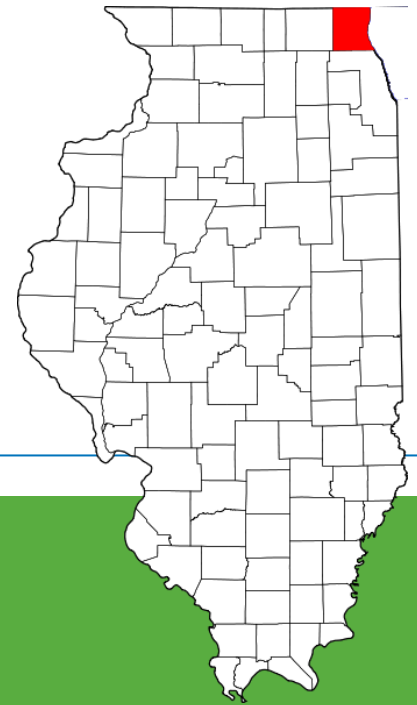




LakeCounty

Health Department and
Community Health Center

Executive Director, Tony Beltran, MBA



Behavioral Health in Lake County 2009-2011

Prepared December 2012 by the Lake County Health Department Assessment Team

For more information on the Lake County Health Department, the services it offers, or additional data questions, please refer to our website at health.lakecountyil.gov, call 847.984.5014, or email at HealthAssessment@lakecountyil.gov.

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Introduction

Mental Health and Behavioral Health

It is important to note that “mental health” and “mental illness” may be thought of as points on a continuum. Mental health (MH) refers to the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity. Mental illness refers collectively to all diagnosable mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning. Alzheimer’s disease exemplifies a mental disorder largely marked by alterations in thinking (especially forgetting). Depression exemplifies a mental disorder largely marked by alterations in mood. Attention-deficit/hyperactivity disorder exemplifies a mental disorder largely marked by alterations in behavior (over activity) and/or thinking (inability to concentrate). Alterations in thinking, mood, or behavior spawn a host of problems— patient distress, impaired functioning, or heightened risk of death, pain, disability, or loss of freedom.

Behavioral Health (BH) is being defined in this report as encompassing mental health, mental illness, substance abuse, and substance use disorders. It should be noted introductorily that mental illness and substance abuse often coexist and can have a causative relation.

Behavioral Health in Lake County

The 2007-2009 Behavioral Risk Factor Surveillance System asked Lake County residents, “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” Twenty-six percent (26.0%) responded by saying 1 to 7 days. Another 12.1% said that their mental health was not good for 8 to up

Days Mental Health not Good	Percent
None	61.9%
1 – 7 Days	26.0%
8 – 30 Days	12.1%

Illinois BRFSS, 2007-2009

to 30 days during the previous month. The responses from respondents for all five counties that boarder Cook County, the collar counties, responded 24.0% for 1 to 7 days and 12.8% for 8 to 30 days.

Methods

This report gathers data from two different sources. The first source is the Lake County Community Survey which was created for Lake County Health Department’s Community Themes and Strengths Assessment. This survey is comprised of 45-questions and was conducted during the months of September and October of 2011 to learn the opinions and perceptions about the health and quality of life in Lake County by individuals who live and/or work in Lake County. 2,703 were surveys completed, achieving a 95% Confidence Level with a +/- 1.9% Confidence Interval. There are 3 main parts to the survey. This report uses data from part two in which respondents were asked to rate various specific health issues on a continuum between “not a problem” to “major problem”. These ratings are broken out by the respondent’s own community and Lake County overall, however only Lake County overall data is used in this report.

The second source of data was the IDPH/Illinois Survey of Hospital Discharges, 2009-2011. This data combines both inpatient hospitalizations and outpatients. "Hospitalization" means the treatment of a person in an acute care hospital as an inpatient. A "person subject to involuntary admission" or "subject to involuntary admission" means: 1. a person with mental illness and who because of his or her illness is reasonably expected to inflict serious physical harm upon himself or herself or another in the near future; or 2. a person with mental illness and who because of his or her illness is unable to provide for his or her basic physical needs so as to guard himself or herself from serious harm. An outpatient is a patient who is not hospitalized for 24 hours or more but who visits a hospital, clinic, or associated facility for diagnosis or treatment. This report uses the term "hospital visit" to refer to both inpatients and outpatients for behavioral health diagnoses.

