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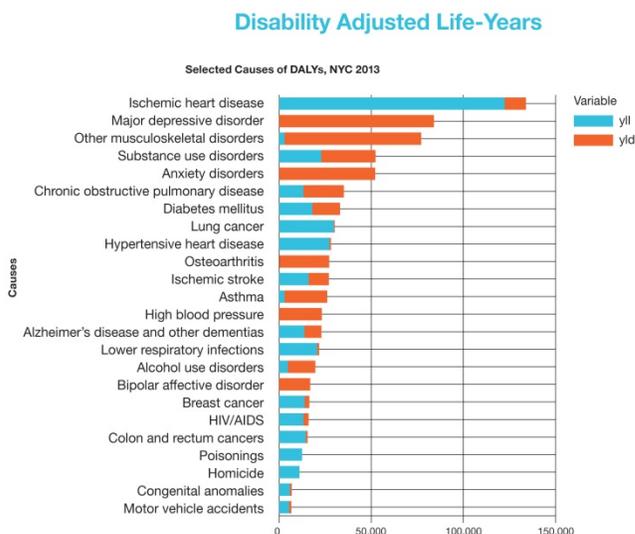
REPORT: UNDERSTANDING NEW YORK CITY'S MENTAL HEALTH CHALLENGE

While statistics alone cannot capture the devastating human costs of mental illness, they drive home the scope of the mental health crisis facing New York City:

- At least one in five adult New Yorkers is likely to experience a mental health disorder in any given year.¹
- 8% of NYC public high school students report attempting suicide.²
- Consequences of substance misuse are among the leading causes of premature death in every neighborhood in New York City.³ Each year, 1,800 deaths and upwards of 70,000 emergency room visits among adults aged 18 to 64 can be attributed to alcohol use.⁴
- 73,000 New York City public high school students report feeling sad or hopeless each month.⁵
- Approximately 8% of adult New Yorkers experience symptoms of depression each year.⁶
- Major depressive disorder is the single greatest source of disability in NYC.⁷ At any given time over half a million adult New Yorkers are estimated to have depression, yet less than 40% report receiving care for it.⁸
- There are \$14 billion in estimated annual productivity losses in New York City tied to depression and substance misuse.⁹
- Unintentional drug overdose deaths outnumber both homicide and motor vehicle fatalities.¹⁰
- The stigma of mental illness has been found to have serious negative effects on hope and an individual's sense of self-esteem. Stigma also increases the severity of psychiatric symptoms and decreases treatment adherence.¹¹

Mental illness exacts a devastating social and economic cost on New Yorkers and the communities they call home.

Disability Adjusted Life-Years



One metric frequently used to describe the impact of mental illness on society relative to other health problems is Disability Adjusted Life-Years (DALYs), which measures the number of years lost to a given disease as a result of loss of life (YLL) or disability (YLD). In other words, DALYs quantify both what makes us feel sick and what kills us. Together, these are often referred to as the “disease burden.”

The figure shows that mental illness and substance use disorders are among the leading contributors to the disease burden for New Yorkers, with depressive illness the single largest contributor after heart disease.¹² If the impact of alcohol use disorders and other substance use disorders are added together (they are separated in this figure), they would be the second leading contributor to overall disease burden in New York City.

Disability related to mental illness (YLD) can have significant real-life consequences for New Yorkers. It can lead to job loss, dropping out of school, struggles with parenting, losing one’s housing, having difficulty making and keeping friends, and other challenges.

