



Department
of Health

Analysis of Mount Sinai Downtown Plan

Office of Primary Care and Health Systems Management

Presentation to PHHPC's Committee on Establishment and Project Review

June 8, 2017

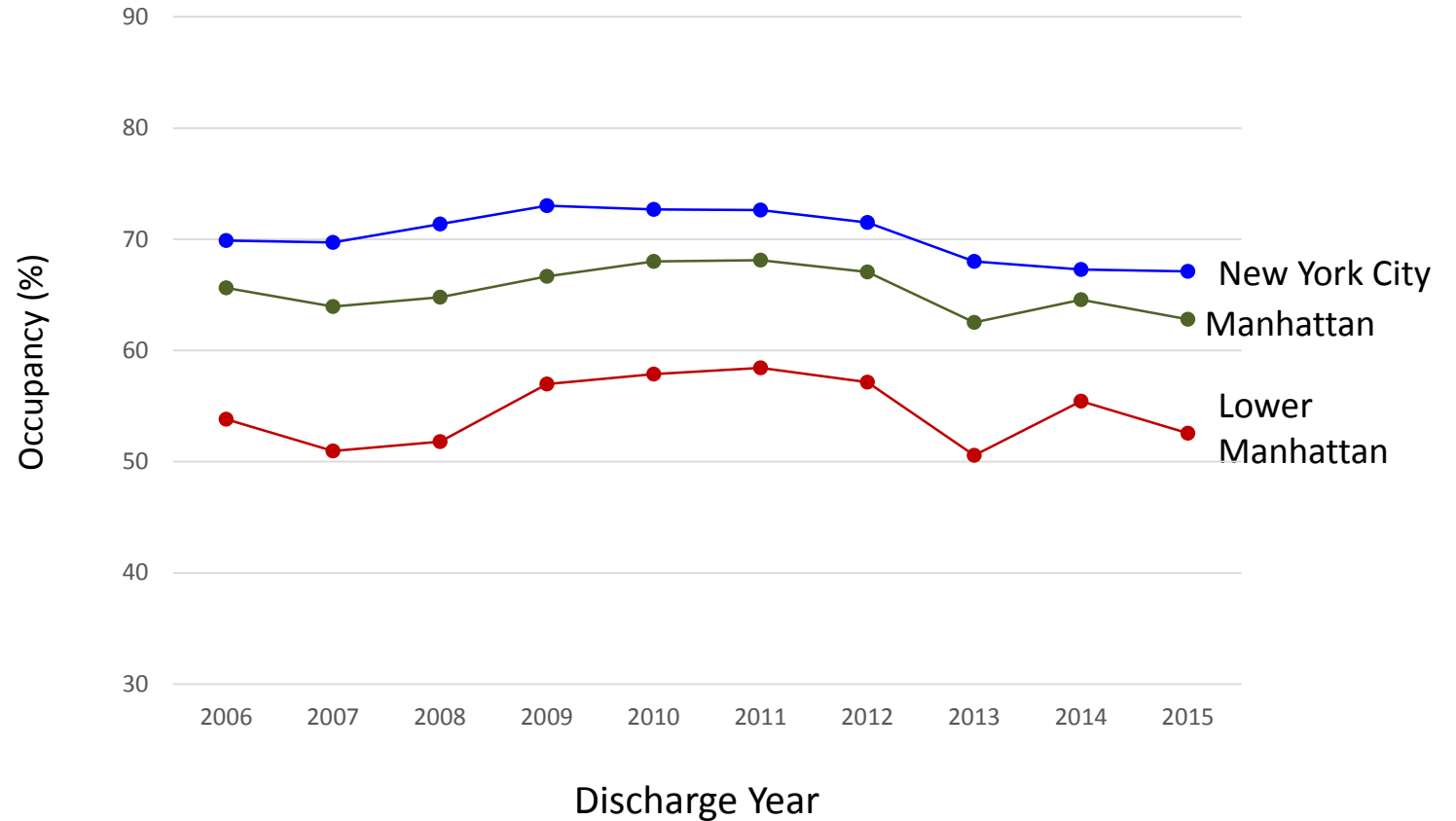
Overview of Presentation

- NYC inpatient bed occupancy rates
- Mount Sinai Beth Israel's bed occupancy
- Overview of Mount Sinai's Plan
- Impact of the Plan on inpatient bed access in NYC
- Inpatient bed utilization patterns for Lower Manhattan residents
- Impact of Plan on inpatient bed access for Lower Manhattan residents
- Impact of Plan on Emergency Department services in Lower Manhattan