Lake County hospital visits were gathered for both inpatient and outpatient data from 2009-2011. To determine behavioral health (BH) diagnoses, the Clinical Classification Software (CCS) codes for ICD-9 were utilized. "The CCS is a diagnosis and procedure categorization scheme that can be employed in many types of projects analyzing data on diagnoses and procedures" (HCUP CCS. Healthcare Cost and Utilization Project (HCUP), August 2012). There were 12 different CCS codes used in this analysis (see Data Tables at the end of this report); however, only primary or principal diagnosis codes were used. The principal diagnosis is the condition established after study to be chiefly responsible for the patient's admission to the hospital.

Highlights

- Both the number of general hospital visits and the number of people who visited a hospital due to a BH condition increased from 2009-2011; however, the amount of BH diagnoses increased at a much higher rate (2.3% and 9.7% respectively).
- The number of hospital visits due to BH conditions comprised a little more than 3% of all principal diagnoses.
- The average age for a person who visited a hospital for a BH condition was 30.6 years old. This was, 12.5 years younger than the average age of a person with a hospital visit due to any diagnosis (43.1 years old).
- The CCS code with the most BH principal diagnoses from 2009-2011 was mood disorders. The total number of this diagnosis remained relatively constant, around 5,350 per year; however, the percent of mood disorders out of the total BH diagnoses decreased 12.3% during this time period. The second most commonly diagnosed CCS code due to a BH condition was alcohol-related disorders, comprising roughly 21% of all BH diagnoses.
- The number of principal diagnoses for intentional self-harm/suicide and intentional self-inflicted injury increased by 56.7%, the most of any BH condition from 2009-2011. The second highest increase over the same time period was for anxiety disorders, 30.4%.
- Women had more hospital visits than men due to only 3 BH conditions: anxiety disorders, mood disorders and miscellaneous disorders. Regardless, these 3 conditions comprised over 55% of all BH hospital visit diagnoses.
- The number of hospital visits due to BH conditions for Asians increased by 24.7% from 2009-2011. Hospital visits due to a BH condition also increased for White non-Hispanic people (7.8%), African American people (0.3%) and Persons of Hispanic or Latino Origin (2.3%), but at slower rates.
- Men and women are evenly split as a total of BH diagnoses with men having slightly more hospital visits at 50.8% of the time.

Details

General

The amount of hospital visits due to BH conditions increased 9.7%, from 12,471 to 13,812 between 2009-2011. Despite an increase in the total number of hospital visits each year, the percent that were principally for BH conditions increased from 3.1% to 3.4%. Of the 12 CCS codes for BH condition hospital visits, the top five comprise over 91% of the total diagnoses (mood disorders, alcohol-related disorders, anxiety disorders, Schizophrenia and other psychotic disorders, and substance-related disorders).

Demographics

Race/Ethnicity

White, non-Hispanic residents make up the majority of Lake County's population (64.8%)¹, and therefore account for about 67% of hospital visits between 2009 and 2011. This rate is comparable to BH condition hospital visits (average of 68.6%). African Americans make up 7.4%¹ of the county population, but account for 10.3% of all hospital visits and 13.4% of BH hospital visits. Persons of Hispanic or Latino Origin comprise 20.3%¹ of the Lake County population but show an opposite trend of African Americans by comprising an average of 14.8% of hospital visits and an average of 10.2% of BH condition hospital visits. Asian persons make up 6.6%¹ of the Lake County population, but comprise only 1.2% of hospital visits due to a BH condition.

Amongst White, non-Hispanic residents of Lake County, principal diagnoses for intentional self-harm/suicide and intentional self-inflicted injury increased the most from 69 in 2009 to 157 in 2011, a 56.1% increase. This same diagnosis was the largest increase for both African Americans (18 in 2009 to 36 in 2011, 50.0% increase) and persons of Hispanic or Latino Origin (9 in 2009 to 20 in 2011, 55.0% increase). There are only four BH conditions in which persons of Hispanic or Latino Origin had more hospital visits than African Americans: anxiety disorders, impulse control disorders, alcohol-related disorders and miscellaneous disorders.