But DALYs only show a part of the impact. They do not capture the wide variety of related health problems that often afflict people with mental illness, and therefore underestimate the full extent of their suffering. A few additional statistics make this clear:

- In the U.S., the average life expectancy of people with a mental illness is approximately eight years less than people without one.¹³ Many people with mental illness or substance use disorders experience a substantial gap in the quality of routine medical care, especially when it comes to general medical and cardiovascular care.¹⁴
- Experiencing a period of mental illness increases a person’s likelihood of developing a physical illness, including diabetes, hypertension, and high cholesterol.^{15, 16, 17, 18}
- Adults in NYC with Serious Mental Illness (SMI) are three times more likely to smoke, and they are less likely to exercise or eat fruits or vegetables. It is therefore not surprising that they are twice as likely to have two or more chronic medical illnesses when

compared to adults without SMI.¹⁹

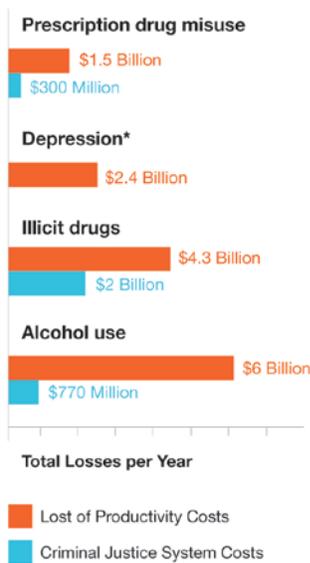
- In the U.S., prolonged depression can more than double the risk of stroke in people over 50 years of age²⁰.

DALYs also do not capture people who may not have a diagnosable mental *illness*, but who still may suffer from poor mental *health*. To support the mental well-being of all New Yorkers and move the needle on DALYs, we need to focus on our society itself—which means addressing big issues like racism, income inequality, and disparities in community resources or access to education and opportunity while also providing targeted individual care when needed.

The economic burden of mental illness

Finally, DALYs do not capture the considerable economic burden mental illness and substance misuse exact on society. In New York City, mental illness and substance misuse together have a tremendous impact on a variety of societal costs, including health care, criminal justice, and lost productivity.²¹

Economic Losses from Mental Health and Substance Use Factors¹⁹⁷ (NYC-wide annual estimate)



*Estimates for depression-related criminal justice system costs are unavailable

- Alcohol misuse is estimated to cost NYC nearly \$6 billion in citywide economic productivity losses every year, while depression accounts for \$2.4 billion in losses.

- Misuse of illicit and prescription drugs and alcohol in NYC together cost approximately \$1 billion in criminal justice expenditures annually.

As troubling as these numbers are, they reflect only a fraction of the total costs. Measuring the cost of productivity losses to a business may not fully capture the cost of mental illness in the workplace. In a study in London, for example, estimates of lost earnings for individuals with mental illness were double the estimate of economic losses in productivity.²² In addition, these figures also do not fully account for costs incurred by caregivers, family members, and the community at large.

It is also important to consider the enormous amount of money we spend on overall health care costs. In 2013, more than 630,000 New Yorkers with health insurance (Medicaid, Medicare or commercial insurance) saw a provider who diagnosed a mental illness. While this group only accounted for 8.3% of the population, the cost of their health care—

almost \$17 billion—represented approximately 25.6% of total health care expenditures paid by these insurance sources in New York City. This figure does not capture the cost of care for the many New Yorkers who are uninsured.^{23, 24}

Risks to mental health affect New Yorkers at every stage of their lives

Mental illness or distress can occur at any point during our lives. But there are certain stages that present greater risks to mental health—and also a greater opportunity to intervene with effective support that could provide the tools to achieve long-term mental wellness.

Early years

The first few years of life play a profound role in a person’s ability to manage emotions in a healthy way. Childhood exposure to adverse events—such as domestic violence, neglect, abuse, family financial strain, and divorce (or certain community conditions such as unsafe neighborhoods)—are all associated with chronic diseases and threats to mental health in adulthood.^{25,26}

These circumstances can also contribute to toxic stress, which is the strong, unrelieved activation of the body’s stress management system in the absence of protective support. Toxic stress can change the architecture of the developing brain and have a devastating lifelong impact.²⁷ For example:

- Adolescents exposed to childhood adversity, including family malfunctioning, abuse, neglect, violence, and economic adversity, are nearly twice as likely as their peers to experience the onset of mental disorders, and the risk to their mental health grows with additional exposures.²⁸
- Even neighborhood violence that a child does not directly experience, such as a nearby homicide, has been shown to reduce cognitive performance.²⁹
- Experiencing two or more adverse events during childhood is associated with a two- to eight-fold increase in depression, anxiety, and tobacco and marijuana use.³⁰
- Early identification of developmental delays and disabilities in young children through timely screening can reduce the risk for depression, anxiety, and overall psychological distress.³¹

Tragically, far too many young New Yorkers are at risk for poor mental health. A 2011-2012 survey found that approximately 18% of children in New York State between the ages of zero and 17 experienced two or more adverse family experiences in their lifetime, which predicts poor mental health and physical health outcomes later in life.³²

Adolescence

Adolescence is period when mental health conditions often first emerge, ranging from substance misuse to psychosis.^{33 34}

- In a biennial survey of NYC public high schools, more than one in four students reported feeling persistently sad or hopeless in the past year. This is a common predictor of depressive illness.³⁵

- In 2013, one in ten NYC public high school students reported being hit, slapped, or physically hurt by someone they were dating or going out with within the past year.³⁶
- A young person who is exposed to pervasive violence has a 50% increased risk of having elevated depressive symptoms and anxiety.³⁷ Each episode of violence (dating violence, bullying, physical fighting, family violence) is associated with an increased risk of that young person also being a perpetrator of violence by anywhere from 35% to 144%.³⁸
- An estimated 7,000 emergency room visits each year in NYC involve alcohol use among individuals under 21 years of age.³⁹
- 8% of NYC public high school students report attempting suicide.⁴⁰ That percentage doubles if a student has been bullied on school grounds, which 18% of students experience.⁴¹
- Gay and lesbian youth in New York City experience nearly twice as much bullying on school property as heterosexual youth, and are more than twice as likely to attempt suicide.⁴² And LGBT youth of color may also experience compounded stressors related to racism and discrimination.⁴³

Young adulthood

Young adulthood is a time of continuing brain development and the creation of lifelong social networks and habits. It is also often a period when mental illnesses emerge, especially mood, psychotic, and substance use disorders. According to national studies, three quarters of all mental health and substance use disorders start by age 24.⁴⁴

Among 1,000 City University of New York undergraduates who responded to a campus survey⁴⁵:

- 19% met criteria for depression
- 26% reported significant anxiety
- Of those who reported depressive symptoms, only 10% received help from their college counseling or health center.

Parenthood

Becoming a parent can be a joyful experience, but it is also associated with a number of mental health risks. While this is true for both fathers and mothers, depression in mothers is more common.⁴⁶ A mother's depression affects her own mental and physical health, heightens the child's risk of psychiatric illness, lowers the chances of the child developing emotional strength and resilience, and decreases the child's likelihood of receiving optimal health care.⁴⁷

Despite the important effect of parenting on mental health, we have limited data when it comes to identifying individuals or areas of the city where risk is high. Here is what we do know:

- 12% of NYC mothers exhibit symptoms of depression in the months after giving birth.⁴⁸
- It is estimated that as many as 20% of lower-income mothers develop symptoms of depression after pregnancy.⁴⁹
- While a higher risk of depression persists in mothers with young children up to five years of age, more than one-third of mothers in one study had not sought help for their mood.⁵⁰
- Parent caregivers of children with chronic illness, including intellectual/developmental disabilities, are at greater risk for depression as well.⁵¹
- Women younger than 19 years old report experiencing post-partum depression at higher rates than women 20 years old and older.⁵²

Acting early with parents also helps us act early for their children. Evidence shows that providing parents with preventive interventions for mental illness reduces the risk of their child developing a mental disorder and psychological symptoms later in life by 40%.⁵³

