

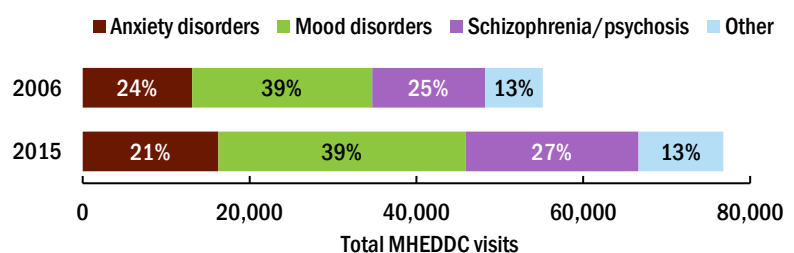
## Mental Health Emergency Department Visits among New York City Adults, 2015

Emergency department (ED) utilization in New York City (NYC) has risen in the past decade. Patients who are treated in the ED and discharged directly to the community may be presenting to the ED due to barriers to appropriate and relevant community care. These ED visits are costly and potentially preventable. In 2015, 68% of mental health-related visits to the ED were treated and discharged to the community (MHEDDC visits); the remaining 32% were transferred to inpatient hospitalization. All 79,796 MHEDDC visits made in 2015 were made by 51,733 adults. This data brief examines changes in ED visits between 2006 and 2015, describes the demographic characteristics of the population being treated and discharged to the community, and identifies high utilizers (five or more MHEDDC visits in 2015), who likely need ongoing services and supports.

### Changes in mental health emergency department visits resulting in discharge to the community between 2006 and 2015

- Between 2006 and 2015, the number of MHEDDC visits increased by 39% (from 55,167 to 76,796). The rate of MHEDDC visits increased from 885 to 1,141 per 100,000 adults.
- Men made 49% of MHEDDC visits in 2006, increasing to 55% in 2015.
- In 2006, adults ages 35 to 44 comprised the highest proportion of MHEDDC visits (26%), and adults ages 25 to 34 the second highest (23%). In 2015, the order reversed (20% of visits among ages 35 to 44, vs. 26% of visits among ages 25 to 34). In both years, the proportion of MHEDDC visits was lowest among adults ages 65 and older (5% and 7% in 2006 and 2015, respectively).
- Between 2006 and 2015, the percentage of MHEDDC visits with a substance use-related secondary diagnosis doubled from 7% to 14%.

**Mental health emergency department visits resulting in discharge to the community (MHEDDC), by primary diagnosis, New York City, 2006 and 2015**



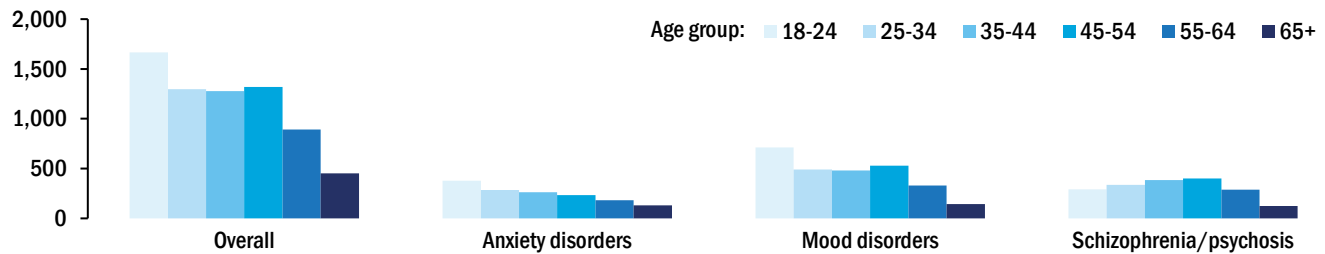
*Source: Statewide Planning and Research Collaborative System 2006 and 2015*

### Characteristics of mental health emergency department visits resulting in discharge to the community, 2015

- Anxiety disorder, mood disorder, and schizophrenia/psychosis diagnoses comprised 21%, 39%, and 27% of MHEDDC visits, respectively.
- Adults ages 18 to 24 had the highest rate of anxiety disorder visits (378 per 100,000 adults) and mood disorder visits (712 per 100,000 adults). Rates due to anxiety disorders were lower among older age groups, while the rate for schizophrenia/psychosis visits was highest among adults ages 45 to 54 (401 per 100,000 adults), compared with other age groups.
- In 2015, adults ages 18 to 24 years had the highest rate of overall MHEDDC visits (1,667 per 100,000 adults). Adults ages 65 and older had the lowest rate (454 per 100,000 adults). Men had a higher rate of MHEDDC visits than women (1,344 per 100,000 men vs. 963 per 100,000 women).
- Men had more than twice the rate of schizophrenia/psychosis diagnoses than women, which accounted for 33% of MHEDDC visits among men, compared with 19% among women.
- Anxiety disorder accounted for 28% of visits by women, compared with 16% of visits by men.
- Medicaid was the source of reimbursement for nearly half (48%) of MHEDDC visits, and one in five (20%) were self-pay (uninsured).