Sex

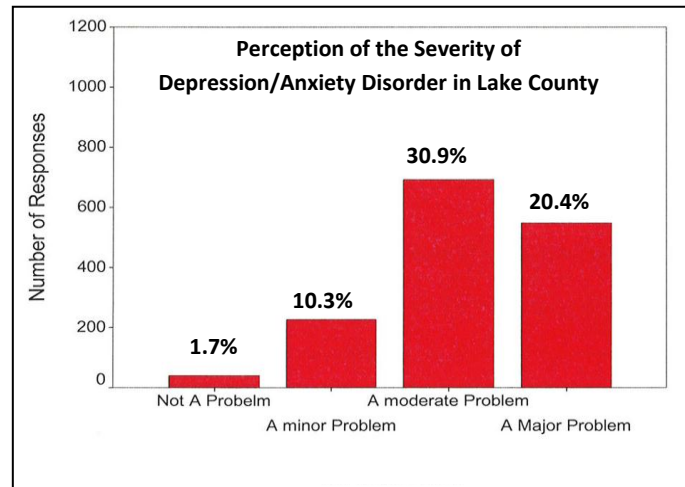
Men and women had hospital visits due to BH conditions at about the same rate (average of 50.8% male from 2009-2011), albeit for different diagnoses. Patients who are diagnosed with miscellaneous disorders (e.g., eating, pregnancy, and dissociative disorders), anxiety disorders and mood disorders are primarily female (average of 76.9%, 59.2% and 55.3% from 2009-2011). The rest of the BH conditions are diagnosed to a preponderance of male patients. The highest percentage of BH hospital visit diagnoses for male patients from 2009-2011 were disorders usually diagnosed in infancy (average of 75.6% male) followed by impulse control disorders (average of 74.9% male) and alcohol-related disorders (average of 63.6% male).

¹ - U.S. Census Bureau: State and County QuickFacts, 2011.

Most Common Behavioral Health Diagnoses

Mood Disorders

Mood disorders include depression, manic disorder and bipolar disorder. This diagnosis accounted for 40.9% of all BH condition hospital diagnoses from 2009-2011. While still the most diagnosed condition, there was a dip in the percent of mood disorders diagnosed out of the total BH diagnoses, a decline of 12.3% during this time period. Despite a decline in the number of White, non-Hispanics (-5.2%) and Persons of Hispanic or Latino Origin (-21.9%) diagnosed with mood disorders, the number of African Americans diagnosed stayed relatively constant between 2009 and 2011 (about 665 per year).



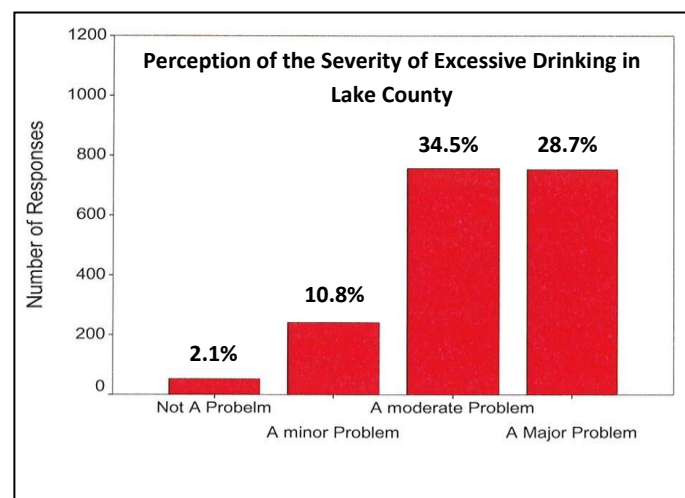
Lake County Community Survey, 2011

Anxiety disorders

Anxiety disorders include panic, hysteria, phobia and stress. Between 2009 and 2011, the number of principal diagnoses for anxiety disorder increased by 30.4%, from 1,377 to 1,979. This BH condition was the principal diagnosis for mainly women, an average of 59.2% of the time during that period. Of hospital visits due to anxiety disorders, 15.9% were for persons of Hispanic or Latino Origin, the second largest percentage of any BH condition for this population. This rate stands in stark contrast to the 12.4% of African Americans with hospital visits due to anxiety disorders.

