Mental Health Impact of the Coronavirus Pandemic in New York State
Introduction

As of February 2021, more than 1.4 million New Yorkers have been infected by the coronavirus and more than 43,000 have died from COVID-19. The devastating impact of the pandemic on the health of New Yorkers extends far beyond these already staggering numbers. In particular, the pandemic has taken a significant toll on the mental health of New Yorkers.

This report reviews survey data related to mental health in New York State during the coronavirus pandemic. It presents self-reported symptoms of anxiety and depression by race and ethnicity, age, and household income, and compares symptoms among New Yorkers who did and did not experience a loss in household employment income during the pandemic.

Data in this report come from the COVID-19 Household Pulse Survey, an experimental data product designed by the U.S. Census Bureau in collaboration with multiple federal agencies. The phases of the survey analyzed provided near real-time data on household experiences during the coronavirus pandemic from April 23, 2020, until October 26, 2020. See Methods for more details on the survey and how rates were developed for this report.

KEY FINDINGS

- In May 2020, more than one-third of adult New Yorkers reported symptoms of anxiety and/or depression in the prior week (referred to in this report as experiencing poor mental health). That rate is more than triple what was self-reported nationally using similar measures during recent pre-pandemic periods.

- The proportion of New Yorkers reporting poor mental health has remained high throughout the pandemic, reaching 37% of adult New Yorkers in October 2020.

- Compared with all racial and ethnic groups, New Yorkers of color generally reported the highest rates of poor mental health throughout the survey period. In October 2020, 42% of Hispanic and 39% of Black New Yorkers reported symptoms of anxiety and/or depression in the prior week.

- Although all age groups were affected, young adult New Yorkers (ages 18–34 years) reported the highest rates (49%) of poor mental health in October 2020.

- Low-income New Yorkers experienced the highest rates of poor mental health across the survey period, compared with all other income groups. Reported symptoms of anxiety and/or depression increased across all income brackets from May to October 2020.

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Introduction (continued)

In October 2020, nearly half of New Yorkers (47%) in households that lost employment income since the start of the pandemic reported symptoms of anxiety and/or depression in the prior week. This rate is 1.7x higher than among households that did not experience income loss.

New York State has taken vital steps to increase access to mental health care during the pandemic. In particular, the State passed emergency provisions to increase insurance coverage and reduce the cost of mental health care. It also expanded access to mental health providers and telemental health services. Although these efforts have likely helped, more work is needed to fulfill unmet needs. In October 2020, approximately 21% of adult New Yorkers with symptoms of anxiety and/or depression reported that they needed counseling or therapy from a mental health professional in the prior four weeks, but did not get it.

In addition to extending these emergency provisions, further actions could address the mental health needs of New Yorkers during the pandemic. Such measures include investing in increased access to broadband internet, expanding resources for mental health hotlines and text- and chat-based services that protect patient privacy, conducting additional targeted outreach for high-risk New Yorkers, and restoring State funding to municipalities for community behavioral health services.
Mental Health & The Pandemic

WHY IS THE CORONAVIRUS PANDEMIC HARMFUL TO MENTAL HEALTH?

Research on the impact of disasters on mental health shows that most people who experience a traumatic event do not develop clinical-level mental health disorders. However, experiencing mental health consequences—such as fear, worry, and stress—during and after a disaster is a common response.\(^2\)\(^,\)\(^3\) In addition to worsening emotional wellbeing, these symptoms put people at increased risk for clinical-level disorders such as major depressive disorder, generalized anxiety disorder, and substance use disorder.\(^4\) Moreover, the persistence of the pandemic may make it harder for people to quickly bounce back or recover from less severe symptoms.\(^5\) Below we discuss how the coronavirus pandemic can cause such symptoms through various pathways, worsening mental health and wellbeing and increasing the risk of clinical disorders.

COVID-19 Illness and Death

New Yorkers at elevated risk for COVID-19 infection (e.g., essential workers, those with preexisting conditions, and people of color) are at risk for experiencing poor mental health.\(^6\)\(^,\)\(^7\) New Yorkers with friends, family members, and community members who have been infected with the coronavirus or have died from COVID-19 experience anxiety and grief; with normal support structures having been disrupted, they are at risk for prolonged grief, major depressive disorder, and post-traumatic stress disorder.\(^8\)\(^,\)\(^9\) Even New Yorkers who have not been directly impacted by a coronavirus infection or COVID-19 death may experience poor mental health. Uncertainty, repeated exposure to anxiety-inducing information, and loss

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4 Goldmann and Galea, “Mental Health Consequences of Disasters.”
5 Goldmann and Galea.
Mental Health & The Pandemic (continued)

of perceived control are drivers of prolonged stress during the pandemic. A wide body of research demonstrates the relationship between prolonged stress, high allostatic load, and mental health difficulties.

