

# ACUTE CARE HOSPITAL UTILIZATION TRENDS IN MASSACHUSETTS FY2009- 2012

MASSACHUSETTS RESIDENTS

METRO SOUTH



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# Introduction

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The Center for Health Information and Analysis (CHIA) is publishing these inpatient, emergency department, and observation stay utilization statistics of Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in Hospital Fiscal Year (FY) 2009 through 2012. In addition to a statewide report, 8 regional analyses were conducted based on combined Hospital Service Areas.

Each report includes demographic information for the region based on data from the American Community Survey. Differences in utilization may be driven by regional demographics such as age, race, ethnicity, and income.

These charts and tables can be used in conjunction with the associated data books. CHIA will monitor trends outlined in this report and update with additional years of data as it becomes available.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer.

To learn more about the data and process used in the development of this report, please see the technical appendix. To see the statewide analysis, or other regions, please go to <http://www.chiamass.gov/hospitalutilization>.

# REGIONAL REPORTING

## METRO SOUTH

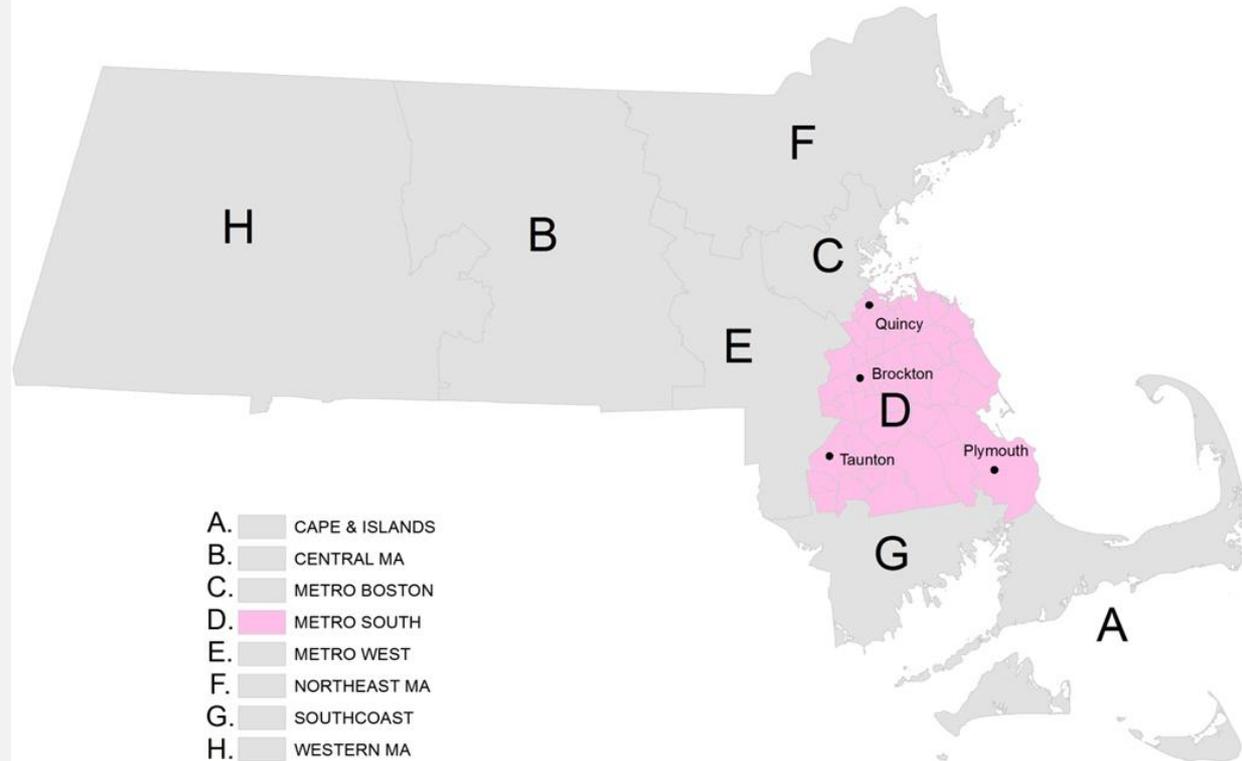


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# Metro South

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# Key Findings for Metro South\*

## Regional Demographics

- Metro South had a similar demographic profile compared to statewide, but had one of the lowest proportions of individuals identified as Hispanic or Latino at 3.5% compared to statewide at 9.6%.
- While Metro South had the same mean household income as the statewide average, the region's poverty level of 7.0% was lower than the statewide poverty level of 9.6%.