Alcohol-Related Disorders

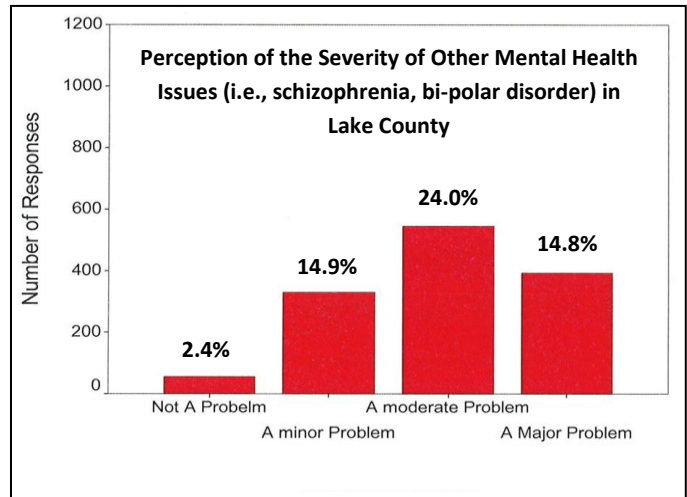
Between 2009 and 2011, the amount of alcohol-related disorders as the principal diagnosis increased by 11.3%, from 2,581 to 2,911. During that time, the majority of those with hospital visits due to this condition were White, non-Hispanic people (average of 75.9%). The largest subgroup was White, non-Hispanic men, accounting for an average of 46.3% of all alcohol-related disorder hospital visits. The average age of a patient with a hospital visit due to an alcohol-related disorder as the principal diagnosis was 42.4 years old, almost 12 years older than the average age for all other BH conditions (30.6 years old).



Lake County Community Survey, 2011

Schizophrenia and other psychotic disorders

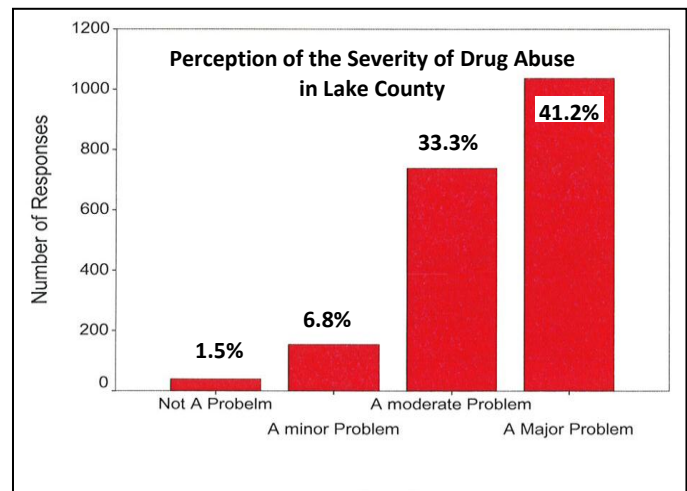
Hospital visits due to schizophrenia and other psychotic disorders as a principal diagnosis modestly increased from 2009-2011 by 2.8%. In 2009, the 1,148 hospital visits were enough to make this condition the fourth most diagnosed BH condition. By 2011, the 1,181 hospital visits put schizophrenia and other psychotic disorders as the fifth most recurrent BH condition behind substance-related disorders. The average age of a patient with a hospital visit due to schizophrenia and other psychotic disorders was 43.2 years old, the oldest average age of any BH condition. Between 2009 and 2011, this condition was the principal diagnosis in predominantly men (58.0%) and White, non-Hispanic people (58.1%). However, 25.3% of hospital visits were for African Americans, the second largest percentage of any BH condition for this population.



Lake County Community Survey, 2011

Substance-related disorders

Hospital visits due to substance-related disorders as a principal diagnosis increased from 951 in 2009 to 1,206 in 2011, a 21.1% change. The percentage of persons of Hispanic or Latino Origin who were had hospital visits due to substance-related disorders increased 51.1% over this time frame. Despite this increase, the largest population with hospital visits was White, non-Hispanics, comprising an average of 73.2%. Similar to other BH conditions, males were hospitalized and diagnosed more frequently than women, 58.1% of the time; however, there was an 8.1% decrease in the number of men and a 10.7% increase in the number of women with hospital visits due to this principal diagnosis from 2009 to 2011.