Societal Change from COVID-19

The large-scale societal changes resulting from COVID-19 can negatively impact emotional wellbeing. Isolation from friends, family, and other social supports; disruption to daily routines and uncertainty about the future; loss of resources (income, food, child care) to meet essential needs; and exposure to interpersonal violence and abuse while sheltering with others can put New Yorkers at risk for poor mental health. Many households with children are educating or caring for children while working remotely, increasing stress and fatigue. Some New Yorkers may use substances as a coping mechanism for these pandemic-related stressors, a behavior that often co-occurs with mental health disorders.

Job Loss

More than 1.7 million private sector jobs were lost in New York State during April 2020, the largest monthly employment drop on record in the State. Even after moderate economic recovery, New York’s unemployment rate in December 2020 remained more than twice as high as the unemployment rate in December 2019. Job loss is associated with anxiety.

References

10 Gruber et al.
11 Gruber et al.
17 Gruber et al.
18 Gruber et al.
Mental Health & The Pandemic (continued)

depression, suicide, and increased substance use.22,23,24,25 The financial strain posed on households by job loss can decrease the ability to afford mental health care and increase food insecurity and housing instability, which are additional risk factors for poor mental health.26,27 A previous report by the New York State Health Foundation (NYSHealth) found that nearly 60% of New Yorkers reported that they or someone in their household had lost employment income since the start of the pandemic. The rate of food scarcity was more than three times higher for those who reported lost household employment income.28


In October 2020, 33% of adult New Yorkers reported symptoms of an anxiety disorder, 25% reported symptoms of depressive disorder, and 37% reported symptoms of anxiety and/or depressive disorder in the prior week (Figure 1). The proportion of New Yorkers reporting these symptoms has stayed consistently high over the course of the pandemic; self-reported rates in May were similar to those in October. These estimates are substantially higher than levels reported prior to the pandemic. Before the pandemic (January–June 2019), 8.2% of adults nationwide had symptoms of anxiety disorder, 6.6% had symptoms of depressive disorder, and 11.0% had symptoms of either or both disorders. Using a broader measure of mental health, 19.5% of New Yorkers before the pandemic (2018–2019) reported any mental illness in the previous year.

Note: Only adults who responded to mental health questions are included in the denominator. Data for May are the average of the following weeks of data: May 7–12, May 14–19, May 21–26, and May 28–June 2. Data for October are the average of the following weeks of data: September 30–October 12, October 14–October 26. See Methods section for the survey questions and scoring.

Source: NYSHealth analysis of U.S. Census Bureau Household Pulse Survey.


Anxiety & Depression Among New Yorkers (continued)

The Household Pulse Survey measured the frequency of anxiety and depression symptoms using questions based upon the Patient Health Questionnaire (PHQ-2) and the Generalized Anxiety Disorder (GAD-2) scales (see Methods section for more details). Certain responses to these scales are associated with diagnoses of major depressive disorder or generalized anxiety disorder. The results from the Household Pulse Survey indicate symptoms of anxiety and depression, but do not represent clinical diagnoses. Even if they do not meet the diagnostic criteria for a mental illness, New Yorkers who experience symptoms of anxiety and depression during the pandemic still require support, as these symptoms negatively impact emotional wellbeing.31

**BY RACE AND ETHNICITY**

In October 2020, Hispanic and Black New Yorkers reported the highest symptoms of anxiety and/or depression (Figure 2) of any racial or ethnic group; 42% of Hispanic and 39% of Black New Yorkers reported symptoms of anxiety and/or depression in the prior week. White New Yorkers were the only racial group whose reported rates of anxiety and/or depression increased between May and October (from 30% to 36%).