## Acute Hospital Utilization

- Medicaid observation stay discharges increased by 55.5% between 2009 and 2012, while the statewide Medicaid observation stay discharges increased by 25.4% during the same time period. Please note: Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.
- Metro South had the highest percentage of Cesarean section delivery discharges in the state at 37.1%, compared to the statewide percentage of 31.9%.

\*All key findings are based on 2012 data unless otherwise indicated.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

# Population at a Glance for Metro South



Demographics*	Metro South	Statewide
<b>Total Population</b>	809,553 (12.3% of the statewide population)	6,560,595
<b>Gender</b>		
<i>Male</i>	48.3%	48.4%
<i>Female</i>	51.7%	51.6%
<b>Age</b>		
0-19	25.4%	24.7%
20-44	31.3%	33.8%
45-64	29.2%	27.7%
65-84	12.1%	11.7%
85+	2.0%	2.2%
<b>Race</b>		
<i>White</i>	83.4%	81.0%
<i>Black/African American</i>	8.7%	6.8%
<i>Asian</i>	4.1%	5.4%
<i>Other**</i>	2.0%	4.2%
<i>Two or More Races</i>	1.8%	2.6%
<b>Ethnicity</b>		
<i>Hispanic or Latino</i>	3.5%	9.6%
<b>Income</b>		
<i>Mean Household Income</i>	\$89,476	\$89,965
<i>Below Poverty Level</i>	7.6%	10.6%

\*Source: American Community Survey 5-year Estimate (2008-2012) U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov/>

\*\*Includes Native and Pacific Islander and American Indian/Alaskan Native

# Acute Hospital Utilization Trends (FY2009-2012) for Metro South

## Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
<b>Inpatient Discharges</b>	115,041	113,009	111,029	108,567	-2.2%	-5.6%	-2.9%	-3.0%
<b>Emergency Department Discharges</b>	298,172	296,284	291,132	298,571	2.6%	0.1%	1.6%	0.7%
<b>Observation Stay Discharges</b>	16,474	17,104	18,370	21,765	18.5%	32.1%	12.2%	20.3%
<b>Total</b>	429,687	426,397	420,531	428,903	2.0%	-0.2%	1.0%	0.7%

## Regional Discharges as a Percentage of Statewide Discharges\*

	2009	2010	2011	2012
<b>% of Statewide Inpatient Discharges</b>	14.3%	14.0%	13.8%	13.9%
<b>% of Statewide Emergency Department Discharges</b>	12.4%	12.4%	12.2%	12.3%
<b>% of Statewide Observation Stay Discharges</b>	11.0%	10.9%	11.4%	12.0%
<b>% of Statewide Total Combined Discharges</b>	12.8%	12.7%	12.6%	12.7%

\*This region's population represents 12.3% of the statewide population.

# Discharge Trends by Payer Type (FY2009-2012) for Metro South

## Inpatient Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
<b>CommCare</b>	1,726	2,021	1,920	2,140	11.5%	24.0%	0.9%	28.0%
<b>Commercial</b>	44,451	42,677	39,933	38,814	-2.8%	-12.7%	-4.5%	-10.9%
<b>Medicaid</b>	15,165	14,863	15,569	15,344	-1.4%	1.2%	1.8%	4.3%
<b>Medicare</b>	49,452	49,186	49,338	47,780	-3.2%	-3.4%	-4.1%	-0.7%
<b>Other Payers*</b>	4,247	4,262	4,269	4,489	5.2%	5.7%	0.4%	2.8%
<b>Total</b>	115,041	113,009	111,029	108,567	-2.2%	-5.6%	-2.9%	-3.0%