- Since 2006, inpatient bed occupancy has decreased from 70% to 67% in NYC as a whole, from 66% to 63% in Manhattan, and from 54% to 53% in Lower Manhattan.
- During this period of time, the number of licensed hospital beds in NYC declined by 4,760 (16%).
- In recent years, the rate of decrease in inpatient utilization has accelerated due primarily to changes in NYS and federal reimbursement policies and advances in medical technology that are reducing hospital lengths of stay and moving procedures from an inpatient to outpatient basis.
- This downward trend is expected to continue for at least the next five years.

Inpatient Occupancy Rates: NYC, Manhattan, Lower Manhattan

Data source: SPARCS Inpatient 2006-2015; HFIS 2006-2015



Inpatient Occupancy Data: NYC, Manhattan, Lower Manhattan

Data source: SPARCS Inpatient 2006-2015; HFIS 2006-2015

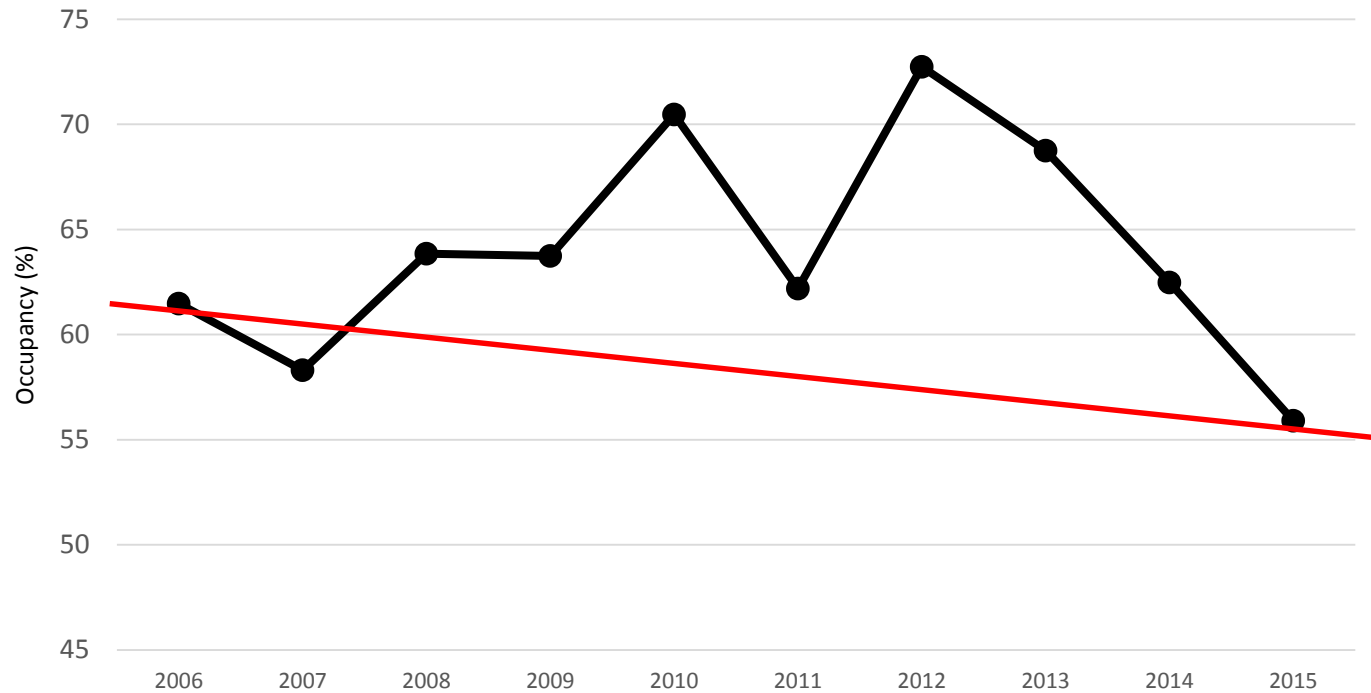
Discharge Year

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
New York City Hospitals	Average Daily Census	20,176	19,877	19,720	19,199	18,954	18,363	18,156	16,916	16,601	16,178
	Certified Beds	28,865	28,506	27,633	26,293	26,074	25,288	25,393	24,869	24,669	24,105
	Occupancy by Certified Beds	69.9	69.7	71.4	73.0	72.7	72.6	71.5	68.0	67.3	67.1
Manhattan Hospitals	Average Daily Census	7,748	7,555	7,452	7,284	7,295	6,811	6,716	6,068	6,146	5,982
	Certified Beds	11,804	11,813	11,503	10,927	10,725	9,998	10,015	9,707	9,519	9,526
	Occupancy by Certified Beds	65.6	64.0	64.8	66.7	68.0	68.1	67.1	62.5	64.6	62.8
Lower Manhattan Hospitals	Average Daily Census	2,375	2,233	2,232	2,203	2,215	1,812	1,772	1,561	1,711	1,622
	Certified Beds	4,414	4,382	4,308	3,866	3,828	3,101	3,101	3,086	3,086	3,086
	Occupancy by Certified Beds	53.8	51.0	51.8	57.0	57.9	58.4	57.1	50.6	55.4	52.6

