

NJHCFFA Greater Newark Area Healthcare Services Evaluation

REPORT APPENDICES

March 2, 2015



DISPUTES & INVESTIGATIONS • ECONOMICS • FINANCIAL ADVISORY • MANAGEMENT CONSULTING

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Appendix A

Service Area Geographies

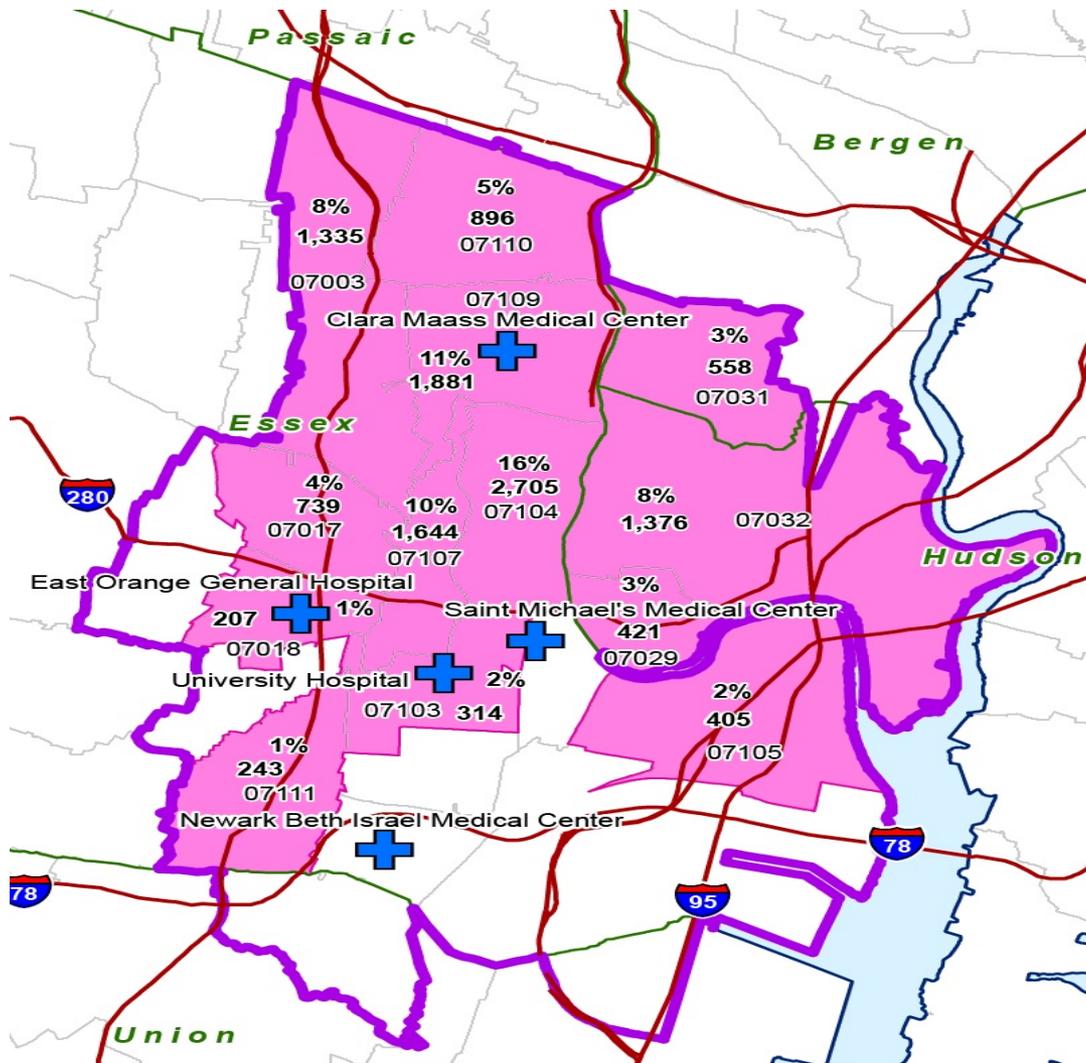


Service Area Definitions

PSA and SSA	Stark Service Area	Core Service Area	Planning Area	Dartmouth Atlas HRR	Dartmouth Atlas HSA
Internally defined hospital Primary Service Area (PSA) and Secondary Service Area (SSA)	A hospital's geographic service area that is composed of the lowest number of contiguous zip codes from which the facility draws at least <u>75% of its inpatient discharges</u>	Navigant-based approach where a service area is determined by identifying the zip codes that are important to the hospital in terms of where its business comes from (patient origin) and which are reliant on the hospital for their healthcare (market share)	Combination of Core Service Areas of each hospital to create a single geographic area of focus for the study	Regional market area for tertiary medical care that contains at least one hospital that performs major cardiovascular procedures and neurosurgery	Local health care market that is composed of a collection of ZIP codes whose residents receive most of their hospitalizations from the hospitals in that area

Considered for the study, but not shown here in the appendix for individual hospitals

Clara Maass Medical Center Stark Service Area



- Planning Area
- CMMC Stark SA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

Note: CMMC and NBIMC are both part of Barnabas Health.