## Emergency Department Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
<b>CommCare</b>	9,380	10,839	9,997	11,124	11.3%	18.6%	-0.9%	31.1%
<b>Commercial</b>	121,170	115,571	113,899	110,316	-3.1%	-9.0%	-5.1%	-14.6%
<b>Medicaid</b>	76,280	76,848	77,329	84,763	9.6%	11.1%	9.3%	13.4%
<b>Medicare</b>	45,177	47,468	45,147	47,652	5.5%	5.5%	4.8%	13.7%
<b>Other Payers*</b>	46,165	45,558	44,760	44,716	-0.1%	-3.1%	-0.3%	-1.7%
<b>Total</b>	298,172	296,284	291,132	298,571	2.6%	0.1%	1.6%	0.7%

## Observation Stay Discharges

	Discharges				Regional % Change		Statewide % Change	
	2009	2010	2011	2012	2011-2012	2009-2012	2011-2012	2009-2012
<b>CommCare</b>	339	427	417	568	36.2%	67.6%	23.9%	65.5%
<b>Commercial</b>	8,039	8,003	7,895	8,798	11.4%	9.4%	3.1%	-0.1%
<b>Medicaid</b>	2,515	2,534	3,351	3,912	16.7%	55.5%	8.7%	25.4%
<b>Medicare</b>	4,826	5,280	5,861	7,500	28.0%	55.4%	24.6%	42.7%
<b>Other Payers*</b>	755	860	846	987	16.7%	30.7%	8.4%	21.6%
<b>Total</b>	16,474	17,104	18,370	21,765	18.5%	32.1%	12.2%	20.3%

\*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

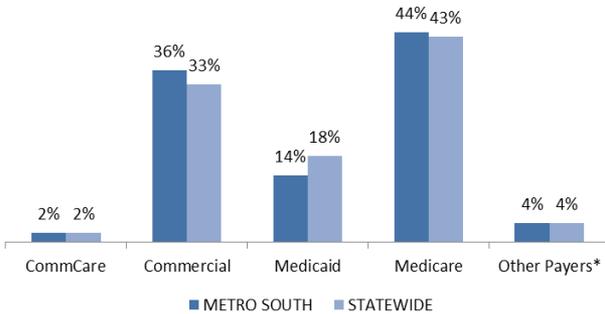
Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

Please note:  
Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category.

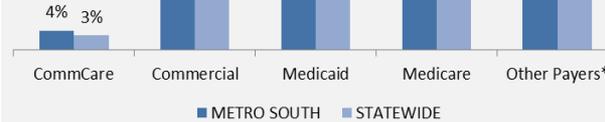
# Percentage of Discharges by Payer Type (FY2012) for Metro South

The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

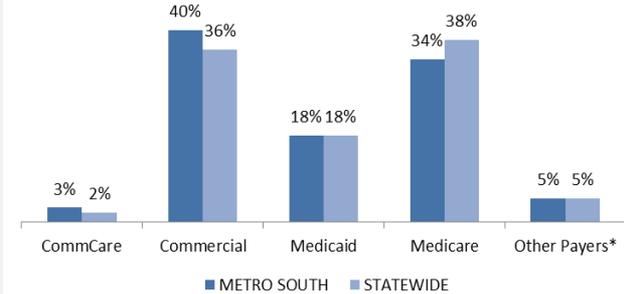
### Inpatient Discharges



### Emergency Department Discharges



### Observation Stay Discharges



\*Other payers include automobile insurance, Health Safety Net, self-pay, workman's compensation and discharges missing payer information.

