



Epi Data Brief

New York City Department of Health and Mental Hygiene

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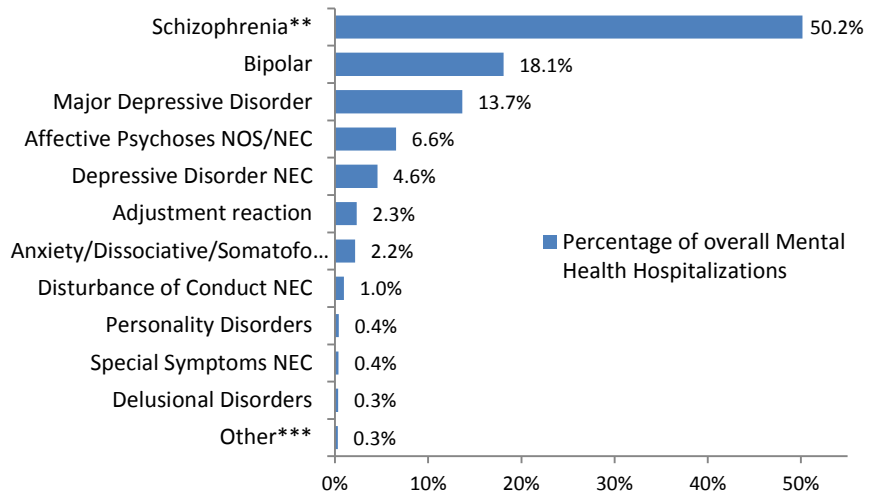
Adult Psychiatric Hospitalizations in New York City

In 2012, an estimated 239,000 adults living in New York City (NYC) (4%) had a Serious Mental Illness (SMI).^{1†} Many individuals with mental illness do not need to be hospitalized, however, hospitalization may help to stabilize an individual who is experiencing worsening symptoms. A psychiatric hospitalization is defined as an overnight stay or longer in a psychiatric inpatient unit (excluding emergency room visits without an inpatient admission) for individuals with behaviors or symptoms that are likely to result in harm to themselves or others. Variations in hospitalization rates among different populations may reflect differences in rates of illness and other social and cultural factors. While psychiatric hospitalizations can indicate need or burden of mental illness, it likely also reflects the adequacy of non-hospital care and access.

Patterns of psychiatric hospitalizations among New Yorkers with mental illness

- The rate of psychiatric hospitalization among NYC adults remained stable from 2004 to 2013. In 2013, the hospitalization rate was 676 per 100,000 adults.
- In 2013, over 31,400 individuals accounted for almost 45,000 psychiatric hospitalizations in acute care NYC hospitals.
- About 1 in 11 adults (9%) who were hospitalized for mental illness in NYC in 2013 had three or more psychiatric hospitalizations during the calendar year. Psychiatric hospitalizations among these adults accounted for a quarter (26%) of all psychiatric hospitalizations.
- Schizophrenia, bipolar and major depressive disorder made up 82% of hospitalizations for mental illness, with schizophrenia comprising the majority.
- Approximately 43% of hospitalizations for a psychiatric condition also indicated a co-occurring substance use disorder.
- The median length of stay among adults who were hospitalized for mental illness in NYC was 11 days.
- Medicaid was the source of reimbursement for more than half (58%) of psychiatric hospitalizations in NYC, while Medicare accounted for almost a quarter of it. The median length of stay of psychiatric hospitalizations for the Medicaid population (11 days) did not differ from the overall adult population. The Medicare population had a slightly higher median length of stay (13 days).

Primary psychiatric diagnoses* among New York City adults hospitalized for mental illness, 2013



*Primary Diagnosis is the condition recorded to be chiefly responsible for the admission of the patient to the hospital for care.

**Schizophrenia includes diagnoses of Schizophrenia and Psychosis Not Otherwise Specified.

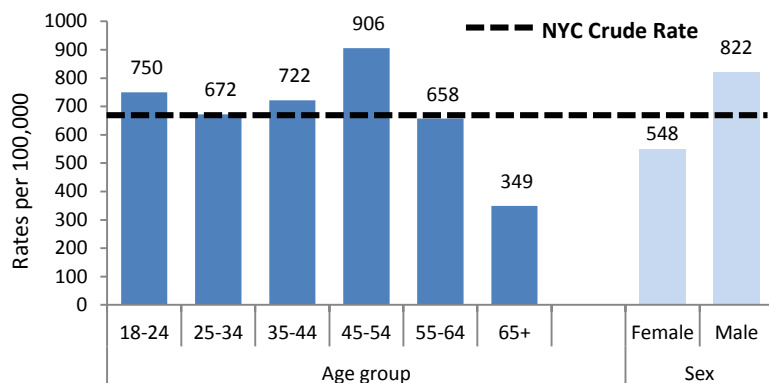
***Other include: diagnoses of other nonorganic psychoses, physiological malfunction arising from mental factors, sexual and gender identity disorders, acute reaction to stress, disturbance of conduct, and hyperkinetic syndrome of childhood.