Mount Sinai Beth Israel Inpatient Occupancy Trend

Data source: SPARCS Inpatient 2006-2015; HFIS 2006-2015

- Since 2006, MSBI's inpatient occupancy rate has declined from 62% to 56%.
- Since 2012, MSBI's inpatient occupancy rate has declined from 73% to 56%. This rate of decline is largely due to: low acuity cases shifting to observation status; rehab and surgical procedures shifting from inpatient to ambulatory; and opening of an expanded NYU emergency department and new Lenox Hill Healthplex in 2014.



		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Mount Sinai Beth Israel Hospitals	Average Daily Census	553	524	574	573	614	542	634	588	536	478
	Certified Beds	899	899	899	899	871	871	871	856	856	856
	Occupancy By Certified Beds	61.5	58.3	63.8	63.7	70.5	62.2	72.7	68.7	62.5	55.9



Overview of Mount Sinai's Plan

- **Inpatient and Emergency Services:** New 70 bed hospital on 14th Street and 2nd Avenue with Emergency Department sized for 70,000 annual visits, including a heart and stroke response center. Completion of hospital in 2021 with continuing operation of current hospital until then.
- **Psychiatric and Substance Abuse:** Renovate existing MSBI space to create Behavioral Health Institute. Maintains 153 inpatient beds, emergency services and integrated outpatient services.

Overview of Mount Sinai's Plan

- **Primary Care and Ambulatory Services (below 34th Street):** Expand capacity from 1 million to 1.5 million visits. Outpatient footprint in Lower Manhattan will include:
 - 16+ practice locations, 600 doctors
 - 35 operating and procedure rooms
 - Cardiac services (including PCI)
 - Cancer care (including infusion and radiation therapy)
 - Obstetrics (pre- and post-natal care)
 - Upgrade/expand primary care and ambulatory services at Mount Sinai Downtown Union Square

