997-2014



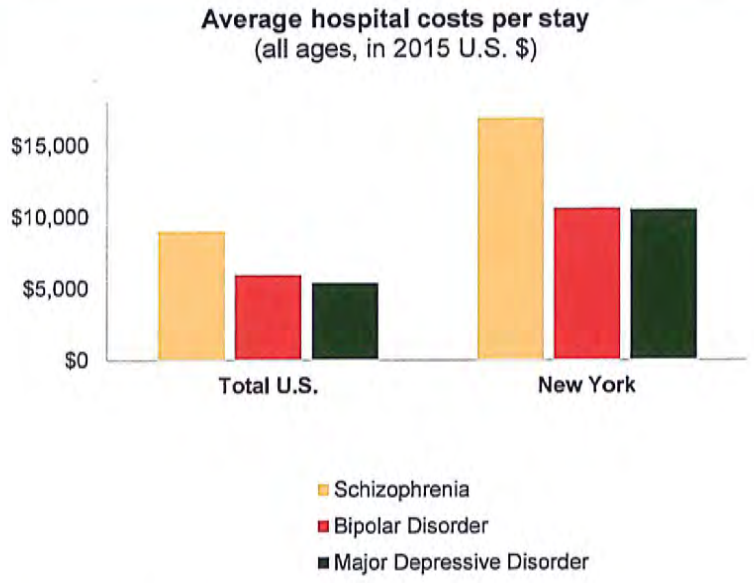
The average length of stay for a schizophrenia hospitalization in New York was longer than those for kidney transplants, heart attacks and hip replacements.

Moreover, the average duration for these three other conditions declined by at least 31%, during the last two decades, while for schizophrenia the duration decreased by only 10%.

Source: Healthcare Cost and Utilization Project (HCUPnet) 2014

Average hospital costs for mental illness hospitalizations

NEW YORK AND UNITED STATES 2014

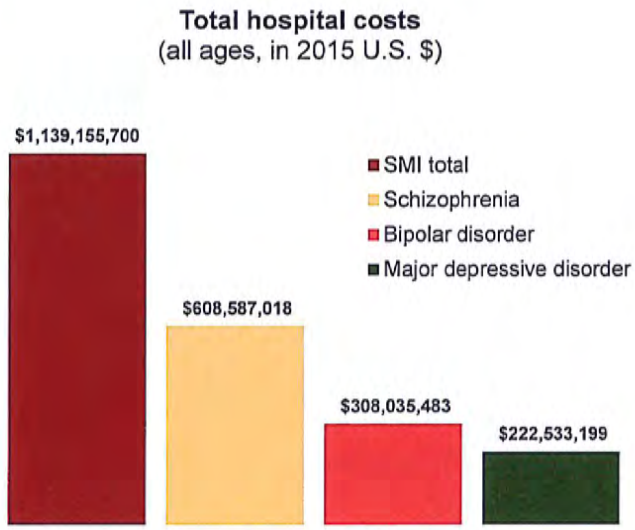


Hospital costs in the U.S. and New York ranged from $5,000 to $17,000 per stay for patients with serious mental illness. This is despite ***a general absence of procedures or surgeries*** *during a hospitalization for symptoms of serious mental illness.*

Source: Healthcare Cost and Utilization Project (HCUPnet) 2014

Total hospital costs for mental illness hospitalizations

NEW YORK 2014



Total hospital costs in New York for hospitalizations for serious mental illness together exceeded $1.1 billion in 2014.

Source: Healthcare Cost and Utilization Project (HCUPnet) 2014

MENTAL HEALTH CARE COVERAGE, UTILIZATION & COSTS

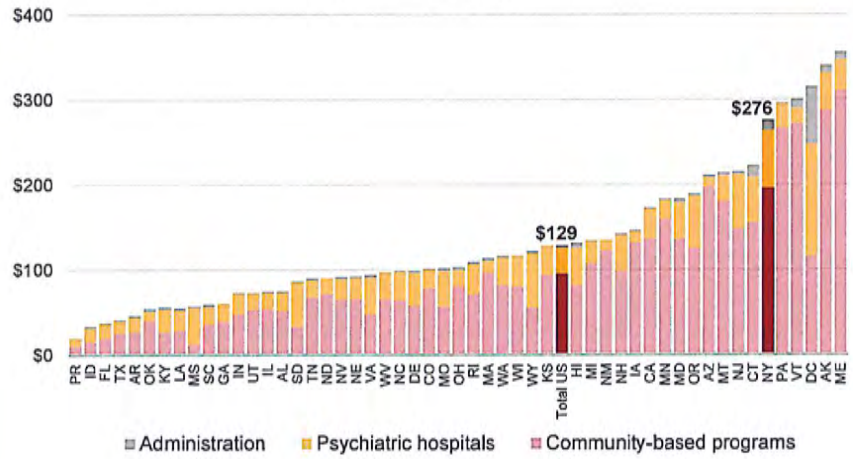
Investment in community-based programs

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 to the U.S. average, the New York state mental health agency spends a higher total amount per capita.

State Mental Health Agency spending

NEW YORK AND UNITED STATES 2013

Per capita
State Mental Health Agency expenditures
(in 2015 U.S. $)



New York's state mental health agency spends a higher per capita amount on mental health services compared to the U.S. average.