Asian New Yorkers experienced the greatest decline in symptoms of anxiety and/or depression from May to October (from 42% to 31%). One possible explanation for this trend is that Asian New Yorkers may have experienced high rates of anxiety and/or depression earlier in the pandemic as a result of racist and biased media and political coverage of the virus. This coverage precipitated a surge of hate crimes, microaggressions, and other negative responses against Asian Americans, including in New York City.32 In addition to feeling anxiety about contracting the coronavirus and the wellbeing of friends and family, many Asian New Yorkers have also experienced the mental health impact of discrimination.


Anxiety & Depression Among New Yorkers (continued)

Note: Only adults in each race or ethnicity category who responded to mental health questions are included in the denominator. We categorized adults with an ethnicity of Hispanic identified in the data as Hispanic. We categorized adults with an ethnicity of Non-Hispanic as Black, Asian, or white, according to their race code identified in the data. Adults with a race identified in the data as "other or two or more races" were excluded from analyses by race/ethnicity because of low sample sizes. Data for May are the average of the following weeks of data: May 7–12, May 14–19, May 21–26, and May 28–June 2. Data for October are the average of the following weeks of data: September 30–October 12, October 14–October 26. See Methods section for the survey questions and scoring.

Source: NYSHealth analysis of U.S. Census Bureau Household Pulse Survey.

BY AGE

Young adult New Yorkers are the most likely of any age group studied to have reported symptoms of anxiety and/or depression over the course of the pandemic (Figure 3). In October 2020, nearly half of adults aged 18–34 years reported symptoms in the prior week. This was an increase from May 2020, when 42% of New Yorkers in this age group reported symptoms.

One-quarter of New Yorkers aged 65 years and older reported symptoms of anxiety and/or depression in October 2020. Although this rate is more than double the rate (11%) reported by older adults nationwide in 2018 prior to the pandemic, it still remains lower than that of other age groups. During the early months of the pandemic, there was widespread concern that older adults would experience poor mental health, owing to their increased risk for COVID-19 mortality and the impact of social distancing on seniors’ loneliness. However, early research

has found that, during the pandemic, older adults have reported lower rates of poor mental health than younger people. Older adults may in part be more resilient to disasters because of the wisdom they have gained through life experience. Wisdom is composed of prosocial behaviors, emotional regulation, the ability to self-reflect, and spirituality. These factors may contribute to the lower reported rates of depression and anxiety among older adult New Yorkers during the pandemic, compared with younger New Yorkers. However, although these intrinsic traits promote resilience, many older adults lack the resources to cope with COVID-19 stress, including the technology to maintain relationships and access to mental health services. Ensuring access to these resources is important to promote emotional wellbeing across all age groups.

Note: Only adults in each age category who responded to mental health questions are included in the denominator. Data for May are the average of the following weeks of data: May 7–12, May 14–19, May 21–26, and May 28–June 2. Data for October are the average of the following weeks of data: September 30–October 12, October 14–October 26. See Methods section for the survey questions and scoring.

Source: NYSHealth analysis of U.S. Census Bureau Household Pulse Survey.

35 Vahia, Jeste, and Reynolds.
37 Vahia, Jeste, and Reynolds, “Older Adults and the Mental Health Effects of COVID-19.”
Anxiety & Depression Among New Yorkers (continued)

**BY HOUSEHOLD INCOME**

Over the course of the pandemic, the lower a New Yorker’s household income, the higher their likelihood of reporting symptoms of anxiety and/or depression (Figure 4). In October, half of New Yorkers in households making less than $25,000 in 2019 reported symptoms of anxiety and/or depression in the prior week. Nearly all income brackets, including the highest, experienced an increase in symptoms of poor mental health from May to October 2020.

**FIGURE 4.** Proportion of Adult New Yorkers Reporting Symptoms of Anxiety and/or Depression During COVID-19, by Household Income

Note: Only adults in each income category who responded to mental health questions are included in the denominator. Household income is defined as total 2019 household income before taxes. Data for May are the average of the following weeks of data: May 7–12, May 14–19, May 21–26, and May 28–June 2. Data for October are the average of the following weeks of data: September 30–October 12, October 14–October 26. See Methods section for the survey questions and scoring.

Source: NYSHealth analysis of U.S. Census Bureau Household Pulse Survey.