Overview of Mount Sinai's Plan

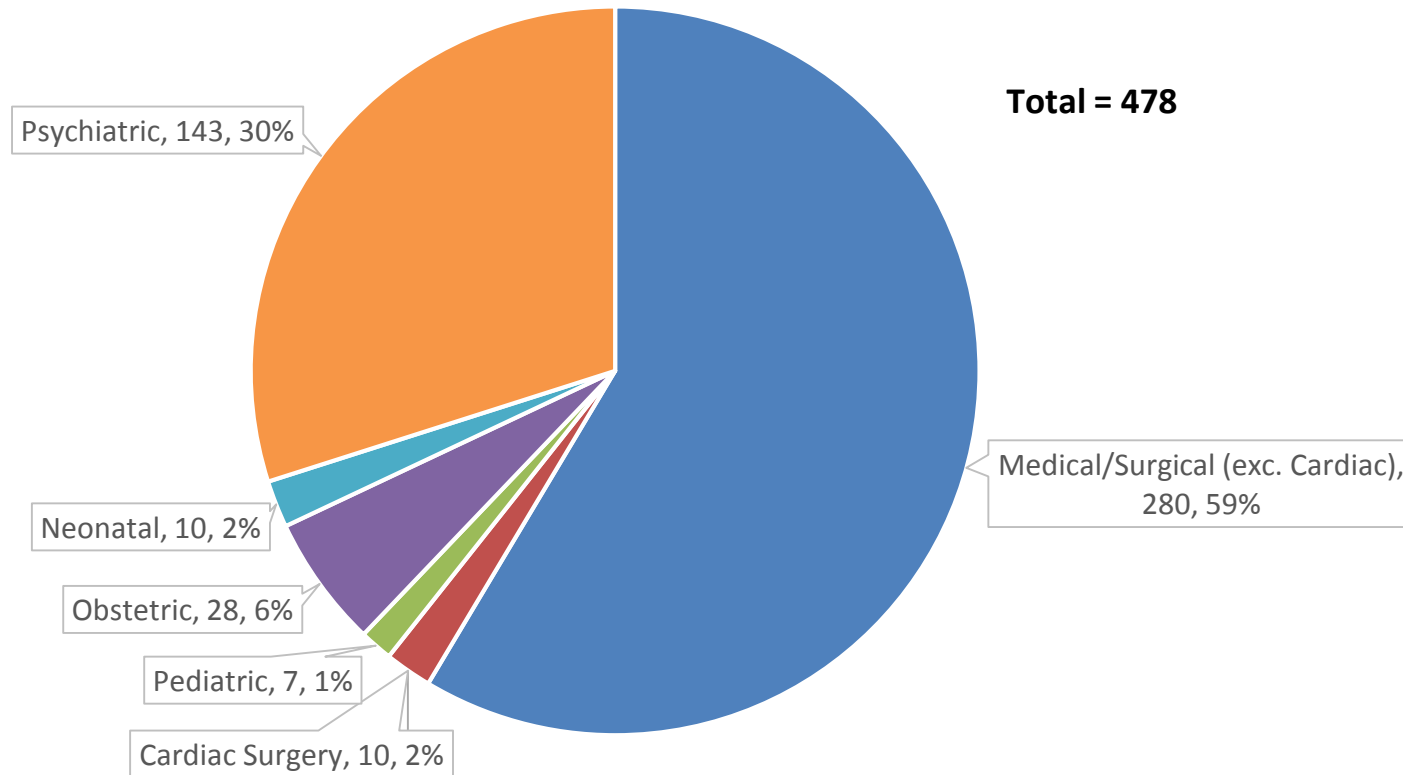
- **Maternity and Obstetrics:** To Mount Sinai West, Mount Sinai Hospital, and The Brooklyn Hospital Center (affiliation)
- **Complex Inpatient Care:**
 - Cardiac Surgery to Mount Sinai St. Luke's
 - Neurosurgery to Mount Sinai Hospital and Mount Sinai West
 - Joint Surgery to Mount Sinai West
 - Newborn to Mount Sinai West, Mount Sinai Hospital, and The Brooklyn Hospital Center (NICU)
 - Pediatric Intensive Care to Mount Sinai Hospital (PICU)