Expenditures include (on 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*

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)

AVAILABILITY OF BEHAVIORAL HEALTH CARE PROFESSIONALS

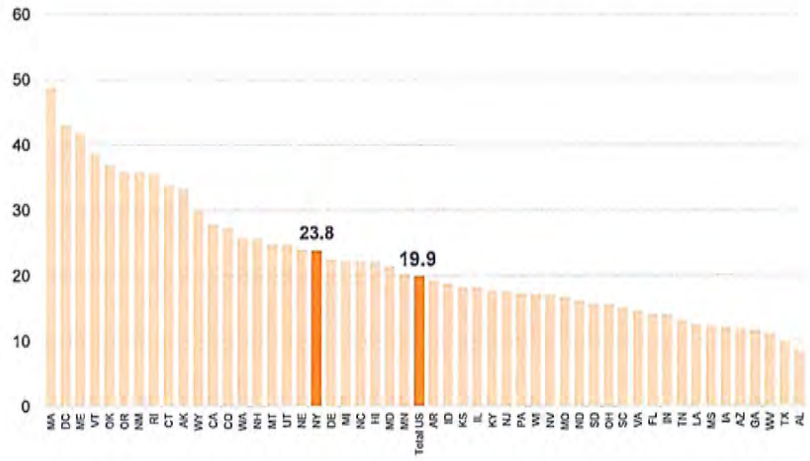
New York has a larger number of behavioral health care professionals and hospital beds per capita than the national average in the U.S. However, to fully serve the population with behavioral health needs, there are many areas and facilities in New York that have a shortage of behavioral health care professionals; 197 full-time professionals are needed in addition to the current workforce in these designated "shortage areas" to reach an acceptable provider-to-patient ratio.

This shortage is also present in the criminal justice system, where many people are in need of behavioral health treatment.

Availability of behavioral health care professionals

NEW YORK AND UNITED STATES 2016

Number of behavioral health care professionals
per 10,000 residents



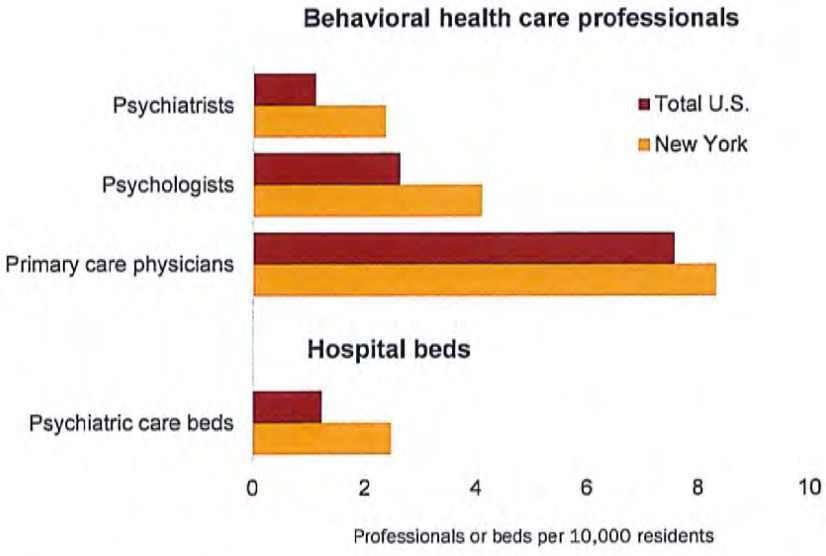
There are approximately 24 behavioral health care professionals for every 10,000 residents in New York, which is higher than the average in the U.S.

Behavioral health care professionals include: *psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and advanced practice nurses specializing in behavioral health care*

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

Availability of behavioral health care professionals and hospital beds

NEW YORK AND UNITED STATES 2013

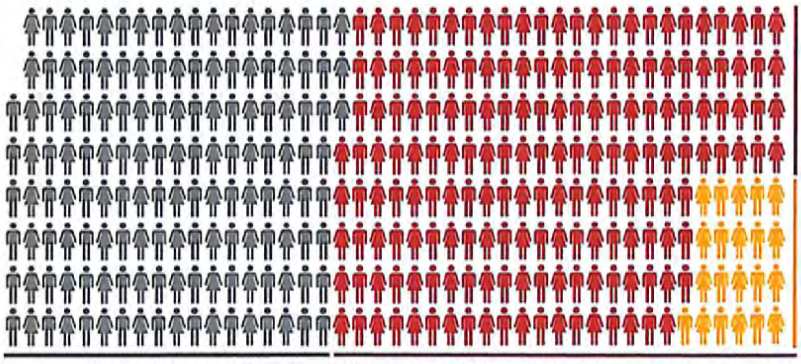


Per resident, New York has more psychiatrists, psychologists, and primary care physicians compared to the U.S. average, as well as a higher number of hospital beds dedicated to psychiatric care.

