

# Data Science & Health Equity in NYC

## Access to Mental Health Treatment among New York City Adults by Age and Household Income, 2018

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Mental health disorders, characterized by alterations in mood, thinking, and behavior, are one of the leading causes of disability in the US, and account for the largest economic burden of any chronic disease.<sup>1,2</sup> The Take Care New York (TCNY) 2020 initiative of the New York City (NYC) Department of Health cites unmet mental health need as a critical issue associated with access to quality care, particularly in very high-poverty neighborhoods.<sup>3</sup> For such underserved NYC neighborhoods, health inequities and poor health outcomes stem from systemic issues like structural racism and income inequality.<sup>4</sup> NYC programs like ThriveNYC, established in 2015, attempt to address such inequities and gaps in mental healthcare by eliminating barriers to care and implementing community-based mental health programs.<sup>5</sup> The Healthy People 2030 initiative of the US Department of Health and Human Services notes that the greatest opportunity for prevention of mental health disorders is among young people.<sup>1</sup>

Using data from the 2018 New York City (NYC) Community Health Survey (CHS), this brief examines the association between access to mental health treatment, age, and household income among adults in NYC. Specifically, it focuses on whether adults in different age groups (aged 18 to 24 years, 25 to 44 years, 45 to 64 years, 65 years and older) differ in access to treatment for a mental health problem across annual household income levels (<100% FPL, 100-400% FPL, >400% FPL) in NYC in 2018.

### Access to mental health treatment varied by age, sex (at birth), race/ethnicity, and household income.

- In 2018, 95.69% of NYC adults had access to mental health treatment.
- Men (96.30%) had greater access to mental health treatment than women (95.16%).
- Access to mental health treatment was higher among NYC adults aged 65 years and older (97.84%) compared with other age groups: aged 18 to 24 years (95.03%), 25 to 44 years (94.80%), 45 to 64 years (96.06%).
- Access to mental health treatment was higher among Asian NYC adults (97.66%) compared with adults of other races/ethnicities.
- NYC adults with higher household income (96.72%) had greater access to mental health treatment than those with lower household income (93.78%), and those with moderate household income (95.99%).

**Table 1: Access to mental health treatment among New York City adults by age and household income, 2018**

	Mental Health Treatment (Response)				Wald Odds Ratio (95% CI)	Cochran-Mantel-Haenszel (CMH) Test (p-value)
	Not Received	Received	Total	Wald Odds Ratio		
<b>Age, Household Income: &lt;100% FPL</b>						
18-24 yrs	8 (6.16%)	146 (93.84%)	154 (11.67%)	1.000	1.000	
25-44 yrs	44 (8.35%)	640 (91.65%)	684 (38.67%)	0.720	(0.705, 0.735)	
45-64 yrs	43 (4.98%)	719 (95.02%)	762 (31.98%)	1.252	(1.224, 1.281)	
65+ yrs	26 (3.24%)	748 (96.76%)	774 (17.67%)	1.963	(1.908, 2.020)	
<b>Age, Household Income: 100-400% FPL</b>						
18-24 yrs	14 (4.44%)	379 (95.56%)	393 (16.58%)	1.000	1.000	<0.001***
25-44 yrs	54 (4.06%)	1173 (95.94%)	1227 (37.47%)	1.097	(1.078, 1.115)	
45-64 yrs	68 (4.64%)	1296 (95.36%)	1364 (30.73%)	0.955	(0.938, 0.971)	
65+ yrs	22 (2.28%)	1175 (97.72%)	1197 (15.22%)	1.991	(1.943, 2.040)	
<b>Age, Household Income: &gt;400% FPL</b>						
18-24 yrs	8 (3.65%)	150 (96.35%)	158 (9.11%)	1.000	1.000	
25-44 yrs	54 (4.55%)	1029 (95.45%)	1083 (45.22%)	0.793	(0.773, 0.814)	
45-64 yrs	27 (2.37%)	1179 (97.63%)	1206 (32.62%)	1.561	(1.517, 1.605)	
65+ yrs	13 (0.99%)	840 (99.01%)	853 (13.04%)	3.783	(3.619, 3.954)	

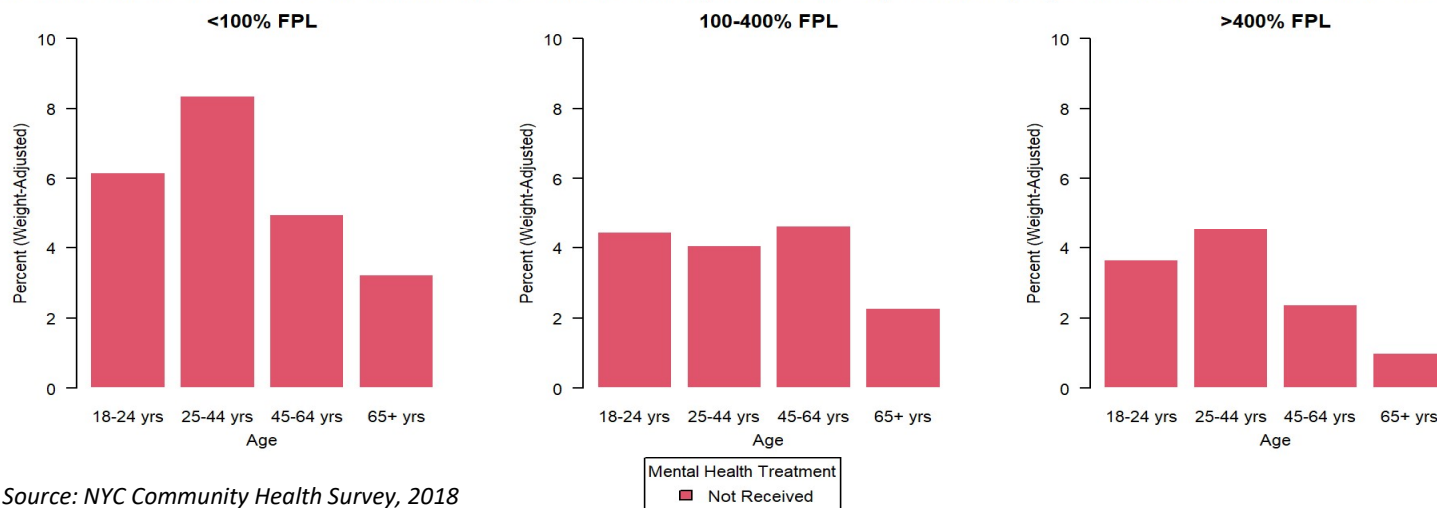
Alpha levels of 0.05 (\*), 0.01 (\*\*), and 0.001 (\*\*\*) used in inferential procedures.