**BY HOUSEHOLD EMPLOYMENT INCOME LOSS**

In October 2020, New Yorkers in households that experienced a loss of employment income since the start of the pandemic were 1.7x more likely to report symptoms of anxiety and/or depression in the prior week than New Yorkers in households that had not lost employment income (Figure 5). The proportion of New Yorkers who lost household employment income reporting symptoms of poor mental health increased between May and October, indicating the mental health impact of prolonged unemployment or reduced income.
Anxiety & Depression Among New Yorkers (continued)

FIGURE 5. Proportion of Adult New Yorkers Reporting Symptoms of Anxiety and/or Depression During COVID-19, by Household Employment Income Loss

Note: Only adults in each household employment income loss category who responded to mental health questions are included in the denominator. An adult is considered to have lost household employment income if they or anyone in their household experienced a loss of employment income since March 13, 2020. Data for May are the average of the following weeks of data: May 7–12, May 14–19, May 21–26, and May 28–June 2. Data for October are the average of the following weeks of data: September 30–October 12, October 14–October 26. See Methods section for the survey questions and scoring.

Source: NYSHealth analysis of U.S. Census Bureau Household Pulse Survey.

UNMET NEED FOR MENTAL HEALTH SERVICES AMONG NEW YORKERS DURING THE PANDEMIC

In October 2020, approximately one in five adult New Yorkers who reported symptoms of anxiety and/or depression also reported that they needed counseling or therapy from a mental health professional during the prior four weeks, but did not get it. Many barriers posed by the pandemic could be preventing New Yorkers from accessing mental health care, including: lack of insurance coverage; cancellation of in-person appointments because of COVID-19; lack of mental health providers offering telemedicine services; lack of internet or technology to use telemedicine; and lack of privacy accessing telemedicine services while isolating at home. Many New Yorkers may also be experiencing symptoms of mental health disorders for the first time, or with greater severity than ever before, and may not have the knowledge, resources, or support to establish care.

Note: 38 NYSHealth analysis of U.S. Census Bureau Household Pulse Survey.
Policy Solutions

Structural barriers to mental health care in New York State long predate the pandemic. For many New Yorkers, the pandemic has made mental health care even more difficult to access, while simultaneously increasing the need for services. New York State has taken key steps to increase access to mental health care during the pandemic. Still, more work is needed. Below we summarize some of the efforts underway and provide additional solutions.

**Extend provisions to help New Yorkers maintain health insurance**

Lack of insurance is a fundamental barrier to mental health care, and the COVID-19 pandemic has magnified the problem. There were more than 1 million fewer private sector jobs in New York State in December 2020, compared with February 2020.\(^{39,40}\) It is likely that a substantial proportion of New Yorkers who lost employment have experienced interruptions to their health insurance coverage or changes to their provider network, or have lost coverage entirely.\(^{41}\)

New York has taken several steps to increase insurance enrollment and prevent insurance loss during the pandemic. For example, as the pandemic first hit New York in March 2020, New York State implemented a coronavirus Special Enrollment Period to provide individuals with the opportunity to enroll in Qualified Health Plans; the enrollment period was subsequently extended through the end of March 2021 (the annual Open Enrollment Period normally begins in November and ends in January).\(^{42,43,44}\) To avoid loss of coverage during the pandemic, the State is also automatically continuing coverage for New Yorkers enrolled in Medicaid, Child Health Plus, or the Essential Plan without requiring consumers to submit renewal forms.\(^{45}\)

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\(^{39}\) New York State Department of Labor, “NYS Unemployment Rate Falls to 8.2% in December 2020.”


\(^{41}\) New York State Department of Labor, “NYS Economy Loses More Than 1.7 Million Private Sector Jobs in April 2020.”


Policy Solutions (continued)

Furthermore, Governor Cuomo committed in the 2021 State of the State to eliminate Essential Plan premiums for more than 400,000 New Yorkers, making coverage more affordable during the pandemic and enrolling an estimated 100,000 New Yorkers who are currently uninsured in the Essential Plan.\textsuperscript{46} For individuals with commercial insurance, the State also directed commercial health insurers to defer payment of premiums and maintain coverage for several months in the spring of 2020 for individuals and businesses experiencing financial hardship as a result of COVID-19.\textsuperscript{47}

The State should continue to extend and expand upon these special provisions. The State could provide additional consumer assistance to newly uninsured New Yorkers through the State’s insurance navigator program. Targeted insurance enrollment outreach could be conducted when new applicants apply for unemployment insurance benefits.