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 behavioral health care professionals

NEW YORK 2017



Behavioral health care professionals:
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

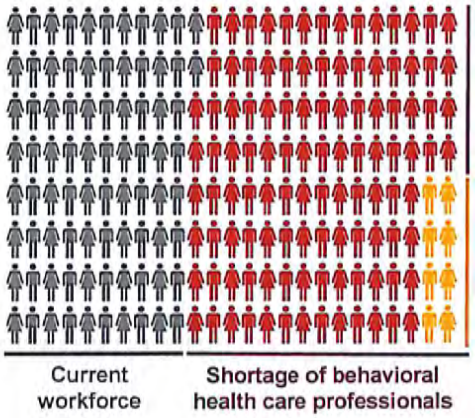
Geographic high needs area based on population-to-provider ratio, poverty levels, elderly and youth ratio, alcohol and substance abuse prevalence, and travel time to nearest source of care outside area

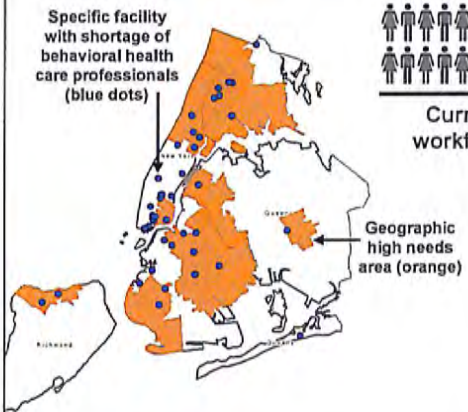
Currently, New York has 145 full-time equivalent behavioral health care professionals in designated shortage areas. In order to address the shortage issue, 197 more full-time professionals are needed in these areas, 21 of whom are needed in correctional facilities. 22% of the total population of New York resides in designated shortage areas (4,435,492 people).

Source: Heal.th Professional Shortage Areas (HSPA), HRSA Data Warehouse data as of 11/08/2017

Shortage of behavioral health care professionals in NYC

NEW YORK CITY 2017





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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

New York City has 82 full-time equivalent behavioral health care professionals in designated shortage areas. In order to address the shortage issue, 118 more full-time professionals are needed in these areas, 8 of whom are needed in correctional facilities. Approximately 30% of the total population of New York City resides in designated shortage areas (2,585,808 people).

Source: Health Professional Shortage Areas (HSPA), HRSA Data Warehouse data as of 11/08/2017

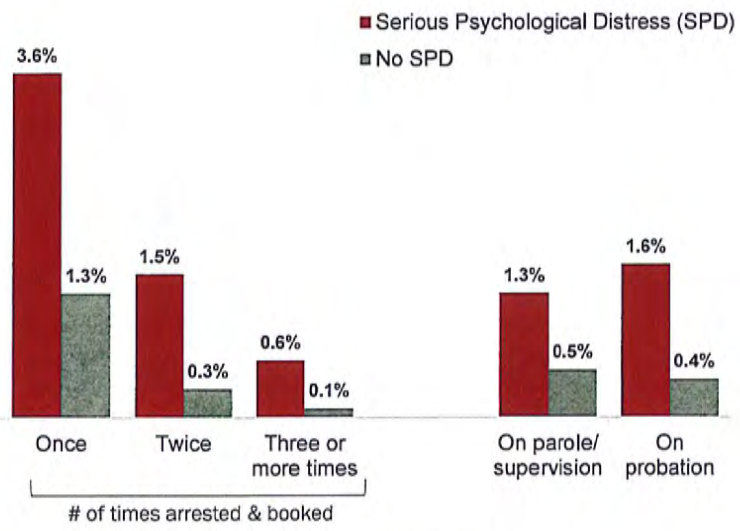
MENTAL HEALTH CONDITIONS & THE CRIMINAL JUSTICE SYSTEM

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 nearly 9,000 prisoners with serious mental illness in the state of New York exceeds $500 million per year.

Contact with criminal justice system

UNITED STATES 2015



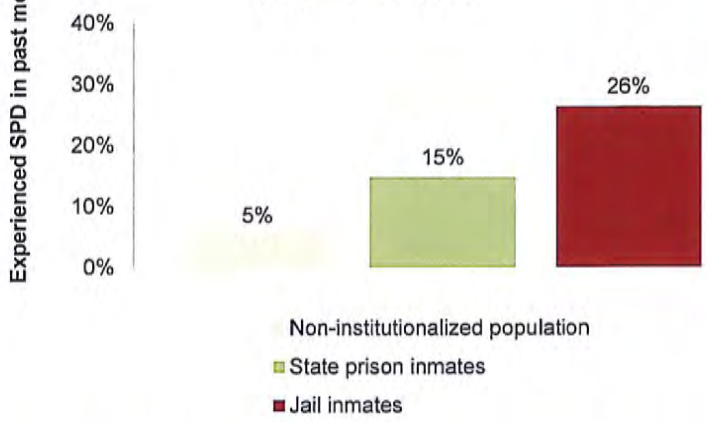
People who experienced serious psychological distress (SPD) are more likely to have been arrested or be on parole or probation in the past year.

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

Current serious psychological distress
is higher in inmates than in general population
(18 years and older)



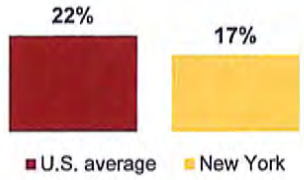
A large percentage of the U.S. adult prison and jail inmate population currently experiences serious psychological distress compared to the non-institutionalized population.