Clara Maass Medical Center

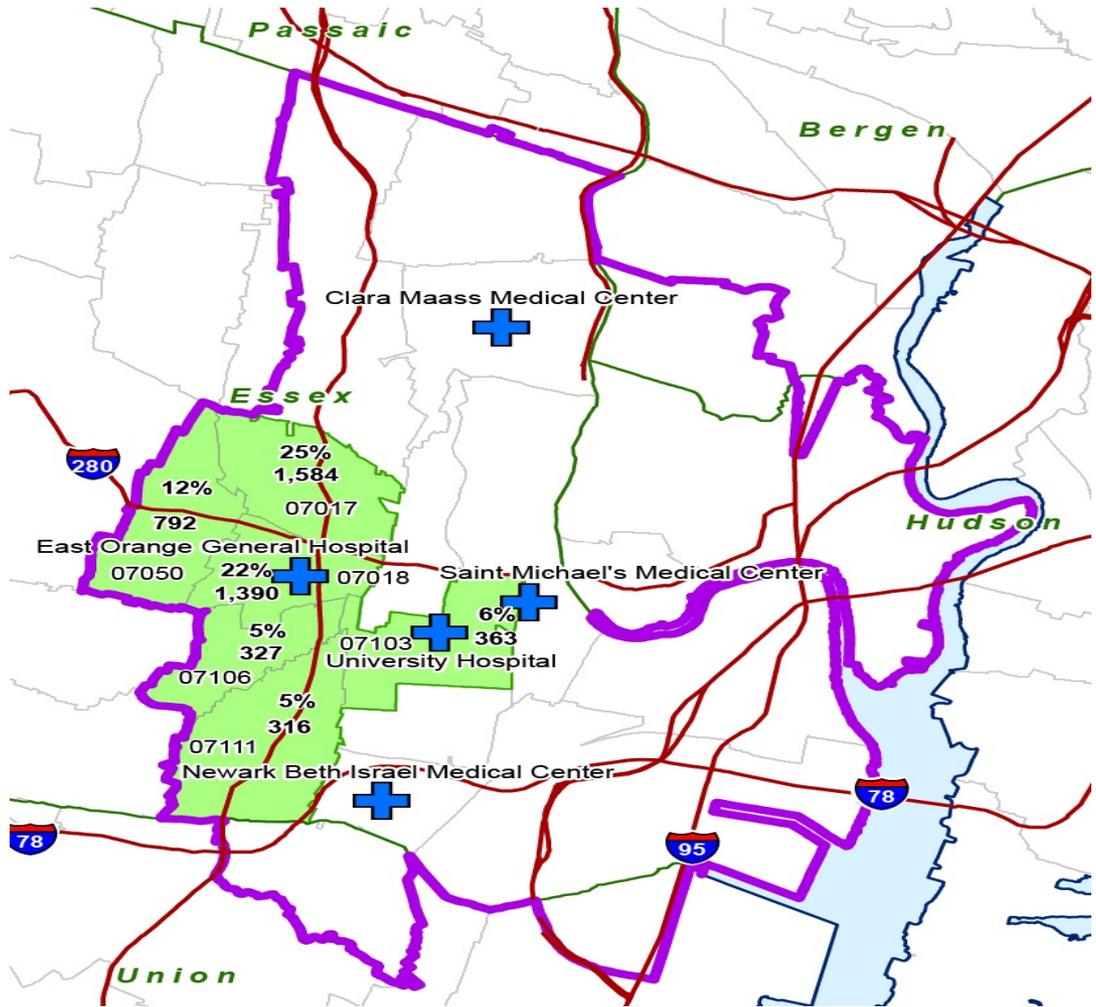
Stark Service Area Patient Origin and Market Share

2013 Patient Origin					2013 Market Share	
Zip Code	County	Hospital Volume	% Total	Cumulative %	Market Volume	Market Share
07104	Essex County	2,705	16%	16%	6,974	39%
07109	Essex County	1,881	11%	27%	3,804	49%
07107	Essex County	1,644	10%	37%	4,980	33%
07032	Hudson County	1,376	8%	45%	3,710	37%
07003	Essex County	1,335	8%	53%	4,990	27%
07110	Essex County	896	5%	58%	2,708	33%
07017	Essex County	739	4%	63%	5,575	13%
07031	Bergen County	558	3%	66%	1,539	36%
07029	Hudson County	421	3%	69%	1,448	29%
07105	Essex County	405	2%	71%	3,800	11%
07071	Bergen County	1	0%	71%	2,109	0%
Total in Stark Service Area		11,961	71%	-	41,637	29%
All Other Essex County Zip Codes		1,951	12%	83%	57,056	3%
All Other		2,912	17%	100%		
Total		16,824	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

East Orange General Hospital Stark Service Area



- Planning Area
- EOGH Stark SA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

Note: CMMC and NBIMC are both part of Barnabas Health.