Lake County Community Survey, 2011

Data Tables

CCS Codes and Diagnosis Categories

CCS Code	Diagnosis Category
650	Adjustment disorders
651	Anxiety disorders
652	Attention-deficit, conduct, and disruptive behavior disorders
655	Disorders usually diagnosed in infancy, childhood, or adolescence including pervasive development disorders, tic disorders, and elimination disorders
656	Impulse control disorders, not elsewhere classified
657	Mood disorders
658	Personality disorders
659	Schizophrenia and other psychotic disorders
660	Alcohol-related disorders
661	Substance-related disorders
662	Suicide and intentional self-inflicted injury
670	Miscellaneous disorders , including eating disorders, mental disorders in pregnancy, dissociative disorders, factitious disorders, sleep disorders, and somatoform disorders

Hospital visits due to a Behavioral Health Principal Diagnosis

CCS Code	2009	2010	2011	% Change 2009-2011
650	181	177	165	-9.7%
651	1,377	1,605	1,979	30.4%
652	269	255	335	19.7%
655	38	47	37	-2.7%
656	64	69	61	-4.9%
657	5,425	5,315	5,351	-1.4%
658	28	33	36	22.2%
659	1,148	1,150	1,181	2.8%
660	2,581	2,753	2,911	11.3%
661	951	1,088	1,206	21.1%
662	101	192	233	56.7%
670	308	385	317	2.8%
TOTAL	12,471	13,069	13,812	9.7%

Total Hospital Visits by Year

	2009	2010	2011	% Change 2009-2011
TOTAL	399,856	406,094	409,248	2.3%

Total Hospital Visits by Race/Ethnicity

Race/Ethnicity	Hospital Visits					
	2009		2010		2011	
	Number	Percent	Number	Percent	Number	Percent
White non-Hispanic	269,245	67.3%	276,158	68.0%	275,485	67.3%
African American	41,802	10.5%	41,018	10.1%	41,932	10.2%
Persons of Hispanic or Latino Origin	61,712	15.4%	60,366	14.9%	57,659	14.1%
Total Hospital Visits	399,856		406,094		409,248	

Hospital Visits due to a Behavioral Health Principal Diagnosis by Race/Ethnicity

Race/Ethnicity	Hospital Visits due to BH Conditions					
	2009		2010		2011	
	Number	Percent	Number	Percent	Number	Percent
White non-Hispanic	8,614	69.1%	9,038	69.2%	9,341	67.6%
African American	1,800	14.4%	1,661	12.7%	1,806	13.1%
Persons of Hispanic or Latino Origin	1,275	10.2%	1,411	10.8%	1,305	9.4%
Total Hospital Visits	12,471		13,069		13,812	