Impact of Plan on Inpatient Access In NYC, Manhattan

- The Department conducted an independent analysis of impact on inpatient bed access using inpatient data for the period July 1, 2015 through June 30, 2016.
- This “Absorption Analysis” was used to determine whether the decertification of inpatient services will result in shortages of beds in a planning area (e.g., medical surgical, maternity, neonatal, pediatric, etc.).
- The analysis uses conservative assumptions about how full “receiving” hospitals can be and still operate effectively.
- The analysis uses actual hospital utilization patterns of people (at zip code level) to model where they will seek care if such care is not available at the hospital where the inpatient service reductions are taking place.
- Psychiatric services were not included in the analysis because Mount Sinai’s plan does not change bed capacity or location for this service line.

MSBI Inpatient ADC by Service Line

(SPARCS Inpatient Data, 7/1/15 - 6/30/16)



Results of Absorption Analysis

Medical/Surgical Services (including Cardiac)

(SPARCS Inpatient Data for ADC, 7/1/15 - 6/30/16; 1Q2017 Data for ADC*);
HFIS Certified Bed Data as Denominator for Occupancy %)

Hospital	Previous Med/Surg ADC	Total Absorbed ADC	New ADC	Previous Occup. %	New Occup. %
Mount Sinai Beth Israel (old and new)	290	56	56	52.9%	84.8%
Mount Sinai Hospital	637	9	644	73.4%	74.2%
NYU Hospitals Center*	297	18	315	41.7%	44.2%
Bellevue Hospital Center*	311	17	328	65.3%	68.9%
NYP Lower Manhattan*	121	14	135	81.8%	91.2%
NYP Cornell	519	11	527	81.3%	82.6%
Lenox Hill Hospital*	264	10	274	49.8%	51.7%
New York Methodist	385	9	394	85.9%	87.9%
Maimonides	308	7	315	61.8%	63.3%
Brooklyn Hospital Center	143	3	146	40.2%	41.0%
Coney Island Hospital	218	4	222	84.2%	85.7%
Kings County Hospital	252	5	257	81.6%	83.2%
NYU Lutheran	204	5	209	57.5%	58.9%
Mount Sinai Brooklyn	163	4	167	76.9%	78.8%
All Other Hospitals (N=197)		118			

Results of Absorption Analysis

- **General Medical/Surgical:** The analysis indicates that there is sufficient inpatient bed capacity in New York City to accommodate the medical/surgical services being provided by MSBI with the construction of a new 70 bed hospital in Lower Manhattan. These services will continue at current MSBI site until the new hospital is open.
- **Obstetric:** One-third of obstetric volume (9 of 28 ADC) at MSBI is for Brooklyn residents and can be met by hospitals in Brooklyn, where those patients reside. The analysis indicates that the remaining volume can be met by other Manhattan hospitals or hospitals outside of Manhattan and Brooklyn where those patients reside.
- **Pediatric/Neonatal:** The utilization of pediatric and neonatal inpatient services at MSBI is low for this type of complex service, and the analysis indicates it can be met by: the new MSBI hospital (pediatric only); Manhattan hospitals such as NYU (neonatal), Weill Cornell (neonatal and pediatric); and hospitals outside of Manhattan where those patients reside.
- **Cardiac Surgery:** For the past three years, the number of cardiac surgery procedures at MSBI has been below the regulatory minimum standard of 500 per year (282 cardiac surgeries during the period 7/1/15 to 6/30/16) and accounts for an average of 10 inpatients per day. The analysis indicates that these cases can be accommodated at lower Manhattan hospitals such as NYU and Bellevue; Manhattan hospitals such as Lenox Hill, NYP Cornell, and NYP Columbia; and hospitals outside of Manhattan where those patients reside.

Impact of Plan on Lower Manhattan Residents

- Although analytically sound on a planning area basis, absorption analyses distribute utilization in a formulaic way that can seem mechanical and detached from community concerns.
- Also, due to the dense geography and number of hospitals in New York City, a traditional absorption analysis may not fully capture impacts on a sub-planning area/community like Lower Manhattan.
- To better assess and explain the localized impact of the Mount Sinai Plan on inpatient services for residents of Lower Manhattan, the Department conducted an additional independent analysis to evaluate impact on access.