Extended provisions to reduce cost barriers for mental health care

Even with health insurance, out-of-pocket costs for mental health services can be a barrier to receiving care. The State has taken important action to make mental health care more affordable. In March 2020, the State began requiring insurers to waive all cost-sharing for in-network telehealth services, including mental health care, so long as a state of emergency is still in effect.\textsuperscript{48} To provide additional support for essential workers, who face increased risks for poor mental health during the pandemic, the State required insurers starting in May 2020 to waive all cost-sharing for in-network in-person and telehealth mental health services for essential workers.\textsuperscript{49} It is critical that these regulations remain in effect so long as New Yorkers continue to feel the impact of the pandemic; the mental health consequences of the pandemic will persist long after the lifting of the state of emergency.


Policy Solutions (continued)

Make permanent insurance coverage of telehealth services

The use of telehealth services has seen a meteoric rise during the pandemic, as it provides a socially distant and safer health care option for many people. New York has taken significant steps to provide access to mental health care via telehealth. In March, New York relaxed Medicaid rules on the types of clinicians, facilities, and services eligible for billing for telehealth services and allowed providers to bill for telephonic services.50 The State also required State-regulated insurers to cover in-network video or telephonic telehealth visits (so long as the visit would also be covered in the provider’s office).51 The federal government has enacted similar rules for the Medicare program.52

The State should consider permanently adopting these regulatory changes. Furthermore, Governor Cuomo’s 2021 State of the State included a proposal for comprehensive telehealth legislation, including the adjustment of reimbursement incentives and elimination of outdated regulatory prohibitions and location requirements.53

Increase technological access to telehealth services

New Yorkers must have access to appropriate technology and connectivity in order to access telemental health care. Lack of connectivity is a statewide issue, affecting both rural and urban communities: in 2018, approximately 1 in 3 households in Syracuse, 1 in 5 households in Rochester and Buffalo, and 1 in 6 households in New York City had no broadband internet.54

Increasing broadband access and cellular service is vital for ensuring access to telehealth.55 In 2015, the State launched the $500 million New NY Broadband Program, which provides State grant funding to projects that deliver high-speed internet access to unserved and underserved areas of the State.56 More recently, the 2021 State of the State included a

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Policy Solutions (continued)

proposal to pass legislation requiring internet service providers to offer high-speed internet plans to low-income households for $15 per month. New York should continue to expand broadband availability, ensure Wi-Fi access in public housing and low-income neighborhoods, and increase the number of cell towers in rural areas.

Increase text- and chat-based services to protect patient privacy

New Yorkers are also unable to use telehealth resources if they feel uncomfortable or unsafe accessing these services from their homes. While sheltering in place, many New Yorkers lack the physical or digital privacy to speak openly with a mental health professional. Increasing text- and chat-based services can accommodate New Yorkers who lack privacy at home. For example, NYC Well—New York City’s support, crisis intervention, and referral service—offers text and chat services for residents seeking help for mental health and substance use concerns.

Expand resources and outreach to support high-risk populations

New York State currently has 178 Mental Health Professional Shortage Areas (HPSAs), or areas with too few mental health providers and services for a given population. The State has implemented several remote programs during the pandemic to connect New Yorkers with mental health professionals or supportive counselors from anywhere in the State. The New York State Office of Mental Health (OMH) launched the Project Hope Emotional Support Hotline with funding from the Federal Emergency Management Administration to help New Yorkers cope with COVID-19. To promote awareness of the resource, OMH launched a digital campaign on social media and digital outlets focused on three different at-risk groups: essential workers, people isolating at home, and new and expectant mothers. OMH also facilitated free group therapy sessions in summer 2020, called “Coping Circles.”

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57 Andrew M. Cuomo, “State of the State 2021: Reimagine, Rebuild, Renew.”
58 New York State Council for Community Behavioral Healthcare and Community Health Care Association of New York State, “Ensuring Sustained Access to Telehealth in the Post-Pandemic Period.”
Policy Solutions (continued)

which provided six weeks of telegroup therapy sessions to New Yorkers struggling with the pandemic.62

NYSHealth has also helped fund the creation of additional resources to meet the increased need for mental health services among at-risk populations. For example, NYSHealth funded the Headstrong Project and the Military Family Center at NYU Langone Health to expand their telemental health resources for veterans, and the Veterans One-stop Center of WNY to expand its peer-mentoring programs for veterans.63,64,65 NYSHealth also supported the Physician Affiliate Group of New York, Bassett Medical Center, and Vibrant Emotional Health to provide mental health services to health care workers and other essential workers.66,67,68

New York should continue to expand existing remote services to increase access to mental health care across the State. For example, consideration should be given to reopen OMH’s Coping Circles group therapy program, as it is not currently enrolling additional participants. Additional outreach and education is also needed to direct New Yorkers toward such services. For example, the State could promote these services on its insurance marketplace and unemployment benefits websites, as New Yorkers who recently lost insurance coverage or income may be in greater need of mental health services.