# Discharges by Demographic Information (Metro South vs. Statewide FY2012)

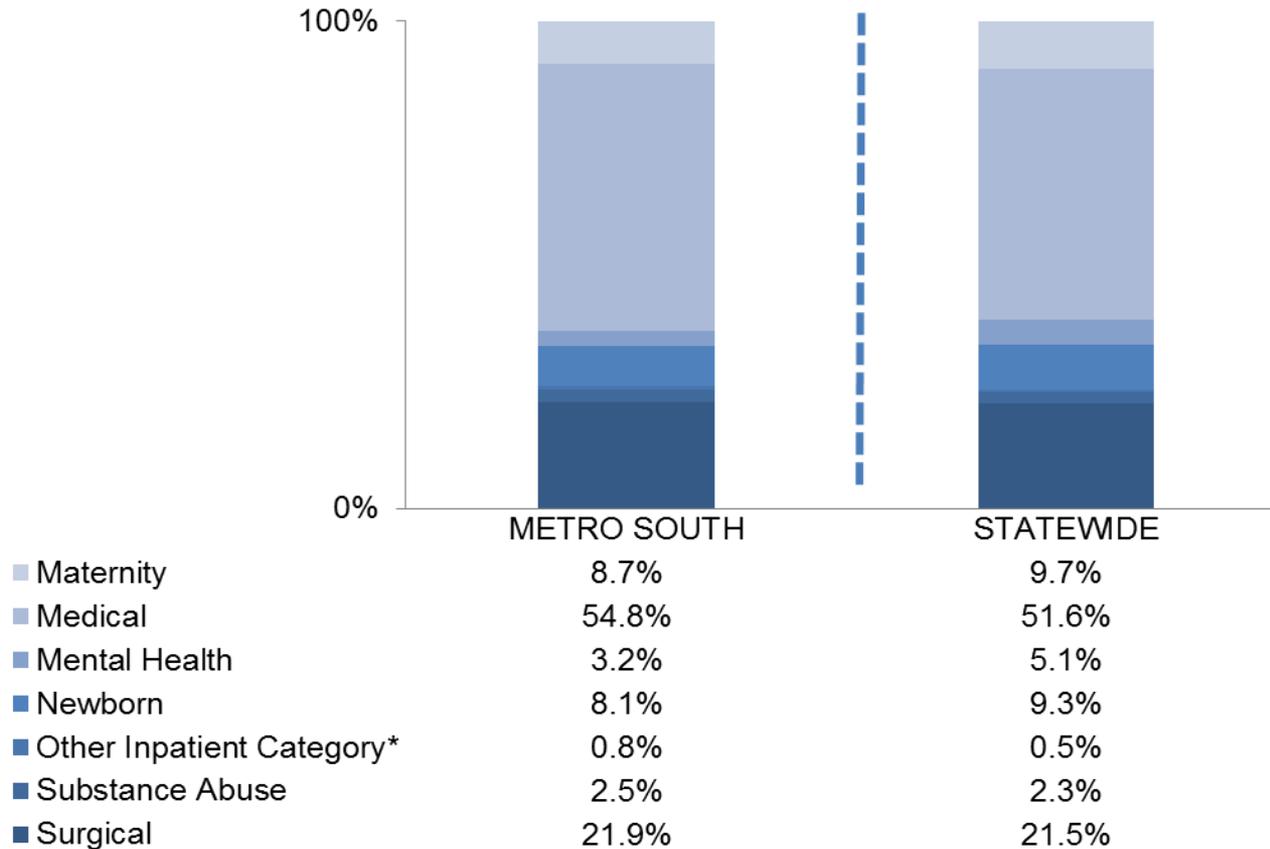
## Age

Age (years)	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
	#	%	%	#	%	%	#	%	%
0-19	14,151	13.0%	<b>14.6%</b>	67,470	22.6%	<b>22.8%</b>	2,187	10.0%	<b>9.9%</b>
20-44	23,364	21.5%	<b>22.6%</b>	126,024	42.2%	<b>41.6%</b>	5,240	24.1%	<b>23.4%</b>
45-64	28,489	26.2%	<b>25.0%</b>	71,673	24.0%	<b>23.4%</b>	7,482	34.4%	<b>32.1%</b>
65-84	31,825	29.3%	<b>27.3%</b>	26,547	8.9%	<b>9.6%</b>	5,224	24.0%	<b>25.5%</b>
85+	10,738	9.9%	<b>10.4%</b>	6,857	2.3%	<b>2.8%</b>	1,630	7.5%	<b>9.0%</b>