Source: Statewide Planning and Research Collaborative System 2013. Data prepared by DOHMH Division of Mental Hygiene.

Definition: †Adults with serious mental illness (SMI) currently or at some time during the past year had a diagnosable mental, behavioral or emotional disorder (excluding developmental and substance use disorders) that resulted in functional impairment that substantially interfered with or limited functioning in one or more major life activities.

Demographic characteristics of adults hospitalized for psychiatric stays

Adult psychiatric hospitalization rates by age and sex, New York City, 2013



Source: Statewide Planning and Research Collaborative System 2013. Data prepared by DOHMH Division of Mental Hygiene.

- The rate of psychiatric hospitalization was highest among adults ages 45 to 54 (906 per 100,000) compared with other age groups.
- The psychiatric hospitalization rate among individuals ages 65 years and older (349 per 100,000) was 48% lower than the overall NYC psychiatric hospitalization rate (676 per 100,000 adults).
- The rates of hospitalization for schizophrenia and major depressive disorder were highest among adults ages 45 to 54 (469 and 128 per 100,000, respectively) compared with other age groups.
- Among adults with schizophrenia, the psychiatric hospitalization rate was almost twice as high among men than among women (451 vs. 241 per 100,000).

Adult psychiatric hospitalization rates by sex and major diagnosis, New York City, 2013

| Diagnosis | Crude rate per 100,000 adults | |
|---------------------------|-------------------------------|------|
| | Female | Male |
| Schizophrenia** | 241 | 451 |
| Bipolar | 114 | 132 |
| Major Depressive Disorder | 90 | 95 |
| Other | 103 | 144 |

**Schizophrenia includes diagnoses of Schizophrenia and Psychosis Not Otherwise Specified
Source: Statewide Planning and Research Collaborative System 2013. Data prepared by DOHMH Division of Mental Hygiene.

Note: All rates are crude unless otherwise noted.

Data sources:

Statewide Planning and Research Collaborative System (SPARCS) 2013: SPARCS is an administrative database of all hospital discharges reported by New York State (NYS) hospitals to the NYS Department of Health. Diagnoses are coded according to the International Statistical Classification of Diseases and Related Health Problems-9th Revision framework. All data presented in this report are limited to NYC residents ages 18 years old and older who had a hospitalization for a psychiatric condition (3 digit ICD-9 codes : 295, 296, 297, 298, 300, 301, 302, 306, 307, 308, 309, 311, 312, 313, 314 excluding ICD-9 30252).

NYC Department of Health and Mental Hygiene Population Estimates modified from US Census Bureau intercensal population estimates 2000-2013, updated August 8, 2014, were used for denominators in rate calculations.

American Community Survey (ACS) 2009-2013 Neighborhood poverty is based on ZIP code and is defined as the percentage of residents with incomes below 100% of the Federal Poverty Level, per ACS 09-13, in four groups: low (<10%), medium (10%-<20%), high (20%-<30%), and very high (>=30%).

References:

¹Norman C, Goldmann E, Staley B, Duchon R. Serious Mental Illness among New York City Adults. *NYC Vital Signs* 2015, Volume 14, No. 2; 1-4.

²Snowden LR, Hastings JF, Alvidrez J. Over-representation of black Americans in psychiatric inpatient care. *Psychiatr Serv* 2009; 60(6): 779-85.

Comment: Due to concerns about the reliability of race/ethnicity data in SPARCS,¹ those data are not reported here. Data from the Community Health Survey indicate that the prevalence of Serious Mental Illness is lower among Blacks (1%) and Asians (1%) than among Whites (5%) or Hispanics (7%). Yet, national studies show that Blacks are twice as likely as Whites to be hospitalized for mental illness.² These differences could be driven by institutional, structural and community factors that differentially impact these various groups. Consideration of race in addition to poverty is important for understanding population patterns. The New York State Department of Health is taking steps to improve the quality of race/ethnicity data collection. In addition, the New York City Department of Health and Mental Hygiene is developing a methodology to impute race/ethnicity. We hope to report further analysis in future publications.

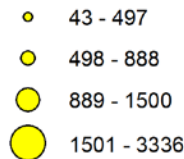
¹The New York State Department of Health identified patient's race and ethnicity in both 2012 SPARCS records and Medicaid enrollment forms. Concordance rates varied significantly across hospitals: among 22 of 62 New York City hospitals, less than 50% of matched patients' race was consistent in both data sets. (http://www.health.ny.gov/statistics/sparcs/reports/race_eth/).