## Mental health emergency department visits resulting in discharge to the community, by primary diagnosis and age group, New York City, 2015

Crude rate per 100,000 adults

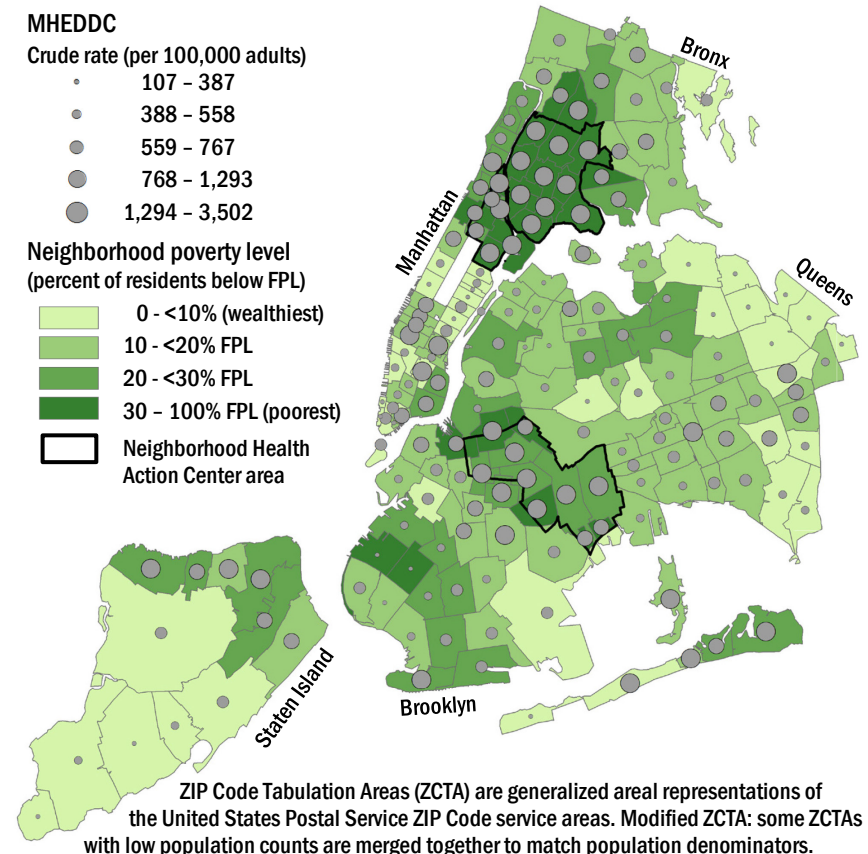


Source: Statewide Planning and Research Collaborative System 2015

## Geographic characteristics of mental health emergency department visits resulting in discharge to the community

- In 2015, neighborhoods with very high poverty had the highest rate of MHEDDC visits (1,847 per 100,000 adults), while neighborhoods with low poverty had the lowest rate (650 per 100,000 adults).
- Among the five boroughs, the Bronx had the highest rate of MHEDDC visits (1,634 per 100,000 adults), whereas Queens had the lowest rate, less than half that of the Bronx (806 per 100,000 adults).
- Neighborhoods with high poverty had the highest rates of MHEDDC visits for schizophrenia/psychosis, anxiety disorders, and mood disorders.
- NYC Department of Health and Mental Hygiene Neighborhood Health Action Centers are established in areas with high rates of chronic disease and premature death, to promote health equity, provide resources, and reduce health disparities at the neighborhood level. In these areas, rates of MHEDDC visits were more than double the rate in the rest of the city (1,582 per 100,000 adults compared with 744 per 100,000 adults).

### Mental health emergency department visits discharged to the community (MHEDDC) and neighborhood poverty level, by modified ZIP Code Tabulation Area, New York City, 2015



Neighborhood poverty level: Percent of neighborhood residents (based on ZIP code) with income below the Federal Poverty Level (FPL), per American Community Survey 2012-2016.