## Race and Hispanic or Latino Ethnicity

Race	Inpatient Discharges			Emergency Department Discharges			Observation Stay Discharges		
	Regional		Statewide Comparison	Regional		Statewide Comparison	Regional		Statewide Comparison
	#	%	%	#	%	%	#	%	%
Asian	2,331	2.1%	<b>2.8%</b>	4,404	1.5%	<b>2.0%</b>	352	1.6%	<b>2.0%</b>
Black/African American	9,101	8.4%	<b>7.6%</b>	41,702	14.0%	<b>11.4%</b>	2,275	10.5%	<b>9.8%</b>
Other Races	3,772	3.5%	<b>5.9%</b>	15,626	5.2%	<b>10.8%</b>	838	3.9%	<b>6.9%</b>
Unknown/not specified	3,194	2.9%	<b>4.9%</b>	4,528	1.5%	<b>4.0%</b>	541	2.5%	<b>4.1%</b>
White	90,169	83.1%	<b>78.9%</b>	232,311	77.8%	<b>71.9%</b>	17,759	81.6%	<b>77.1%</b>
<b>Ethnicity</b>									
Hispanic or Latino	2,990	2.8%	<b>8.2%</b>	14,578	4.9%	<b>15.0%</b>	792	3.6%	<b>9.7%</b>

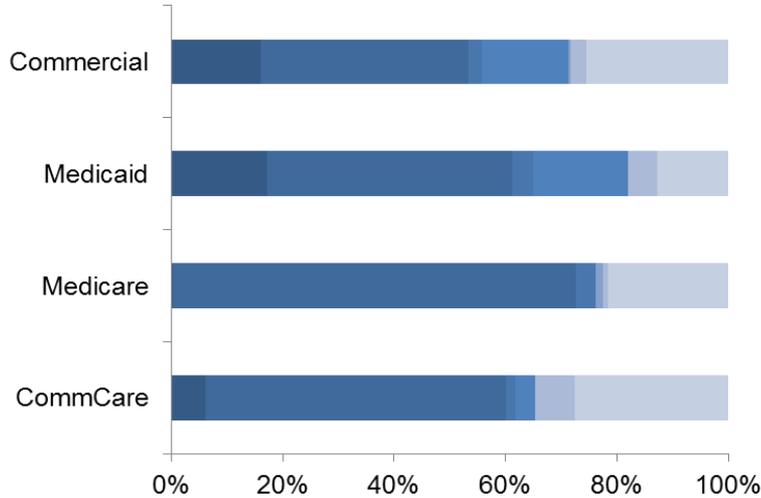
# Inpatient Discharges by Inpatient Service Categories (Metro South vs. Statewide FY2012)



\*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

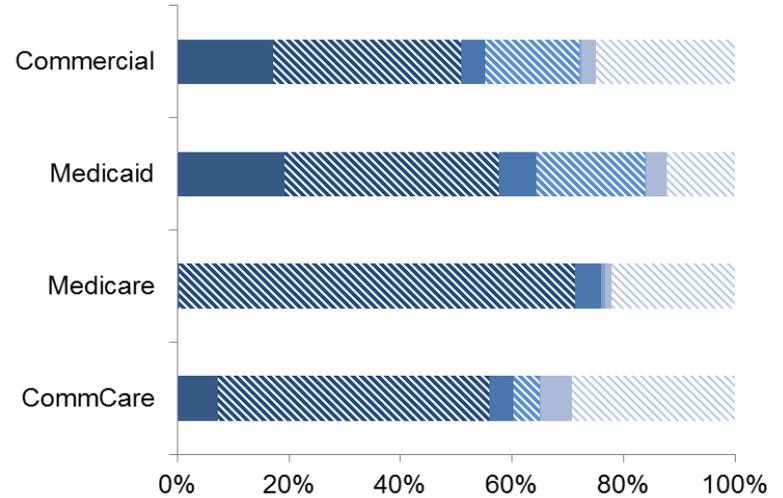
# Percentage of Inpatient Discharges by Payer Type and Service Category (Metro South vs. Statewide FY2012)