Where do people who live in Lower Manhattan currently get their inpatient care?

Data Source: SPARCS: July 1, 2015 – June 30, 2016

- Of the total inpatient discharges for all Lower Manhattan residents, 26% (or an Average Daily Census of 187) were at MSBI.
- This also means that 39% of inpatients at MSBI live in Lower Manhattan (187 out of 478) and 61% of inpatients at MSBI live elsewhere.
- About half of the hospitals in NYC capture a greater % of their utilization from their local communities (primary service areas) than MSBI.

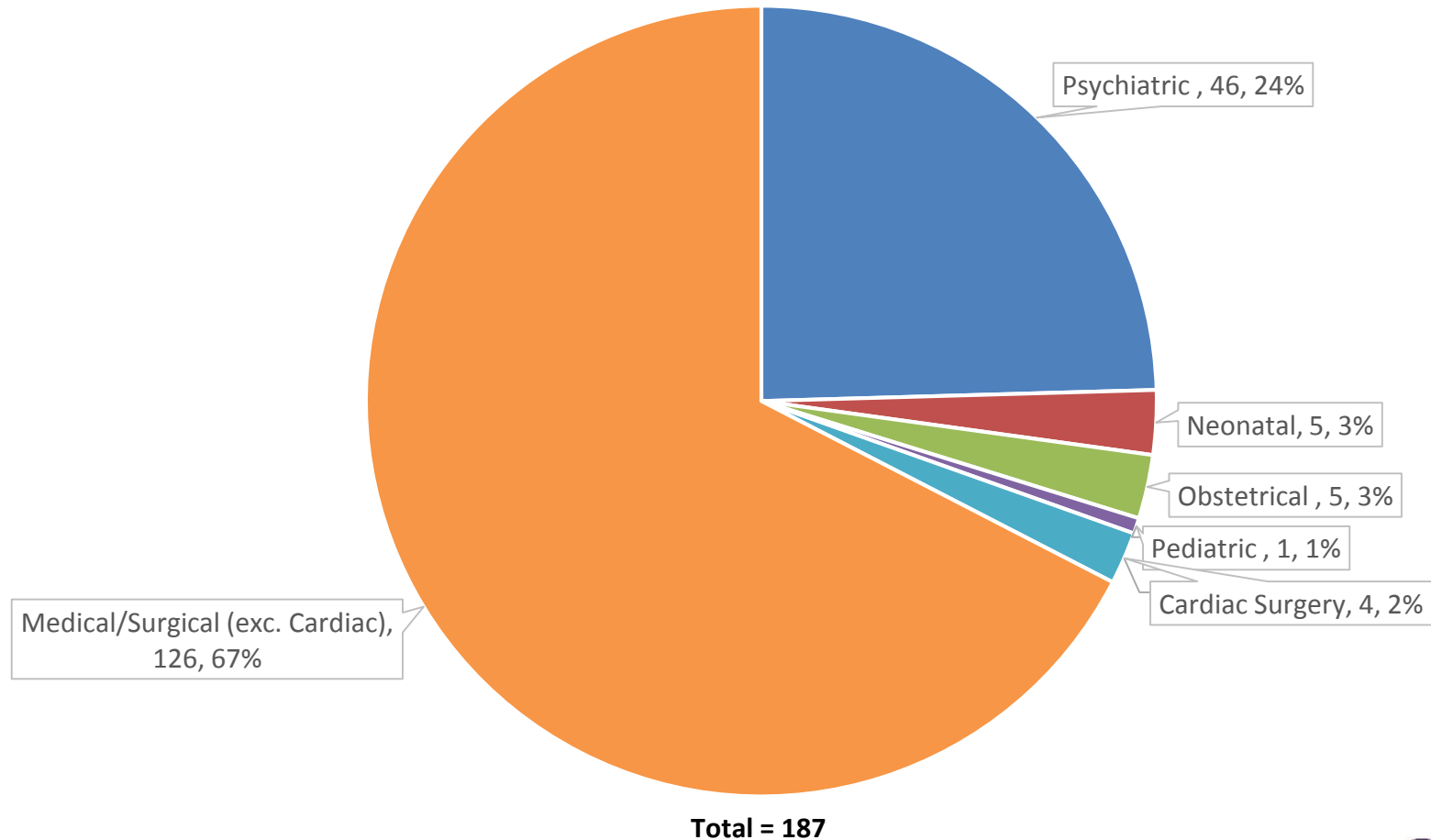
Hospital (Top 20)	Discharges	%	ADC
Mount Sinai Beth Israel	11,419	25.6%	186.8
Bellevue Hospital Center	6,716	15.0%	159.5
NYU Hospitals Center	5,651	12.6%	71.8
NYP-lower Manhattan Hospital	4,168	9.3%	57.2
NYP-New York Weill Cornell	3,292	7.4%	50.0
Lenox Hill Hospital	2,592	5.8%	29.6
Mount Sinai Hospital	2,429	5.4%	32.2
Mount Sinai West	1,515	3.4%	16.6
NYP - Columbia	756	1.7%	12.7
NYU Hospital for Joint Diseases	600	1.3%	9.9
Memorial Sloan Kettering	586	1.3%	9.6
Hospital for Special Surgery	454	1.0%	4.2
SJRH - Park Care Pavilion	430	1.0%	7.4
Metropolitan Hospital Center	319	0.7%	7.1
Mount Sinai St. Luke's	198	0.4%	3.6
NYP - Westchester	195	0.4%	9.3
Harlem Hospital Center	177	0.4%	3.1
Maimonides Medical Center	170	0.4%	2.0
New York Methodist Hospital	167	0.4%	2.5
NYU Lutheran Medical Center	149	0.3%	1.8