Neighborhood Health Action Centers have been established by the Health Department to promote health equity and reduce health disparities at the neighborhood level in the South Bronx, East and Central Harlem, and North and Central Brooklyn, neighborhoods with high rates of chronic disease and premature death.

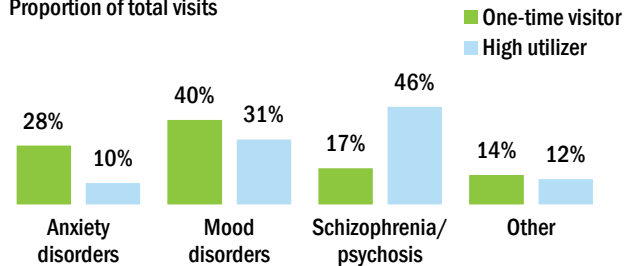
Sources: Statewide Planning and Research Collaborative System 2015; American Community Survey, 2012-2016

## Mental health emergency department visits resulting in discharge to the community among high utilizers

- Of the 51,733 adults who made all MHEDDC visits in 2015, one in five (21%) made more than one visit.
- Adults who made two or more MHEDDC visits in 2015 comprised 47% of all MHEDDC visits.
- In 2015, high utilizers (five or more MHEDDC visits in a year) comprised 17% of all MHEDDC visits, totaling 13,069 visits.
- Men comprised 68% percent of high utilizer MHEDDC visits, compared with 50% of one-time visits.
- Among high utilizer MHEDDC visits, 46% were for a schizophrenia/psychosis diagnosis and 31% were for a mood disorder diagnosis, whereas 17% of one-time visits were for a schizophrenia/psychosis diagnosis, and 40% were for a mood disorder diagnosis.

### Primary diagnoses of mental health emergency department visits resulting in discharge to the community among one-time visitors and high utilizers (5 or more visits), New York City, 2015

Proportion of total visits



Source: Statewide Planning and Research Collaborative System 2015

- Medicaid covered 56% of high utilizer visits, compared with 43% for one-time visits. About 16% of one-time visits were covered by commercial/private insurance, compared with only 3% of high utilizer visits.

#### Data Sources:

**Statewide Planning and Research Collaborative System (SPARCS) 2006, 2015:** administrative database of all emergency department visits reported by New York State (NYS) hospitals to the NYS Department of Health. All data presented in this report are limited to NYC residents ages 18 years old and older who had a ED visit at an NYC hospital and were discharged to home or self-care (routine discharge).

**NYC Department of Health and Mental Hygiene Population Estimates** modified from US Census Bureau intercensal population estimates 2000-2015, updated April 2017, were used for denominators in rate calculations.

**Note:** All rates are crude and include the entire population in the denominator.

#### Definitions:

**Mental health emergency department visit resulting in discharge to the community (MHEDDC),** defined as a visit to the emergency department for a psychiatric condition (ICD-9 codes: 295-298, 300-302, 306-309, 311-314, E95, V62.84, excluding 302.52; ICD-10 codes: F20-F52, F59-F63, F65, F68-F69, F90-F99, X71-X83, R45.1, R45.7, R45.851, T14.91, excluding F48.2) or a prescription refill with psychiatric secondary diagnosis (ICD-9 code V68.1, or ICD-10 code Z76.0, with secondary diagnosis as above), resulting in discharge to home or self-care (routine discharge). Unit of analysis is visit, not individual.

**Diagnosis categories:** Anxiety disorders category includes anxiety, dissociative, stress-related, somatoform, and other non-psychotic mental disorders. Mood disorders category includes depressive disorders, bipolar disorders, adjustment disorders and unspecified mood disorders. Schizophrenia/psychosis category includes delusional disorders, nonorganic psychoses, and schizophrenic/schizoaffective disorders. Other category includes special symptoms not elsewhere classified, disturbance of emotions, suicide attempt/self-harm, prescription refill, suicidal ideation, personality disorders, physiological malfunction arising from mental factors, and sexual and gender identity disorders.

**Neighborhood poverty:** Based on ZIP code and defined as percentage of residents with incomes below 100% of the federal poverty level (FPL), per American Community Survey 2012-2016, in four groups: low (<10% FPL), medium (10 %-< 20% FPL), high (20 %-< 30% FPL), and very high (≥30% FPL).