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

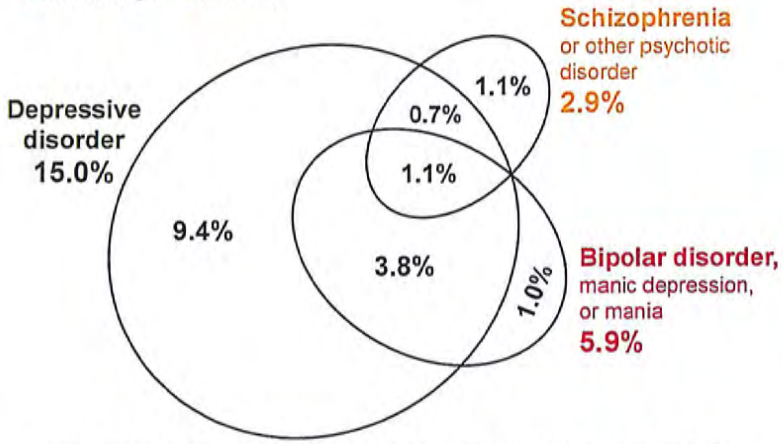
Source: National Survey of Drug Use and Health (NSDUH) 2015
Bureau of Justice report: Sexual Victimization in Prisons and Jails Reported by Inmates, 2011-12, based on data from the National Inmate Survey

State prison population with serious mental illness

NEW YORK



New York state prison inmates
previously diagnosed with
a serious mental illness:



In New York state prisons, approximately 17% of prison inmates previously have been diagnosed with a serious mental illness, which is lower than 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.

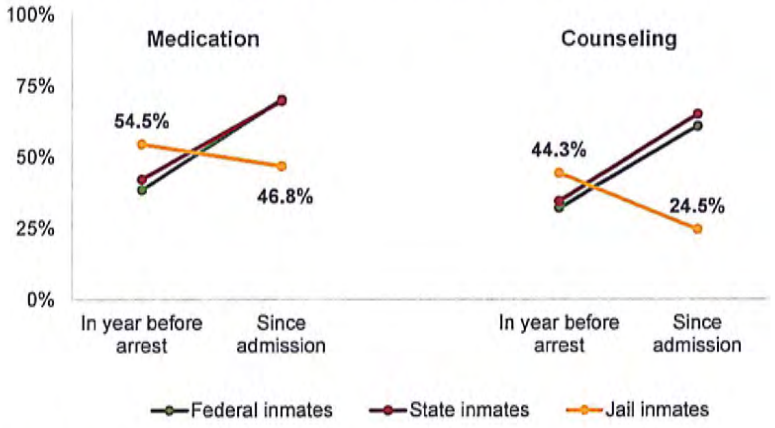
Source: Survey of Inmates in State Correctional facilities, BJS, 2004. Includes juveniles
Due to rounding, percentages of separate parts may not add up to the total percentage

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



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

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 general 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.

Estimated number of
New York state prison inmates in 2015,
previously diagnosed with serious mental illness :

8,934

Estimate of overall annual costs in 2015:

$558,303,460

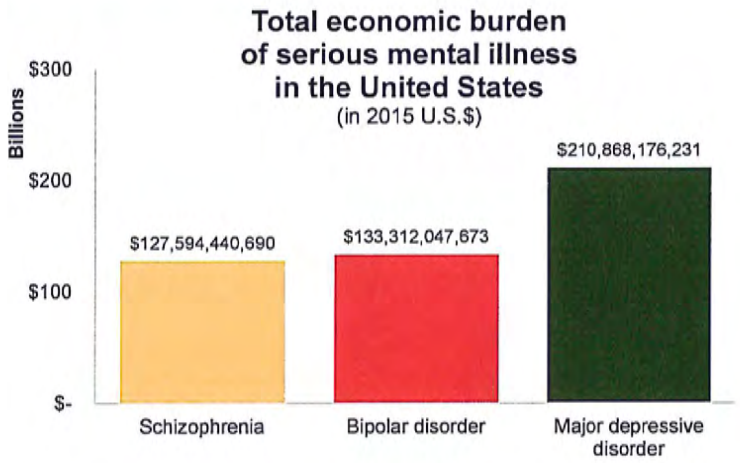
Overall annual costs based on 2015 average of all state prison inmates in New York
Source: Annual Survey of State Government Finances 2015
Survey of Inmates in State/Federal Correctional facilities, BJS, 2004
New York State, Commission of Correction - Inmate Population Statistics 2015

TOTAL ECONOMIC BURDEN OF SERIOUS MENTAL ILLNESS

The economic burden of each serious mental illness in adults is estimated to be at least $127 billion for the U.S. and $8 billion for New York per year