Restore State aid payments for community behavioral health

New York began withholding 20% of State aid payments to local governments in June 2020, citing budget shortfalls and the uncertainty of federal aid receipt. This withholding has taken

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Policy Solutions (continued)

a toll on the ability of community behavioral health providers to deliver services. These nonprofit providers contract with the State to deliver mental health and addiction services in community-based settings, including county mental hygiene programs, freestanding agencies, and hospital behavioral health divisions. In response to withholdings of State aid funding, providers have reported they stopped filling staffing vacancies and anticipate layoffs, service reductions, and program closures if the cuts become permanent. The FY 2022 Executive Budget plans to permanently cut local aid payments by 5%, and repay amounts that have been withheld above this amount. During the COVID-19 pandemic, it is important to expand investments in mental health services. If possible given the current budget shortfalls, the State should restore State aid payments to behavioral health providers in their entirety, particularly if new federal aid becomes available.


72 Nadia Chait, “Oversight Hearing: Impact of COVID-19 on Individuals with Either a Mental Illness or an Intellectual or Developmental Disability” (The Coalition for Behavioral Health, September 8, 2020).

73 Bump, “New York Mental Health Providers Warn Lawmakers Cuts Will Be ‘Devastating.’”

Methods

DATA

The data used for the analysis are part of the COVID-19 Household Pulse Survey, an experimental data product designed by the U.S. Census Bureau in collaboration with multiple federal agencies. The data are available from:


The survey is designed to provide near real-time data on household experiences during the coronavirus pandemic across all states to inform federal and state recovery planning. Phase One of data collection began on April 23, 2020, and was generally conducted on a weekly basis until July 21, 2020. Phase Two of data collection began on August 19, 2020, and was generally conducted every two weeks until October 26, 2020. Households were contacted via e-mail and/or a mobile phone number to complete an internet questionnaire.

Only adults were surveyed. The Census Bureau drew the sampling frame from the Census Bureau Master Address File, supplemented by the Census Bureau Contact Frame. The Census Bureau weighted the survey responses to account for nonresponse. This weighting also adjusted the survey responses to be more representative of demographic distributions—including by educational attainment, sex, age, and race and ethnicity—in each state. Weighted data were used in this analysis based on the weights provided by the Census Bureau.

The unweighted counts of weekly responses in New York State are displayed in Table 1 below. More information on the survey design, including the survey instrument, are available from:

Phase One:

Phase Two:
TABLE 1: Unweighted Survey Responses by Week and Demographic Group, New York State

<table>
<thead>
<tr>
<th>SURVEY WEEK</th>
<th>Dates</th>
<th>Overall</th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian</th>
<th>18–34</th>
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<td>12</td>
<td>Jul 16–Jul 21, 2020</td>
<td>1,995</td>
<td>1,382</td>
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<td>247</td>
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<td>Aug 19–Aug 31, 2020</td>
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<td>Sep 2–Sep 14, 2020</td>
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<td>Sep 30–Oct 12, 2020</td>
<td>2,123</td>
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<td>Oct 14–Oct 25, 2020</td>
<td>1,939</td>
<td>1,333</td>
<td>163</td>
<td>247</td>
<td>136</td>
<td>419</td>
<td>1,160</td>
<td>360</td>
<td>153</td>
<td>248</td>
<td>484</td>
<td>697</td>
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CALCULATION OF RATES

Throughout the report, rates are calculated as the percentage of the applicable (weighted) population that self-reported a certain attribute (e.g., symptoms of anxiety and/or depression). Although the survey was conducted on a weekly (for Phase One) or biweekly (during Phase Two) basis and results were reported as such by the Census Bureau, we reported results that combined multiple time periods of the survey. That is, we created a “May” estimate by averaging the data from Phase One covering the survey time periods of: May 7–12, May 14–19, May 21–26, and May 28–June 2. An “October” estimate was created by averaging the Phase Two survey time periods of: September 30–October 12, October 14–October 26. This was done to increase the sample size associated with each estimate and smooth out weekly (or biweekly) variation in estimates that may be a result of small sample sizes, particularly when reporting results on subgroups of the population.