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New York City Department of Health and Mental Hygiene





# Epi Data Tables

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## Mental Health Emergency Department Visits among New York City Adults, 2015

### Data Tables

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### Data Sources

**Statewide Planning and Research Collaborative System (SPARCS) 2006, 2015:** administrative database of all emergency department visits reported by New York State (NYS) hospitals to the NYS Department of Health. All data presented in this report are limited to NYC residents ages 18 years old and older who had a ED visit at an NYC hospital and were discharged to home or self-care (routine discharge). Psychiatric conditions were defined using the psychiatric primary diagnosis (ICD-9 codes: 295-298, 300-302, 306-309, 311-314, E95, V62.84, excluding 302.52; ICD-10 codes: F20-F52, F59-F63, F65, F68-F69, F90-F99, X71-X83, R45.1, R45.7, R45.851, T14.91, excluding F48.2) or a prescription refill with psychiatric secondary diagnosis (ICD-9 code V68.1, or ICD-10 code Z76.0, with secondary diagnosis as above). Unit of analysis is visit, not individual.

**NYC Department of Health and Mental Hygiene Population Estimates:** modified from US Census Bureau, intercensal population estimates 2000-2015, updated April 2017, were used for denominators in rate calculations.

**American Community Survey 2007-2011, 2012-2016:** Neighborhood poverty is based on ZIP code and is defined as the percentage of residents with incomes below 100% of the Federal Poverty Level, in four groups: low (<10% FPL), medium (10 %-< 20% FPL), high (20 %-< 30% FPL), and very high (>=30% FPL).

**Table 1. Overall emergency department visits resulting in discharge to the community and mental health emergency department visits resulting in discharge to the community, among adults, New York City, 2006 and 2015**

Source: Statewide Planning and Research Collaborative System (SPARCS) 2006, 2015, American Community Survey 2007-2011, 2012-2016

Counts, rates, and proportions of EDDC and MHEDDC visits	2006		2015	
Count of overall EDDC visits	1,601,056		2,309,677	
Count of MHEDDC visits	55,167		76,796	
Age adjusted rate of MHEDDC visits per 100,000 adults	879		1,161	
Crude rate of MHEDDC visits per 100,000 adults	885		1,141	
% of MHEDDC visits with substance use as a secondary diagnosis	7%		14%	
	Count	Percent	Count	Percent
<b>Sex</b>				
Women	27,958	51%	34,432	45%
Men	27,209	49%	42,361	55%
<b>Age group (years)</b>				
18-24	9,211	17%	13,463	18%
25-34	12,877	23%	19,676	26%
35-44	14,404	26%	15,084	20%
45-54	11,089	20%	14,668	19%
55-64	4,646	8%	8,795	11%
65+	2,940	5%	5,110	7%
<b>Primary diagnosis*</b>				
Anxiety disorders	13,112	24%	16,273	21%
Mood disorders	21,591	39%	29,637	39%
Schizophrenia/psychosis	13,528	25%	20,714	27%
Other	6,936	13%	10,172	13%
<b>Borough</b>				
Bronx	13,380	24%	17,692	23%
Brooklyn	15,420	28%	23,972	31%
Manhattan	11,888	22%	15,827	21%
Queens	11,007	20%	14,944	19%
Staten Island	3,472	6%	4,361	6%
<b>Neighborhood poverty level</b>				
0 to <10% of residents below FPL (wealthiest)	6,842	12%	8,149	11%
10 to <20% of residents below FPL	18,031	33%	25,319	33%
20 to <30% of residents below FPL	14,245	26%	22,545	29%
30 to 100% of residents below FPL (poorest)	15,936	29%	20,751	27%

\*Anxiety disorders category includes anxiety, dissociative, stress-related, somatoform, and other non-psychotic mental disorders. Mood disorders category includes depressive disorders, bipolar disorders, adjustment disorders and unspecified mood disorders. Schizophrenia/psychosis category includes delusional disorders, nonorganic psychoses, and schizophrenic/schizoaffective disorders. Other category includes special symptoms not elsewhere classified, disturbance of emotions, suicide attempt/self-harm, prescription refill, suicidal ideation, personality disorders, physiological malfunction arising from mental factors, and sexual and gender identity disorders.