Adulthood

Adult mental illness often builds upon earlier events, but this period of life can present additional threats to mental health such as the loss of a job, economic vulnerability, and divorce. Overall, bipolar illness, schizophrenia, PTSD, OCD, and other anxiety disorders can also exert their greatest impact in adulthood, contributing to disability and social and economic difficulties and challenging families. Family support is a key promoter of resilience, mental health, and connection to quality care for people suffering from these disorders.^{54, 55, 56} Employment is another crucial factor for self-sufficiency in adults^{57, 58} and yet individuals experiencing mental illness and intellectual and developmental disabilities are significantly underrepresented in the workforce.^{59, 60, 61}

Adulthood can also be a time of trauma, especially in the form of intimate partner and other violence. Nearly one out of every 50 adult New Yorkers reports that they are physically fearful of their partner.⁶² And this is an issue that cuts across every demographic—our Family Justice Centers, which serve victims of domestic violence, have worked with clients from every residential zip code in New York City. It is also important to note that abuse isn't always physical. According to a 2011 study by the Centers for Disease Control, “nearly half of all women and men in the United States have experienced psychological aggression by an intimate partner in their lifetime (48.4% for women and 48.8% for men).” The same study found that more than 20% of individuals who suffered intimate partner abuse also suffered from one or more symptoms of Post-Traumatic Stress Syndrome.⁶³

Late adulthood

Our eldest citizens, especially if they are socially isolated or impaired from diminished overall health, have an escalated risk for depression and suicide.

- The incidence of depression is higher among subpopulations of elders compared to the general population, with rates of major depression occurring in 13.5% of elder home health care recipients.⁶⁴

- As mentioned, in some studies roughly one-third of widows and widowers meet the criteria for depression in the first month after the death of their spouse. Half of these individuals—most of whom are senior citizens—remain clinically depressed a year later.⁶⁵
- In the U.S. the suicide rate of older adults (65+) is roughly 50% higher than the general population, with white men over 85 committing suicide at 4 times the rate of the general population.⁶⁶
- Information from the National Household Survey on Drug Use predicted that as baby boomers age, treatment rates for substance use disorders among older adults (50+) may increase by as much as 70%.⁶⁷
- Older parent caregivers of those with intellectual/developmental disabilities may be at a relatively greater risk for psychological stress and other mental health conditions.⁶⁸
- 92 out of every 1,000 older New York City residents were victims of elder abuse in a one year period.⁶⁹

Mental health varies across the city

We all face threats to our mental health. But these threats are distributed unequally, and are especially present in neighborhoods where historic neglect has resulted from racial discrimination and other longstanding structural inequities.

Poverty

In New York City, the distribution of mental illness varies strongly by income:

- SMI is more than twice as common for adults who live below 200% of the federal poverty level (FPL) compared to those living 200% above it.⁷⁰
- In NYC, most of the young children with reported mental health disorders live in poverty. Of all NYC children between the ages of two and five whose parents report their child being diagnosed with at least one of five common mental health disorders, 90% live in poverty.⁷¹

Race and ethnicity

The prevalence, diagnosis, and treatment of mental illness can vary widely among racial and ethnic groups. For example:

- In New York City, Latina adolescents feel disproportionately sad or hopeless and are more likely to attempt suicide.⁷²
- In the United States, African Americans are less likely than whites to be diagnosed with common mental illnesses like depression and anxiety. But when they *are* diagnosed with

a mental illness, African Americans are more likely than whites to experience a persistent and severe illness.^{73, 74} This may in part be due to biases in diagnosis. For example, African Americans are more likely to be given a diagnosis of schizophrenia and other psychotic disorders, and that is true even when they have the same symptoms as white people.⁷⁵

This highlights a significant challenge to understanding the prevalence of mental illness in a given population. Provider biases can affect the diagnosis and treatment of mental illness, and the use of mental illness labels can sometimes be driven by social judgments⁷⁶ and prejudice. It is therefore uncertain to what degree data on racial, ethnic, or gender differences in mental health data reflect the true presence of illness.