Geographic and economic characteristics of psychiatric hospital stays (age adjusted)

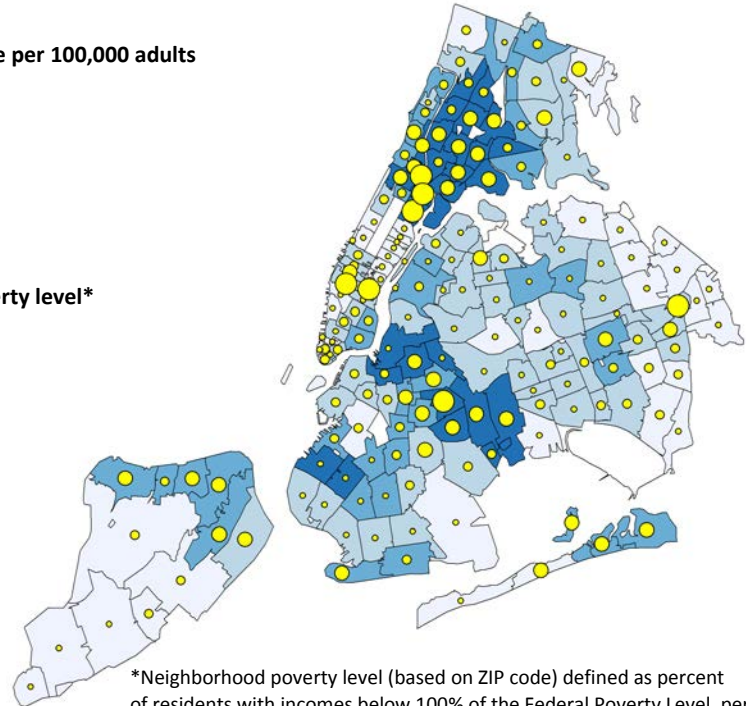
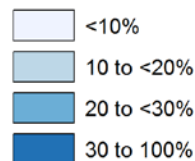
- Psychiatric hospitalization rates differed by geographic area in NYC. The highest rates (more than 1,500 per 100,000 adults) were concentrated in East and Central Harlem, Chelsea, Gramercy Park, Queens Village, and Ocean Hill. Some of these high rates could be explained, in part, by the presence of homeless shelters and mental health residential programs in these areas.
- The psychiatric hospitalization rate was lowest among Queens residents (508 per 100,000 adults).
- The psychiatric hospitalization rate among adults living in the highest poverty areas was higher (1,001 cases per 100,000 adults) than the lowest poverty areas (399 cases per 100,000).

Adult psychiatric hospitalization rates by neighborhood poverty level* and modified Zip Code Tabulation Area (ZCTA)** in New York City, 2013

Hospitalization rate per 100,000 adults



Neighborhood poverty level*



*Neighborhood poverty level (based on ZIP code) defined as percent of residents with incomes below 100% of the Federal Poverty Level, per American Community Survey 2009-2013, in four groups: low (<10%), medium (10 %-< 20%), high (20 %-< 30%), and very high (>=30%).

**ZIP Code Tabulation Areas (ZCTA) are generalized areal representations of the United States Postal Service (USPS) ZIP Code service areas. Modified ZCTA: some ZCTA's with low population count are merged together to match population denominators.

Source: Statewide Planning and Research Collaborative System, 2013 and American Community Survey, 2009-13

30- and 90-day readmissions rates

It is not uncommon for individuals who have been hospitalized for mental illness to be hospitalized again within a 30-day period after discharge. Psychiatric hospital readmission rates within 30 days of discharge are considered an indicator of the quality of mental health treatment.

- In 2013 in NYC, the rate of psychiatric hospitalization readmissions within 30 days to any NYC hospital was 13%. The rate of readmission within 90 days was 22%.
- In 2013, rates of readmissions within 90 days to a NYC hospital were highest for hospitalizations that had a primary diagnosis of Schizophrenia (25%) or Bipolar Disorder (22%) followed by hospitalizations with Major Depressive Disorder (16%).
- Adults between ages 30 and 44 had the highest 30-day readmission rate (15%), while adults 65 years and older had the lowest readmission rate (8%).

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MORE New York City Health Data and Publications

- To see additional data related to this Brief, visit www1.nyc.gov/assets/doh/downloads/pdf/epi/datatable71.pdf
- Visit EpiQuery, the Health Department's online, interactive health data system at nyc.gov/health/EpiQuery

Interactive tools and data publications at nyc.gov/health/data