**Table 2. Mental health emergency department visits resulting in discharge to the community, among adults, by gender, age group, borough, and neighborhood poverty level in New York City, 2015***Source: Statewide Planning and Research Collaborative System (SPARCS) 2015, American Community Survey 2012-2016*

	Visits (count)	Percent among total (column)	Crude rate per 100,000	Age-adjusted rate per 100,000
<b>Sex</b>				
Women	34,432	45%	963	995
Men	42,361	55%	1,344	1,339
<b>Age group (years)</b>				
18-24	13,463	18%	1,667	----
25-34	19,676	26%	1,296	----
35-44	15,084	20%	1,279	----
45-54	14,668	19%	1,320	----
55-64	8,795	11%	893	----
65+	5,110	7%	454	----
<b>Borough</b>				
Bronx	17,692	23%	1,634	1,630
Brooklyn	23,972	31%	1,187	1,200
Manhattan	15,827	21%	1,129	1,168
Queens	14,944	19%	806	838
Staten Island	4,361	6%	1,179	1,252
<b>Neighborhood poverty level</b>				
0 to <10% of residents below FPL (wealthiest)	8,149	11%	650	698
10 to <20% of residents below FPL	25,319	33%	978	1,002
20 to <30% of residents below FPL	22,545	29%	1,278	1,291
30 to 100% of residents below FPL (poorest)	20,751	27%	1,847	1,815

**Table 3. Payer source\* for mental health emergency department visits resulting in discharge to the community, among adults, New York City, 2015**

Source: Statewide Planning and Research Collaborative System (SPARCS) 2015

Payer source	Count	Percent
Medicaid/Medicaid HMO	37,090	48%
Medicare/Medicare HMO	12,720	17%
Blue Cross/Commercial/Private	8,946	12%
Self-pay	15,117	20%
Other**	2,923	4%

\*Per PSREIM code, which identifies the payer expected to pay the major portion of the bill

\*\*Other includes the following PSREIM categories: self-insured; CHAMPUS/VA; other government; workers compensation; no-fault; no charge; corrections - federal, state, or local; and other

**Table 4. Mental health emergency department visits resulting in discharge to the community, among adults, by sex, age group, neighborhood poverty level, and primary diagnosis\*, New York City, 2015***Source: Statewide Planning and Research Collaborative System (SPARCS) 2015, American Community Survey 2012-2016*

	Crude Rate per 100,000 adults			
	Anxiety disorders	Mood disorders	Schizophrenia/psychosis	Other
<b>Sex</b>				
Women	271	384	184	123
Men	209	504	448	183
<b>Age group (years)</b>				
18-24	378	712	292	286
25-34	284	491	337	183
35-44	261	481	383	154
45-54	233	528	401	158
55-64	181	330	289	92
65+	130	145	125	54
<b>Neighborhood poverty level</b>				
0 to <10% of residents below FPL (wealthiest)	168	251	151	80
10 to <20% of residents below FPL	212	374	268	124
20 to <30% of residents below FPL	267	481	363	167
30 to 100% of residents below FPL (poorest)	353	740	487	267

\*Anxiety disorders category includes anxiety, dissociative, stress-related, somatoform, and other non-psychotic mental disorders.

Mood disorders category includes depressive disorders, bipolar disorders, adjustment disorders and unspecified mood disorders.

Schizophrenia/psychosis category includes delusional disorders, nonorganic psychoses, and schizophrenic/schizoaffective disorders.

Other category includes special symptoms not elsewhere classified, disturbance of emotions, suicide attempt/self-harm, prescription refill, suicidal ideation, personality disorders, physiological malfunction arising from mental factors, and sexual and gender identity disorders.



**Table 5. Frequency of mental health emergency department visits resulting in discharge to the community, among adults, New York City, 2015**

Source: Statewide Planning and Research Collaborative System (SPARCS) 2015

Visits made	Adults (count)
1	40,704
2	6,504
3	2,033
4	979
5-9	1,181
10-19	252
20 or more	80

**Table 6. Characteristics of mental health emergency department visits resulting in discharge to the community, among adults with one visit, by sex, age group, primary diagnosis\*, payer source, borough, and neighborhood poverty level, New York City, 2015**

Source: Statewide Planning and Research Collaborative System (SPARCS) 2015, American Community Survey 2012-2016