We must also look closely at differences within racial groups. While diagnosis rates for depression and anxiety among adult Latinos in recent years are relatively comparable to whites⁷⁷, there are large variations within Latinos. For example, people of Puerto Rican descent were 54% more likely to have more severe depressive symptoms than people of Mexican descent.⁷⁸

Every New Yorker is shaped by factors such as race, culture, ethnicity, income, and geography in unique and complex ways. Because an individual simultaneously occupies more than one identity, and because of the many social prejudices and obstacles that can accompany each of these identities, a better understanding of how these different experiences and histories shape mental health outcomes—whether as a diagnosable illness, or as other emotional suffering that needs better solutions—is critical to designing effective responses.

Access to care varies throughout the city

Despite the fact that people of color and those in poverty bear the greatest mental health burden, they are among the least likely to get help.

- African Americans and Asians are less likely to receive counseling/therapy or take medication for their illness than whites, according to a survey of NYC residents.⁷⁹
- Receipt of mental health treatment has been found to be lower for African Americans and Latinos compared to whites.⁸⁰
- National studies suggest that African Americans can be half as likely as whites to receive community-based mental health care, but as much as twice as likely to be hospitalized.^{81, 82}

The likelihood of someone having a psychiatric hospitalization in New York City varies dramatically by neighborhood and income.

People from the city's lowest income neighborhoods are twice as likely to be hospitalized for mental illness compared to residents from the highest income neighborhoods.⁸³

The reasons behind these variations across our neighborhoods reflect more than a need for hospitalization; they also reflect a lack of other options. High rates of psychiatric hospitalization likely reflect the challenges residents of some neighborhoods face, including difficulty accessing preventive services and early care, greater exposure to stressors such as housing instability, and interruptions in health insurance.

Taking a public health approach to mental illness means examining these root causes. In other words, we cannot limit ourselves to advocating for access to treatment—we must also examine the context that results in certain communities bearing such a disproportionate share of the collective burden.

People are not connected to the right care when they need it

Our mental health treatment system is often criticized as not being a “system” at all, for the simple reason that it doesn’t do a good job of reaching people, directing them to effective care, and making sure they actually receive the care they need. 41% of New York City adults with an SMI⁸⁴ said they needed treatment at some point in the past year but did not receive it or delayed getting it.⁸⁵ And when New Yorkers do receive care, it is often inefficient and ineffective.

Consider Medicaid spending in New York City. Medicaid is the source of health insurance for approximately 3 million New Yorkers. In 2013, the overall health costs for people with a mental illness or substance use-related diagnosis were more than three times the cost for people without these diagnoses. Individuals with any mental illness diagnosis or indication of substance misuse experience three times the number of emergency room visits for physical health care issues, and six times the number of medical inpatient hospital days compared to people without those conditions.⁸⁶ These overall patterns hold for other sources of insurance as well.⁸⁷ And other data suggests that older patients with symptoms of depression have roughly 50% higher overall health care costs than non-depressed seniors.^{88 89} ,

Although high-cost mental health and medical care services clearly fuel each other, they are generally not well-coordinated or well-integrated. This serves to further escalate costs.

It’s not just that hospitalization is expensive—it is also ineffective if not followed by regular, ongoing outpatient treatment in the community. Yet in the first six months of 2014, only about one in three people who completed a psychiatric hospitalization in New York City were successfully linked to follow-up outpatient treatment within 30 days of leaving the hospital.⁹⁰

This illustrates a fundamental problem: Despite the substantial resources we invest and spend on mental health, the treatment system falls short on results. A big reason for this failure is the fact that care is often not evidence-based, in two key ways:

- **The treatment often doesn’t fit the need.** Too often, we connect people to resources and treatment that do not get to the heart of the problem. For example, a disproportionate share of Medicaid dollars is devoted to families with complex needs that are affected by poverty, abuse, neglect, and mental health challenges. While children in these families who suffer from mental illness may receive treatment or support services, the services

typically focus on the child and fail to address the ways in which the mental health of the child is inextricably tied to the larger family dynamic.⁹¹ In other situations, specialized treatment options are often used where lighter touches, such as support groups or self-care, would be more effective instead.