Total Hospital Visits by Sex

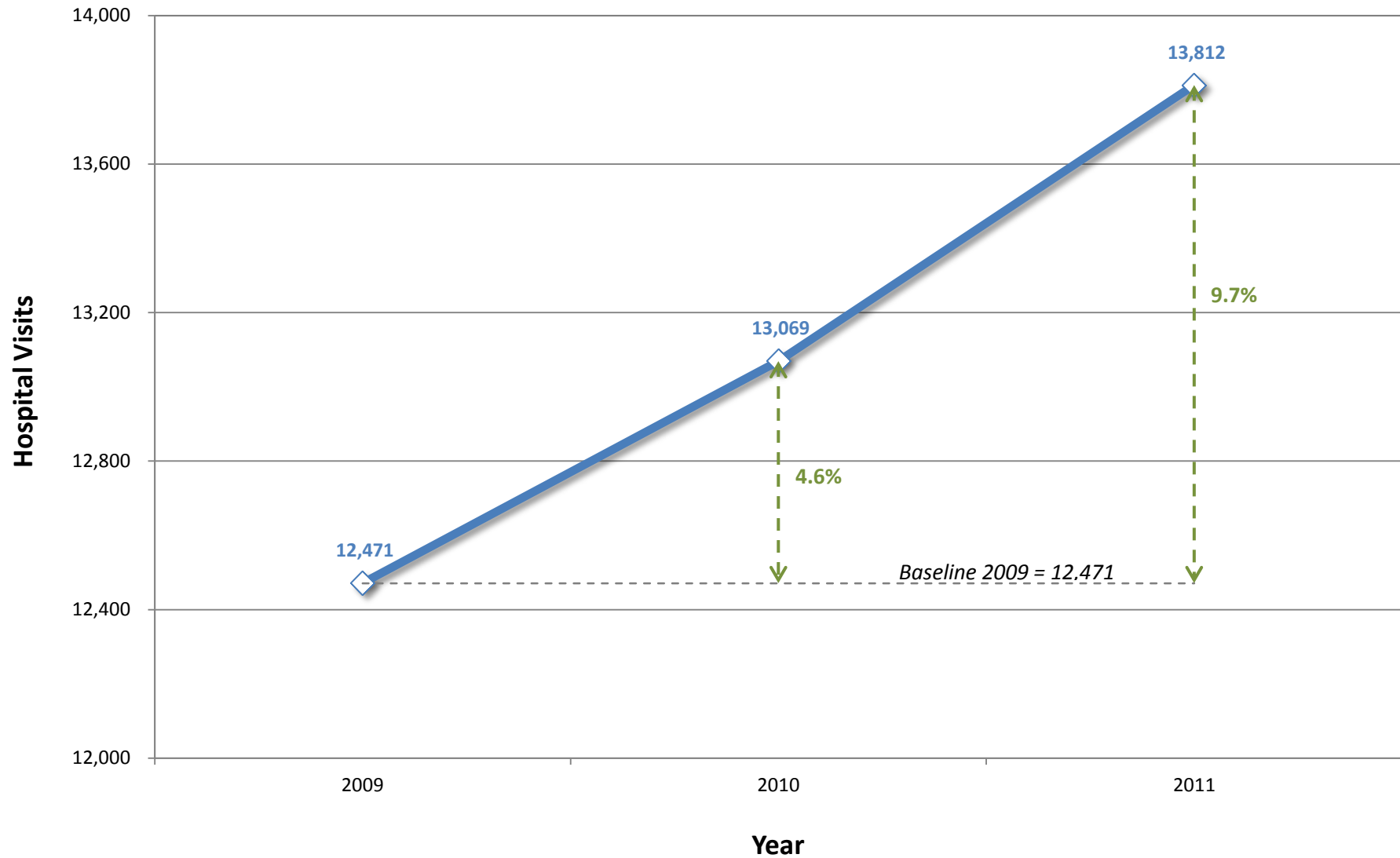
	2009				2010				2011			
	Male		Female		Male		Female		Male		Female	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
TOTAL	172,528	43.1%	227,328	56.9%	174,891	43.1%	231,203	56.9%	175,407	42.9%	233,841	57.1%