• Lower Manhattan (below 34th St;) Zip codes: 10001, 10002, 10003, 10004, 10005, 10006, 10007, 10009, 10010, 10011, 10012, 10013, 10014, 10016, 10038, 10280



MSBI Inpatient ADC Attributable to Lower Manhattan Residents by Service Line

(SPARCS Inpatient Data, 7/1/15 - 6/30/16)



Impact of Plan on Inpatient Care for Lower Manhattan Residents

- Medical/Surgical (126 ADC): The analysis indicates that this utilization can be met by the new MSBI and other Lower Manhattan hospitals after factoring in transfer of complex care to other Mount Sinai Hospitals and before adjusting ADC for projected continued decline in inpatient utilization.
 - Also, the design for new MSBI allows for the ability to add up to 4 floors after the hospital is constructed.
- Psychiatric (46 ADC): Met by new Behavioral Health Institute.
- Cardiac Surgery (4 ADC), Neonatal (5 ADC); Obstetrical (5 ADC); Pediatric (1 ADC): The analysis indicates that cardiac, obstetrical and pediatric utilization can be met by other Lower Manhattan hospitals. Neonatal utilization can be met by other Manhattan hospitals. The analysis indicates insufficient utilization to support separate service lines at new MSBI. Consolidating these service lines at higher volume Mount Sinai hospitals will improve quality and safety. New MSBI will have 4 pediatric observation beds adjacent to Emergency Department to meet lower acuity, short-term needs.

Impact of Plan on Emergency Services in Lower Manhattan

- The MSBI emergency department (ED) currently receives about 90,000 visits annually.
- About 70 percent of those ED visits could have been treated in a primary or urgent care setting.
- Expanded extended hour primary and/or urgent care facilities at Chelsea, Union Square and Stuyvesant Town Peter Cooper Villages coupled with State and federal efforts to decrease ED utilization likely to further suppress need.
- The New MSBI ED will accommodate up to 70,000 visits annually, which will meet need.

Thank You