Economic burden of serious mental illness

UNITED STATES 2015



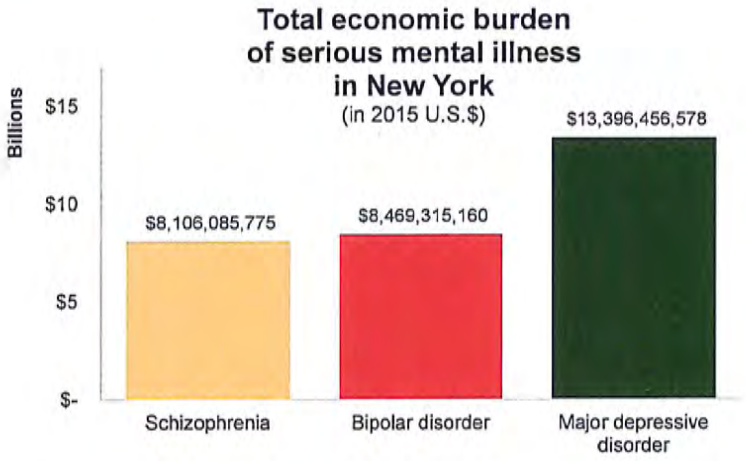
*The economic burden of schizophrenia, bipolar disorder, and major depressive disorder in adults in the U.S. is estimated to be at least **$127 billion for each serious mental illness.***

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

NEW YORK 2015



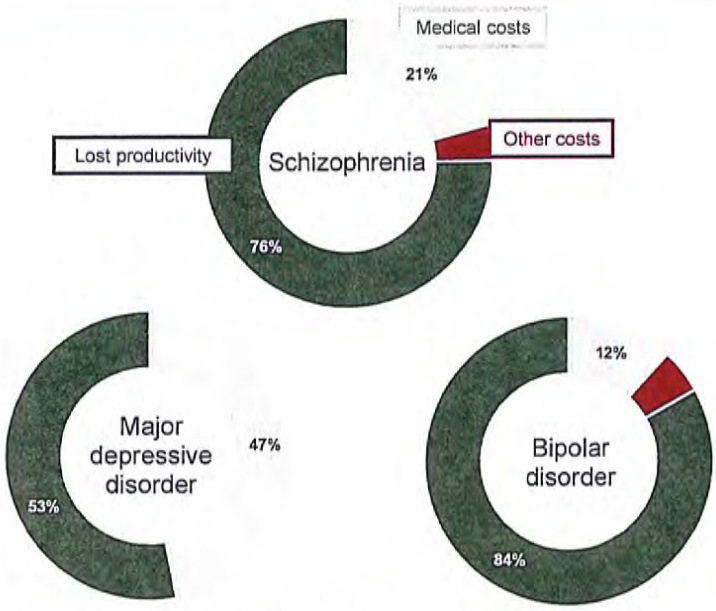
*The economic burden of schizophrenia, bipolar disorder, and major depressive disorder in adults in New York is estimated to be at least **$8 billion for each serious mental illness.***

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

Lost productivity is the largest contributor to economic burden of serious mental illness

UNITED STATES 2015



*Most of the total economic burden of serious mental illness is due to **lost productivity** (unemployment, lost compensation (incl. caregivers), or early mortality). Only 12 to 47% of the total burden is resulting from direct **medical costs** (including substance abuse treatment), and an even smaller percentage from law enforcement, incarceration, shelters, or research & training (**other costs**).*

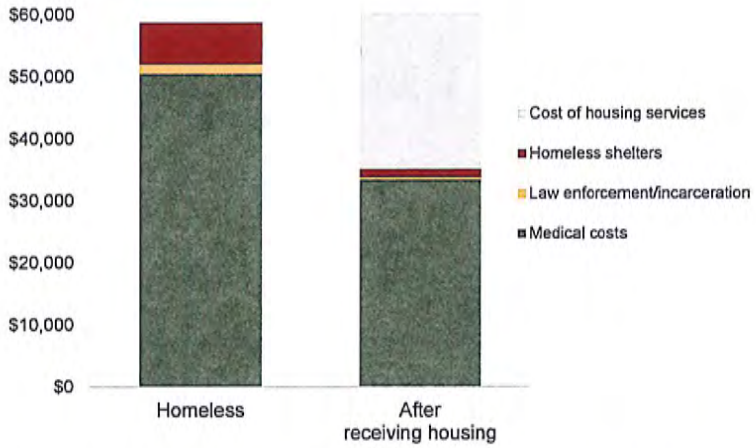
This highlights the large potential economic and societal benefits from improving treatment for serious mental illness even if it means spending more on care.

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

Providing housing to homeless people with SMI can reduce the strain on public services

NEW YORK CITY

Projected benefits & costs of NY/NY Housing Program for people with SMI, in 2015 U.S.$



In 2015, approximately 10,000 homeless people in New York City had a severe mental illness (13% of the total homeless population).

Based on evaluations of a housing program in the 1990's, a homeless person with serious mental illness in New York City uses more than $58,000 per year in health care, corrections and shelter services (in 2015 U.S.$).

By investing in housing for homeless people, these annual costs can be reduced with more than $23,000 per housing unit, thereby recouping 95% of the costs of supportive housing, and significantly reducing the strain on publicly-funded service systems.

Note that there are potential benefits not evaluated here, such as better economic opportunities for people in supportive housing programs.