Hospital Visits due to a Behavioral Health Principal Diagnosis by Sex

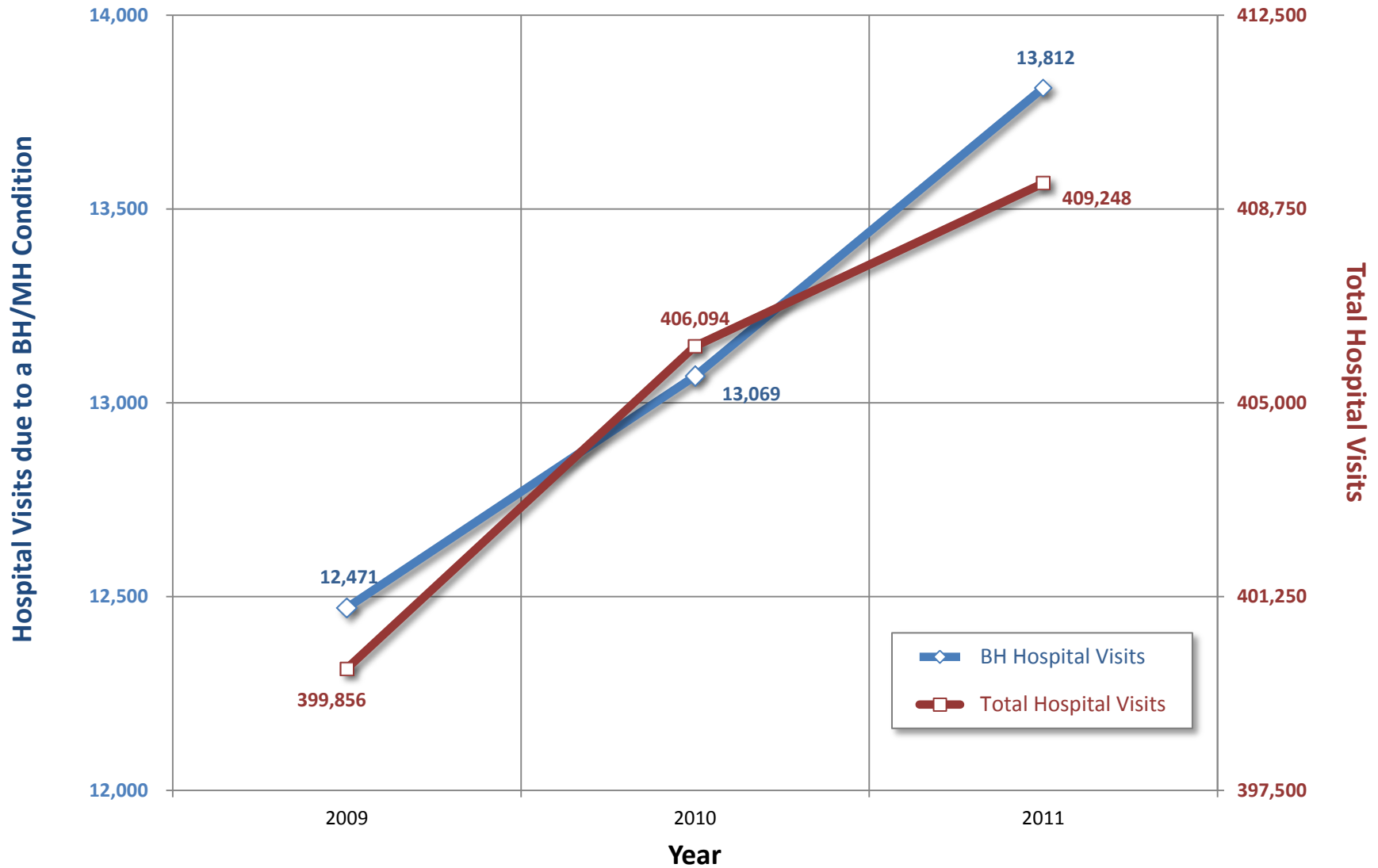
CCS Code	2009				2010				2011			
	Male		Female		Male		Female		Male		Female	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
650	93	51.4%	88	48.6%	88	49.7%	89	50.3%	81	49.1%	84	50.9%
651	549	39.9%	828	60.1%	638	39.8%	967	60.2%	849	42.9%	1,130	57.1%
652	168	62.5%	101	37.5%	164	64.3%	91	35.7%	213	63.6%	122	36.4%
655	29	76.3%	9	23.7%	39	83.0%	8	17.0%	25	67.6%	12	32.4%
656	50	78.1%	14	21.9%	48	69.6%	21	30.4%	47	77.0%	14	23.0%
657	2,487	45.8%	2,938	54.2%	2,393	45.0%	2,922	55.0%	2,315	43.3%	3,036	56.7%
658	14	50.0%	14	50.0%	21	63.6%	12	36.4%	18	50.0%	18	50.0%
659	668	58.2%	480	41.8%	664	57.7%	486	42.3%	685	58.0%	496	42.0%
660	1,653	64.0%	928	36.0%	1,747	63.5%	1,006	36.5%	1,842	63.3%	1,069	36.7%
661	584	61.4%	367	38.6%	609	56.0%	479	44.0%	685	56.8%	521	43.2%
662	57	56.4%	44	43.6%	107	55.7%	85	44.3%	137	58.8%	96	41.2%
670	85	27.6%	223	72.4%	82	21.3%	303	78.7%	65	20.5%	252	79.5%
TOTAL	6,437	51.6%	6,034	48.4%	6,600	50.5%	6,469	49.5%	6,962	50.4%	6,850	49.6%

Charts

Hospital Visits due to a Behavioral Health Principal Diagnosis



Total Hospital Visits and Hospital Visits due to a Behavioral Health Principal Diagnosis



Hospital Visits due to a Behavioral Health Principal Diagnosis by CCS Code