## Metro South



	CommCare	Medicare	Medicaid	Commercial
■ Maternity	6.1%	0.2%	17.3%	16.1%
■ Medical	54.0%	72.5%	43.9%	37.2%
■ Mental Health	1.6%	3.4%	3.7%	2.5%
■ Newborn	3.6%	0.0%	17.0%	15.5%
■ Other Inpatient Category*	0.0%	1.3%	0.1%	0.4%
■ Substance Abuse	7.2%	0.9%	5.1%	2.8%
■ Surgical	27.5%	21.6%	12.8%	25.4%

## Statewide

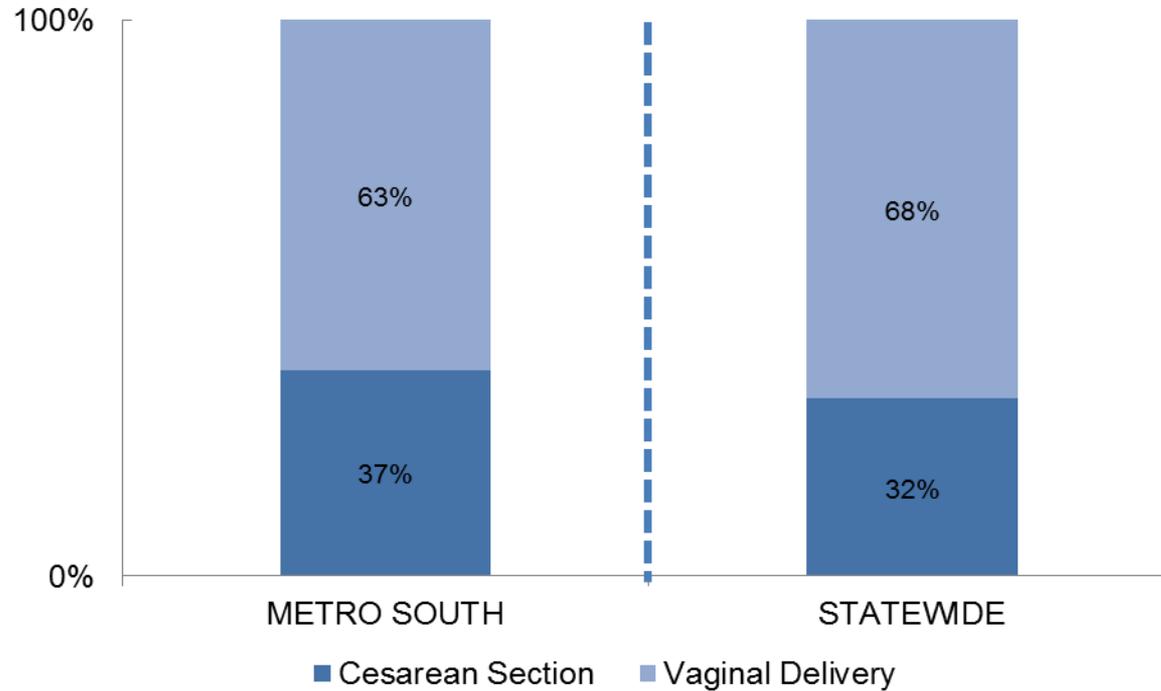


	CommCare	Medicare	Medicaid	Commercial
■ Maternity	7.3%	0.3%	19.3%	17.3%
▨ Medical	48.7%	71.1%	38.4%	33.7%
■ Mental Health	4.3%	4.7%	6.7%	4.4%
▨ Newborn	4.7%	0.0%	19.5%	16.9%
■ Other Inpatient Category*	0.3%	0.7%	0.2%	0.3%
■ Substance Abuse	5.5%	1.1%	3.7%	2.6%
▨ Surgical	29.2%	22.2%	12.2%	24.9%

\*Other Inpatient Category includes discharges that do not fall into one of the other major categories. Discharges in this category include procedures such as bone marrow transplants.