Sources: HUD Exchange

Culhane et al., Public service reductions associated with placement of homeless persons with severe mental illness in supportive housing. Housing Policy Debate 2002, 20; 1:107-163

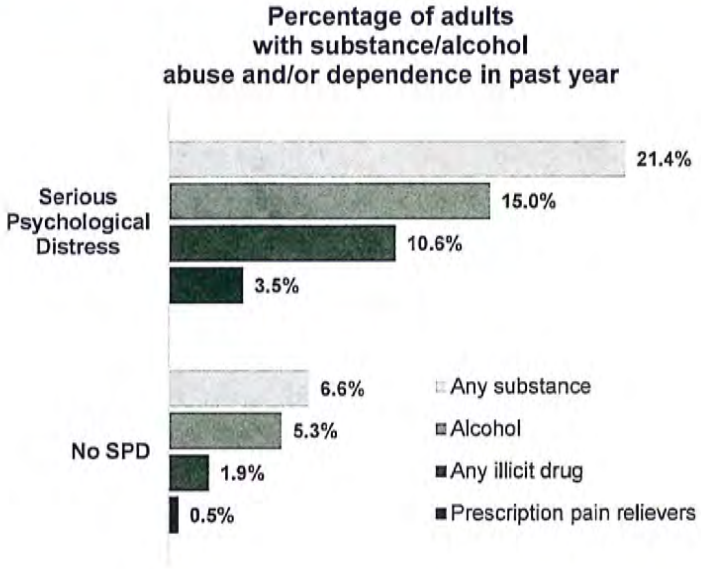
OPIOID ABUSE AND FATAL OVERDOSES

People who experience serious psychological distress are more likely to abuse or be dependent on alcohol, prescription opioids, and illicit drugs. During the past decades, the rates of opioid-related hospitalizations and emergency department visits have increased steadily in the U.S., despite a recent reduction in prescription opioid sales.

The increase in abuse and dependency, as well as the presence of substances like fentanyl, has resulted in a large increase in fatal overdoses by opioids in the last several years.

Substance abuse in people with serious psychological distress

UNITED STATES 2015

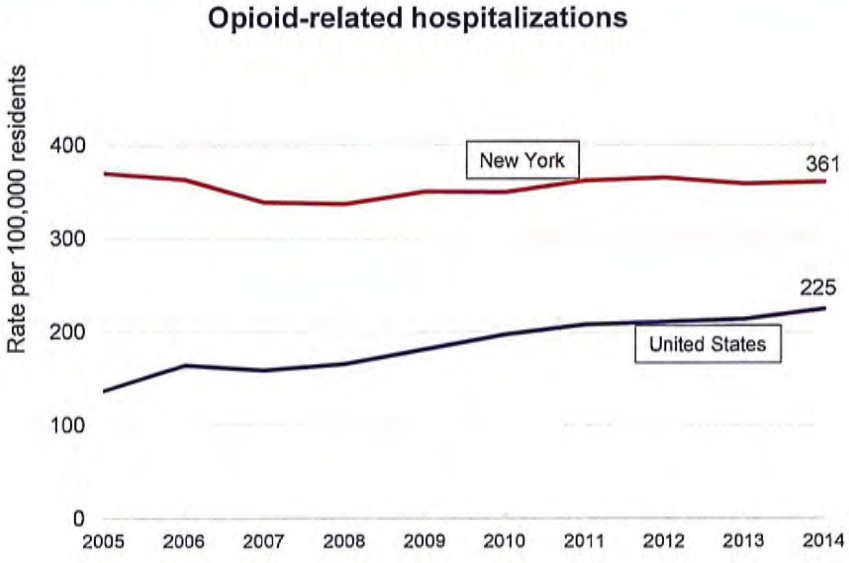


People who experienced serious psychological distress in the past 12 months are more likely to abuse or be dependent on alcohol or illicit drugs during that same time period

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

Opioid-related hospitalization rates are high in New York

NEW YORK AND UNITED STATES 2005-2014

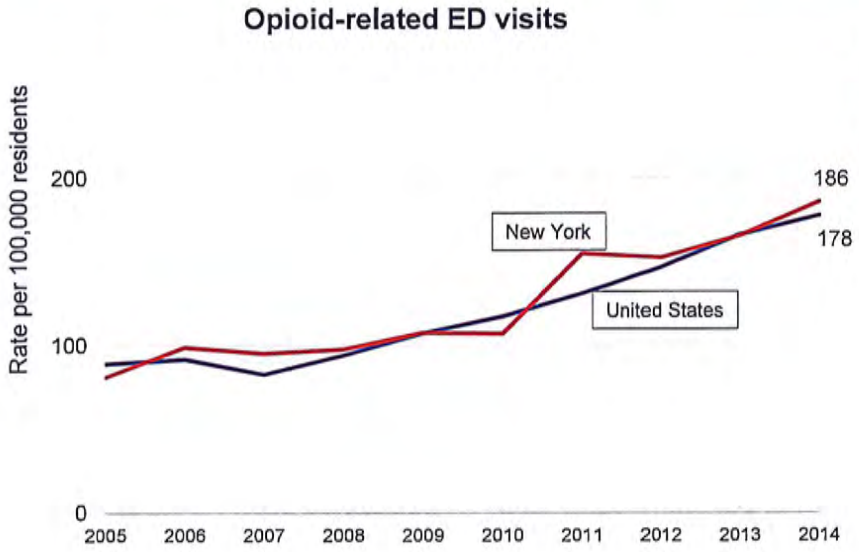


In contrast to the rest of the country, the rate of opioid-related hospitalizations in New York did not increase during the last decade. However, the hospitalization rate in New York is still 60% higher than the national rate.*

Source: Healthcare Cost and Utilization Project (HCUP Fast Stats - Opioid-Related Hospital Use)
** Opioid refers to both opioids and opiates in this chartbook*