The Wald odds ratio indicate the odds of receiving mental health treatment relative to baseline.

Percent estimates, Wald odds ratios, and the CMH test adjusted for sampling weight.

Source: NYC Community Health Survey, 2018

**Generally, older New York City adults with greater household incomes had greater access to mental health treatment. Relative lack of access to mental health treatment among New York City adults by age and household income, 2018**



Source: NYC Community Health Survey, 2018

**Across different levels of household income, NYC adults aged 65 years and older had the greatest access to mental health treatment.**

- Across all levels of household income, NYC adults aged 65 years and older had the greatest odds of receiving mental health treatment compared to other age groups.
- Among NYC adults with lower, moderate, and higher household income, those aged 65 years and older had ~1.963, ~1.991, and ~3.783 times the odds, respectively, of receiving mental health treatment compared to those aged 18 to 24 years.

**For different levels of household income, NYC adults aged 25 to 44 years and 45 to 64 years had the least access to mental health treatment.**

- Among NYC adults with lower and higher household income, those aged 25 to 44 years had the lowest odds of receiving mental health treatment compared to other age groups (~0.720 and ~0.793 times the odds, respectively, of receiving mental health treatment compared to those aged 18 to 24 years).
- Among NYC adults with moderate household income, those aged 45 to 64 years had the lowest odds of receiving mental health treatment compared to other age groups (~0.955 times the odds of receiving mental health treatment compared to those aged 18 to 24 years).

**Implications:**

These findings confirm previous studies that NYC adults with lower household income have less access to mental health treatment. However, the greatest opportunity for prevention for different levels of household income was not among young people as stated in previous studies, but rather among those aged 25 to 44 years and 45 to 64 years. Equity in access to mental health treatment can be achieved by supporting access to mental health treatment for these underrepresented groups through policy and NYC programs.

This analysis uses the response to the question “Was there a time in the past 12 months when you needed treatment for a mental health problem, but did not get it?” as a measure of access to mental health treatment – however this question does not consider whether mental health treatment is needed by all respondents, just whether it is received. The categories for age and household income were fixed by the 2018 NYC Community Health Survey and could not be changed significantly in the analysis. The findings for this analysis could have been influenced by race/ethnicity, which should be considered in future analyses.

**Definitions:**

**Access to Mental Health Treatment** is defined according to the survey respondent’s response to the question: Was there a time in the past 12 months when you needed treatment for a mental health problem, but did not get it?

**Household Income** is a measure of annual household income as a function of the federal poverty level (FPL). NYC adults are classified as having a lower household income (<100% FPL), moderate household income (100-400% FPL) or higher household income (>400% FPL) to coincide with Medicaid subsidy cutoffs.

**References:**

- 1 Office of Disease Prevention and Health Promotion. Mental Health and Mental Disorders. [www.healthypeople.gov/2020/topics-objectives/topic/mental-health-and-mental-disorders](http://www.healthypeople.gov/2020/topics-objectives/topic/mental-health-and-mental-disorders). Accessed December 6, 2020.
- 2 Insel TR. Assessing the economic costs of serious mental illness. *Am J Psychiatry*. 2008; 165: 663-665. doi: 10.1176/appi.ajp.2008.08030366
- 3 New York City Department of Health and Mental Hygiene. TCNY 2020 3<sup>rd</sup> Annual Update 2018. <https://www1.nyc.gov/assets/doh/downloads/pdf/tcny/tcny-2020-annual-report3.pdf>. Accessed December 6, 2020.
- 4 New York City Department of Health and Mental Hygiene. TCNY 2020 2<sup>nd</sup> Annual Update 2017. <https://www1.nyc.gov/assets/doh/downloads/pdf/tcny/tcny-2020-annual-report2.pdf>. Accessed December 6, 2020.
- 5 Mayor’s Office of ThriveNYC. Mental Health for All: ThriveNYC Progress Report – Winter 2019/2020. <https://thrivenyc.cityofnewyork.us/wp-content/uploads/2020/03/ThriveNYC-ProgressReport-FY19.pdf>. Accessed December 6, 2020.

**Team Roles:**

Clara Geffs (Background), Vivek Kantamani (Description of the Population, Figures), Adriana Kulusic-Ho (Results), Mary Pruden (Definitions, Methods)