Notes: The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer. Trends in total discharges by payer type may be the result of changes in the number of members enrolled in each payer type category. CommCare utilization may also include discharges for members covered by the CommCare Bridge program.

# Percentage of Inpatient Delivery Discharges by Method of Delivery (Metro South vs. Statewide FY2012)



# Top 10 MS-DRGs by Number of Inpatient Discharges (FY2012) for Metro South

MS-DRG	Title	Discharges	Average Charges	ALOS	% of Regional Discharges	Statewide % Comparison
795	Normal newborn	5,461	\$3,191	2.7	5.0%	5.9%
775	Vaginal delivery w/o complicating diagnoses	4,235	\$9,973	2.6	3.9%	4.9%
392	Esophagitis, gastroent & misc digest disorders w/o MCC	3,624	\$10,617	2.8	3.3%	2.7%
470	Major joint replacement or reattachment of lower extremity w/o MCC	3,158	\$31,958	3.3	2.9%	2.8%
885	Psychoses	2,473	\$16,791	10.1	2.3%	3.8%
794	Neonate w other significant problems	2,012	\$4,480	3.0	1.9%	2.1%
897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	1,978	\$7,232	4.4	1.8%	1.4%
603	Cellulitis w/o MCC	1,960	\$8,530	3.2	1.8%	1.6%
766	Cesarean section w/o CC/MCC	1,875	\$12,981	4.1	1.7%	1.7%
871	Septicemia or severe sepsis w/o MV 96+ hours w MCC	1,516	\$24,510	6.5	1.4%	1.6%

# Top 10 Principal Diagnosis Codes by Number of Emergency Department Discharges (FY2012) for Metro South

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
789	Other symptoms involving abdomen and pelvis	13,681	\$3,002	4.6%	5.0%
780	General symptoms	11,777	\$1,971	3.9%	4.5%
786	Symptoms involving respiratory system and other chest symptoms	11,569	\$2,192	3.9%	4.4%
724	Other and unspecified disorders of back	8,949	\$1,207	3.0%	3.0%
847	Sprains and strains of other and unspecified parts of back	8,706	\$1,221	2.9%	2.2%
959	Injury, other and unspecified	7,767	\$1,991	2.6%	2.5%
784	Symptoms involving head and neck	7,465	\$1,960	2.5%	2.5%
682	Other cellulitis and abscess	6,801	\$1,157	2.3%	2.4%
873	Other open wound of head	5,747	\$1,482	1.9%	2.0%
719	Other and unspecified disorders of joint	5,421	\$1,166	1.8%	1.7%

# Top 10 Principal Diagnosis Codes by Number of Observation Stay Discharges (FY2012) for Metro South

ICD-9 Diagnosis Code	Title	Discharges	Average Charges	% of Regional Discharges	Statewide % Comparison
786	Symptoms involving respiratory system and other chest symptoms	5,169	\$8,727	23.7%	21.8%
780	General symptoms	1,818	\$8,711	8.4%	7.9%
789	Other symptoms involving abdomen and pelvis	808	\$9,294	3.7%	3.1%
427	Cardiac dysrhythmias	448	\$21,239	2.1%	2.3%
276	Disorders of fluid, electrolyte, and acid-base balance	417	\$7,120	1.9%	2.1%
644	Early or threatened labor	338	\$2,147	1.6%	2.4%
474	Chronic disease of tonsils and adenoids	310	\$8,171	1.4%	1.1%
648	Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth	306	\$3,980	1.4%	1.3%
787	Symptoms involving digestive system	300	\$7,942	1.4%	1.3%
724	Other and unspecified disorders of back	299	\$9,471	1.4%	1.1%