Responses for the “May” and “October” periods were combined and averaged without any additional weighting. That is, aside from the application of the survey weights supplied by the Census Bureau to make the results more generalizable to the full New York State population, no additional weighting was applied in the development of the rates for this analysis. See the Census Bureau website for more details on the specific weeks that the survey was conducted:


Categorizations

The Household Pulse Survey included questions to measure the frequency of anxiety and depression symptoms. These questions were developed based on the Patient Health Questionnaire (PHQ-2) and the Generalized Anxiety Disorder (GAD-2) scale. One difference is that the Household Pulse Survey measured symptoms over the last 7 days, as opposed to the typical 14 days.

Adapted PHQ-2 questions:

- Over the last 7 days, how often have you been bothered by having little interest or pleasure in doing things? Would you say not at all, several days, more than half the days, or nearly every day?

- Over the last 7 days, how often have you been bothered by feeling down, depressed, or hopeless? Would you say not at all, several days, more than half the days, or nearly every day?
Adapted GAD-2 questions:

- Over the last 7 days, how often have you been bothered by the following problems: Feeling nervous, anxious, or on edge? Would you say not at all, several days, more than half the days, or nearly every day?

- Over the last 7 days, how often have you been bothered by the following problems: Not being able to stop or control worrying? Would you say not at all, several days, more than half the days, or nearly every day?

The answers to each scale were assigned a numerical value (not at all = 0, several days = 1, more than half the days = 2, and nearly every day = 3). The answers for each scale (for PHQ-2 and GAD-2) were summed together. A sum of three or greater on the PHQ-2 score is associated with diagnoses of major depressive disorder, while a sum of three or greater on the GAD-2 scale is associated with diagnoses of generalized anxiety disorder. The proportion of adults with symptoms in this report are based on the composite scores. Only adults who responded to both questions were included in each scale’s calculation. For more information, see:


To analyze adults by race/ethnicity, we categorized adults with an ethnicity of Hispanic identified in the data as Hispanic. We categorized adults with an ethnicity of Non-Hispanic as Black, Asian, or white, according to their race code identified in the data. Adults with a race identified in the data as “Other or two or more races” were excluded from analyses by race/ethnicity as a result of low counts.

Adults were categorized into age groups based on the birth year provided in the data. Since month and date of birth were not collected from survey respondents, ages were treated as the respondent’s age as of December 31, 2020.

Household income is defined in the survey as total 2019 household income before taxes. Loss of household employment income since the start of the pandemic is defined as an adult or someone in their household experiencing a loss of employment income since March 13, 2020.
Limitations

Confidence intervals are not provided with the estimates. Although we attempted to improve the reliability of estimates by developing estimates based on multiple time frames of the survey, readers should interpret the precision of the estimates with caution, particularly those for subgroups of the New York State population. Rather than focusing on specific point estimates, these data are most useful for understanding the persistence of patterns over time, including the identification of changes in the direction of trends (e.g., persistent increases followed by persistent decreases), and the relativeness of estimates of one group in comparison with another (e.g., persistent patterns of differences in estimates by race).

As with most surveys, biases can occur in the survey estimates. The Census Bureau has identified certain biases as a result of measurement error, coverage error, nonresponse error, and processing errors that could have occurred in the administration of the COVID-19 Household Pulse Survey. For more details, see:


Some of the errors may have been more likely to occur because the COVID-19 Household Pulse Survey was meant to provide near real-time information during the pandemic. This meant there was limited time for testing questions to help ensure that survey questions were consistently clear to respondents. However, the questions used to measure depression and anxiety are based on well-established research. Processing errors (e.g., incorrect coding of data) may have also been more likely because of the rapid timeline.

Coverage error may have occurred as households were invited to participate in the survey via cellphone and e-mail. New Yorkers without cellphones, computers, or internet access therefore may have been underrepresented. Also, the response rate for the Household Pulse Survey was substantially lower than many other federally sponsored surveys, which would make it more susceptible to nonresponse error. Although the federal government employs quality-control procedures to minimize certain biases, the extent of such biases has not yet been evaluated for the COVID-19 Household Pulse Survey.