- **Much of the care is not delivered properly.** Examples of this abound:
 - Approximately half of all treatment for major depressive illness in the U.S. does not follow expert-recommended best practices.^{92, 93, 94}
 - Almost three-quarters of youth insured by Medicaid who receive antipsychotics were prescribed these drugs “off-label”, that is, for conditions not approved by the Food and Drug Administration. While off-label use is common and not illegal, the use of these medications for children in the absence of firm evidence of their efficacy has garnered significant concern and scrutiny.⁹⁵
 - A recent national study suggests that increased access to mental health treatment for youth over the last decade may contribute to the overuse of anti-depressant and stimulant medications.⁹⁶

We need more information to be effective

Despite the many data points described here, there remain many questions about where and how mental health threats take root, how to better match what we are doing with where we can make the biggest impact, and the comparative value and quality of treatment and intervention options.

And we especially need to better measure mental *health* itself through adopting new measures and tools. In order to effectively tailor both our treatment and prevention efforts, we must have a thorough and data-based understanding of how mental illness, substance misuse, and threats to mental health manifest. To move forward and address mental health priorities we should also rethink traditional methods for gathering information about mental health.⁹⁷

Some countries are beginning to measure “well-being” and the position attributes of mental health.⁹⁸ Similarly, it would be useful to capture not just neighborhood effects that pose threats to mental health, but also positive attributes that contribute to the resiliency of individuals and communities. Better data about both mental health and mental illness will help us make better decisions and smarter choices.

¹ There is surprisingly limited data on which to base very specific descriptions of mental illness in our communities. And as will be discussed in this report, formal definitions of “illness” and information we have about them only capture a part of how threats to mental health, affect so much of our lives. This is one reason why this Roadmap will underscore the need for developing better information gathering methods to support a strong program for mental health. Existing studies indicate that somewhere near the range of 18-26% of adults each year experience a defined mental health disorder—a term which throughout this report is intended to also include substance use disorders— in a given year. (1) The National Comorbidity Survey-Replication (NCS-R) estimates 26% of US adults have a mental health disorder in a given year, using a gold-standard survey method that uses a diagnostic checklist and assessed for several disorders including anxiety, mood, impulse control, and substance use disorders. (2) The National Survey on Drug Use and Health (NSDUH) estimates prevalence of mental health disorders based on extrapolating predictions from a similar diagnostic interview. Based on these predictions, approximately 19% of adults in New York State have a mental health disorder in a given year, not including substance use disorders. (3) Using a similar model, our own NYC data estimates the prevalence of mental health disorders—though excluding substance use disorders— at 21%. Given that (4) the NSDUH estimates 8% of New York State adults have a substance use disorder in a given year, the overall NYC prevalence of mental illness is potentially even higher than 21%. Sources: 1) Kessler RC, Chiu WT; Demler O, Walters EE. Prevalence, Severity, and Comorbidity of 12-Month DSM-IV Disorders in the National Comorbidity Survey Replication, *Archives of General Psychiatry*, (2005) 62: 617-627; 2) <http://www.samhsa.gov/data/sites/default/files/NSDUHsaeSpecificStates2013/NSDUHsaeNewYork2013.pdf>; 3) Thorpe LE, Greene C, Freeman A, et al. Rationale, design and respondent characteristics of the 2013–2014 New York City Health and Nutrition Examination Survey (NYC HANES 2013–2014). *Preventive Medicine Reports*, 2015. <http://www.samhsa.gov/data/sites/default/files/NSDUHsaeSpecificStates2013/NSDUHsaeNewYork2013.pdf>

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