	Visits (count)	Total visits	Percent of visits by one-time visitors (row)	Percent among one-time visitors (column)
<b>Sex</b>				
Women	20,530	34,432	60%	50%
Men	20,171	42,361	48%	50%
<b>Age group (years)</b>				
18-24	7,916	13,463	59%	19%
25-34	10,285	19,676	52%	25%
35-44	7,357	15,084	49%	18%
45-54	7,371	14,668	50%	18%
55-64	4,595	8,795	52%	11%
65+	3,180	5,110	62%	8%
<b>Primary diagnosis*</b>				
Anxiety disorders	11,434	16,273	70%	28%
Mood disorders	16,354	29,637	55%	40%
Schizophrenia/psychosis	7,108	20,714	34%	17%
Other	5,808	10,172	57%	14%
<b>Payer source</b>				
Medicaid/Medicaid HMO	17,603	37,090	47%	43%
Medicare/Medicare HMO	5,423	12,720	43%	13%
Blue Cross/Commercial/Private	6,592	8,946	74%	16%
Self-Pay	9,367	15,117	62%	23%
Other	1,719	2,923	59%	4%
<b>Borough</b>				
Bronx	8,795	17,692	50%	22%
Brooklyn	12,460	23,972	52%	31%
Manhattan	8,722	15,827	55%	21%
Queens	8,376	14,944	56%	21%
Staten Island	2,351	4,361	54%	6%
<b>Neighborhood poverty level</b>				
0 to <10% of residents below FPL (wealthiest)	4,712	8,149	58%	12%
10 to <20% of residents below FPL	13,700	25,319	54%	34%
20 to <30% of residents below FPL	11,880	22,545	53%	29%
30 to 100% of residents below FPL (poorest)	10,392	20,751	50%	26%

\*Anxiety disorders category includes anxiety, dissociative, stress-related, somatoform, and other non-psychotic mental disorders. Mood disorders category includes depressive disorders, bipolar disorders, adjustment disorders and unspecified mood disorders. Schizophrenia/psychosis category includes delusional disorders, nonorganic psychoses, and schizophrenic/schizoaffective disorders. Other category includes special symptoms not elsewhere classified, disturbance of emotions, suicide attempt/self-harm, prescription refill, suicidal ideation, personality disorders, physiological malfunction arising from mental factors, and sexual and gender identity disorders.

**Table 7. Characteristics of mental health emergency department visits resulting in discharge to the community, among high-utilizing<sup>+</sup> adults, by sex, age group, primary diagnosis\*, payer source, borough, and neighborhood poverty level, New York City, 2015**

Source: Statewide Planning and Research Collaborative System (SPARCS) 2015, American Community Survey 2012-2016

	Visits (count)	Total visits	Percent of visits by high utilizers <sup>+</sup> (row)	Percent among high utilizers <sup>+</sup> (column)
<b>Sex</b>				
Women	4,223	34,432	12%	32%
Men	8,846	42,361	21%	68%
<b>Age group (years)</b>				
18-24	1,711	13,463	13%	13%
25-34	3,432	19,676	17%	26%
35-44	3,242	15,084	21%	25%
45-54	2,653	14,668	18%	20%
55-64	1,415	8,795	16%	11%
65+	616	5,110	12%	5%
<b>Primary diagnosis*</b>				
Anxiety disorders	1,370	16,273	8%	10%
Mood disorders	4,042	29,637	14%	31%
Schizophrenia/psychosis	6,046	20,714	29%	46%
Other	1,611	10,172	16%	12%
<b>Payer source</b>				
Medicaid/Medicaid HMO	7,332	37,090	20%	56%
Medicare/Medicare HMO	3,168	12,720	25%	24%
Blue Cross/Commercial/Private	407	8,946	5%	3%
Self-Pay	1,811	15,117	12%	14%
Other	351	2,923	12%	3%
<b>Borough</b>				
Bronx	3,049	17,692	17%	23%
Brooklyn	4,263	23,972	18%	33%
Manhattan	2,768	15,827	17%	21%
Queens	2,354	14,944	16%	18%
Staten Island	635	4,361	15%	5%
<b>Neighborhood poverty level</b>				
0 to <10% of residents below FPL (wealthiest)	1,314	8,149	16%	10%
10 to <20% of residents below FPL	4,291	25,319	17%	33%
20 to <30% of residents below FPL	3,865	22,545	17%	30%
30 to 100% of residents below FPL (poorest)	3,589	20,751	17%	27%

\*Anxiety disorders category includes anxiety, dissociative, stress-related, somatoform, and other non-psychotic mental disorders. Mood disorders category includes depressive disorders, bipolar disorders, adjustment disorders and unspecified mood disorders. Schizophrenia/psychosis category includes delusional disorders, nonorganic psychoses, and schizophrenic/schizoaffective disorders. Other category includes special symptoms not elsewhere classified, disturbance of emotions, suicide attempt/self-harm, prescription refill, suicidal ideation, personality disorders, physiological malfunction arising from mental factors, and sexual and gender identity disorders.

+ High utilizer is defined as an adult with five or more MHEDDC visits in a year.