Opioid-related emergency department visits are on the rise

NEW YORK AND UNITED STATES 2005-2014

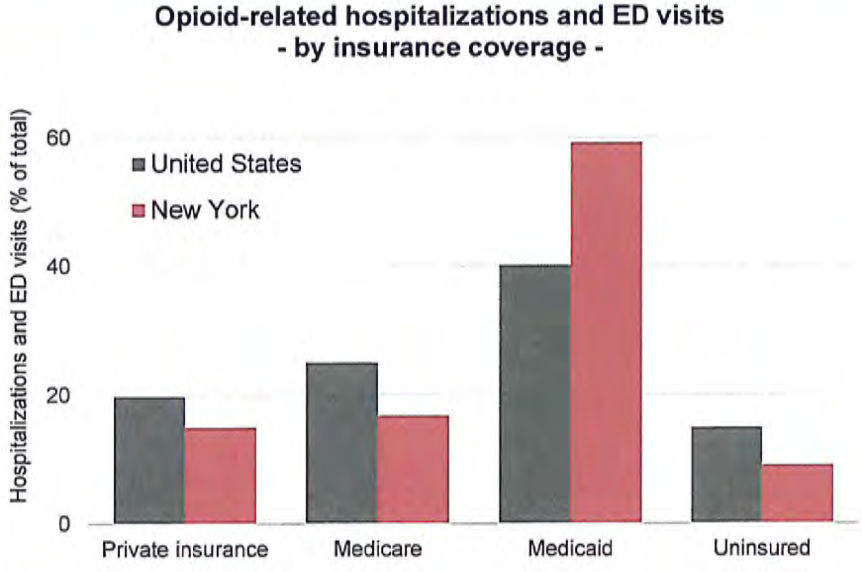


The rate of opioid-related emergency department (ED) visits doubled between 2005 and 2014 in New York and in the U.S. as a whole.

Source: Healthcare Cost and Utilization Project (HCUP Fast Stats - Opioid-Related Hospital Use)

Insurance coverage for opioid-related hospitalizations and ED visits

NEW YORK AND UNITED STATES 2014

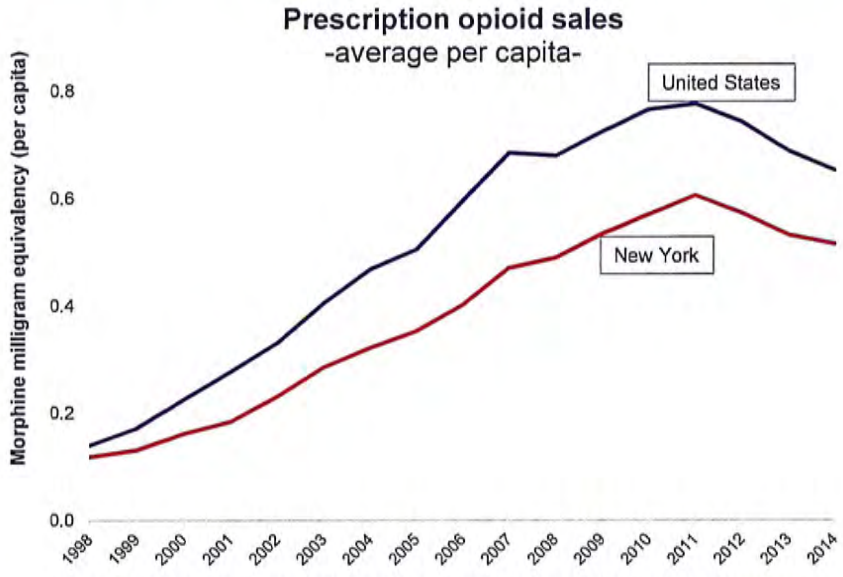


Most opioid-related hospitalizations and ED visits in the U.S. are by patients with Medicaid coverage, compared to patients with other coverage or without health insurance. This difference is even more pronounced in New York, where almost 60% of these patients are covered by Medicaid.

Source: Healthcare Cost and Utilization Project (HCUP Fast Stats - Opioid-Related Hospital Use)

Prescribing of opioids started to decrease in 2011

NEW YORK AND UNITED STATES 1998-2014



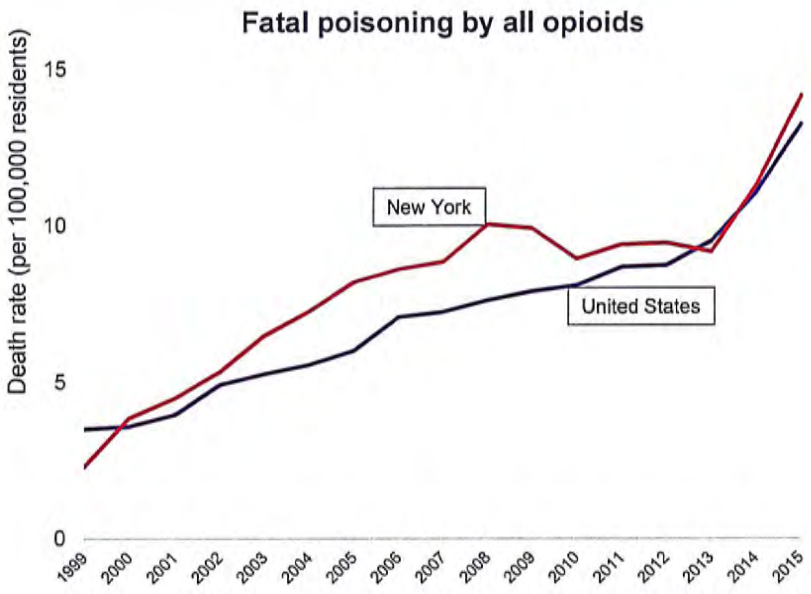
Source: Automation of Reports and Consolidated Orders System (ARCOS), Drug Enforcement Administration. United States data includes all states except DE, MO and PA

Between 1998 and 2011, average prescription opioid sales in the U.S. increased more than five-fold, followed by a decline in the last several years.

Prescription opioid sales in New York have followed the same trend, but remained lower than the national average.

Fatal overdoses by opioids are on the rise

NEW YORK AND UNITED STATES 1999-2015

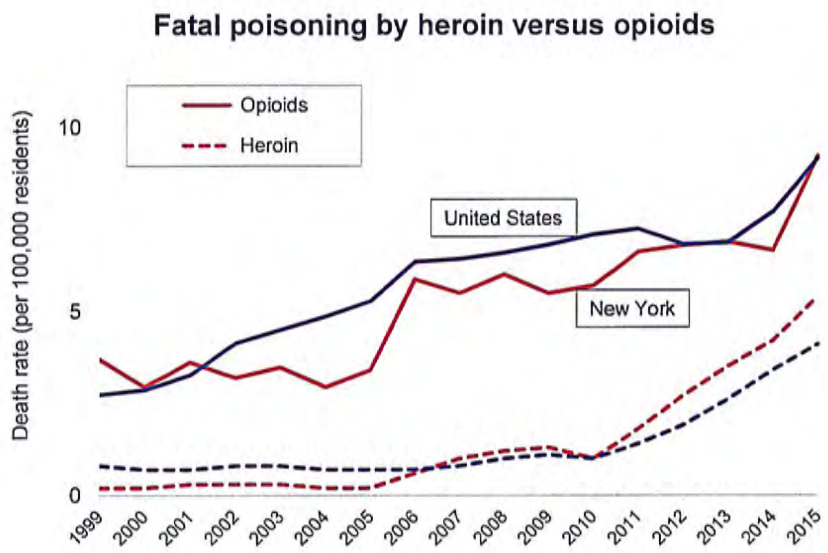


Source: Centers for Disease Control and Prevention, CDC Wonder – Multiple Cause of Death Data

Despite the moderate decline in opioid drug prescriptions since 2011, there has been an increase in the number of opioid overdose deaths in the United States and in New York.

Disproportionate increase in fatal heroin overdose deaths

NEW YORK AND UNITED STATES 1999-2015

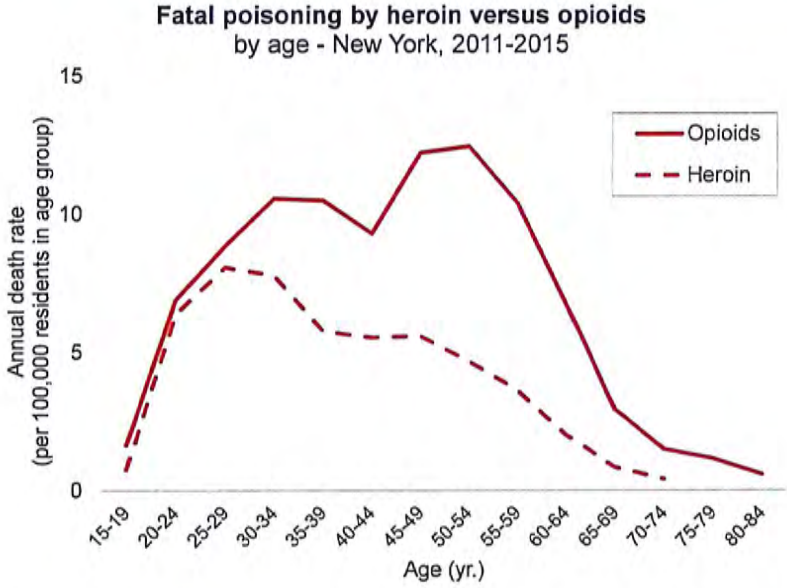


Whereas the absolute number of fatal overdoses by heroin is still lower than overdoses by opioids in New York, the relative increase in the heroin overdose death rate between 2010 and 2015 is much higher (540%) than the increase in death rate due to opioids (162%).

Source: Centers for Disease Control and Prevention, CDC Wonder – Multiple Cause of Death Data

Age distribution of fatal poisoning by opioids and heroin

NEW YORK 2011-2015



In New York people aged 30 years and older are more likely to die from poisoning by opioids than heroin, whereas deaths due to a heroin overdose occur more often in younger than in older people. Similar trends are observed on a national level.

Source: Centers for Disease Control and Prevention, CDC Wonder – Multiple Cause of Death Data

ACKNOWLEDGMENTS

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National Council for Behavioral Health and the Behavioral Health + Economics Network.

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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for Health Policy & Economics