East Orange General Hospital

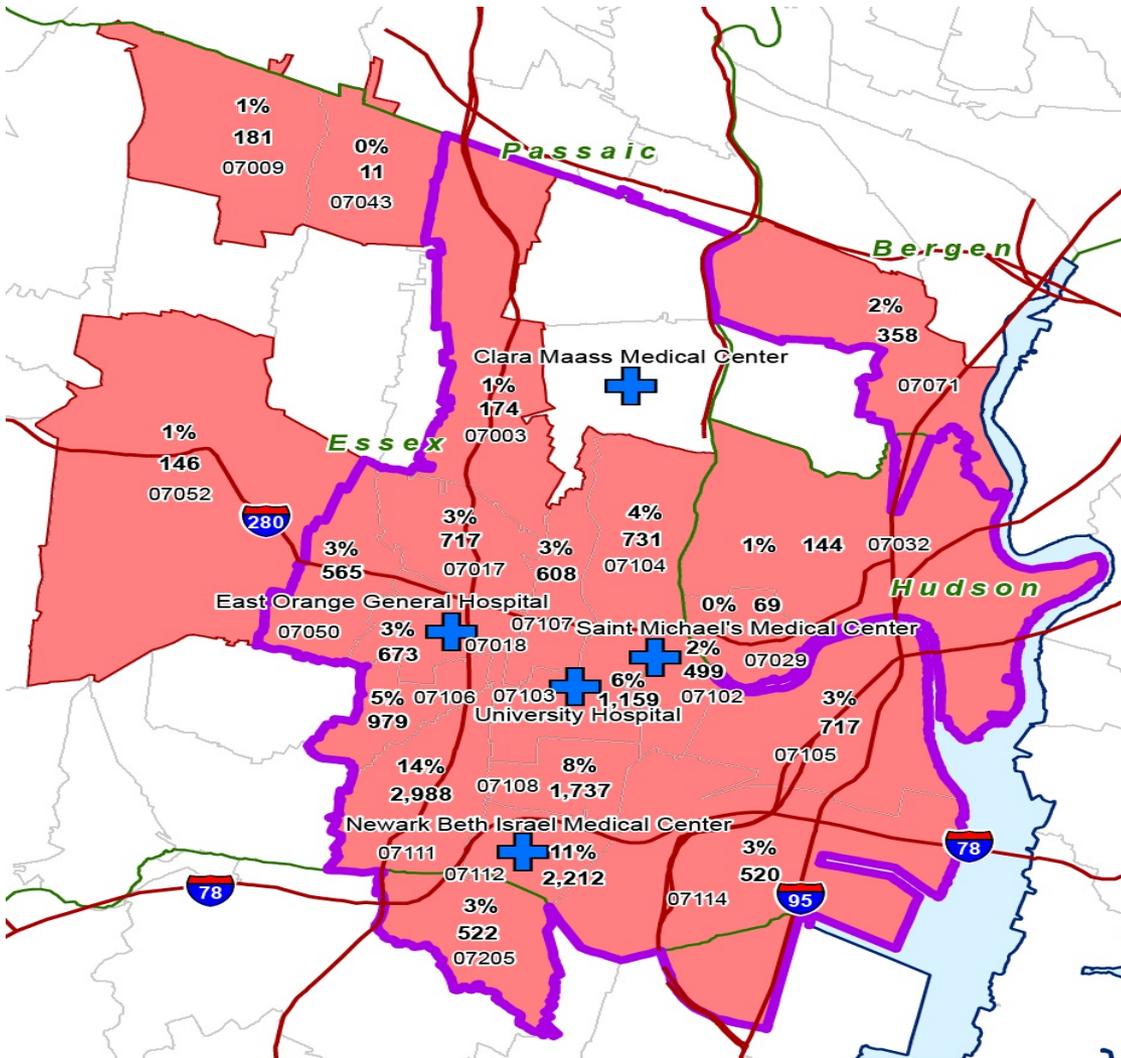
Stark Service Area Patient Origin and Market Share

2013 Patient Origin					2013 Market Share	
Zip Code	County	Hospital Volume	% Total	Cumulative %	Market Volume	Market Share
07017	Essex County	1,584	25%	25%	5,575	28%
07018	Essex County	1,390	22%	47%	4,256	33%
07050	Essex County	792	12%	59%	4,211	19%
07103	Essex County	363	6%	65%	4,998	7%
07106	Essex County	327	5%	70%	3,679	9%
07111	Essex County	316	5%	75%	6,569	5%
Total in Stark Service Area		4,772	75%	-	29,288	16%
All Other Essex County Zip Codes		1,541	24%	99%	59,646	3%
All Other		60	1%	100%		
Total		6,373	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

Newark Beth Israel Medical Center Stark Service Area



- Planning Area
- NBIMC Stark SA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

Note: CMMC and NBIMC are both part of Barnabas Health.

Newark Beth Israel Medical Center

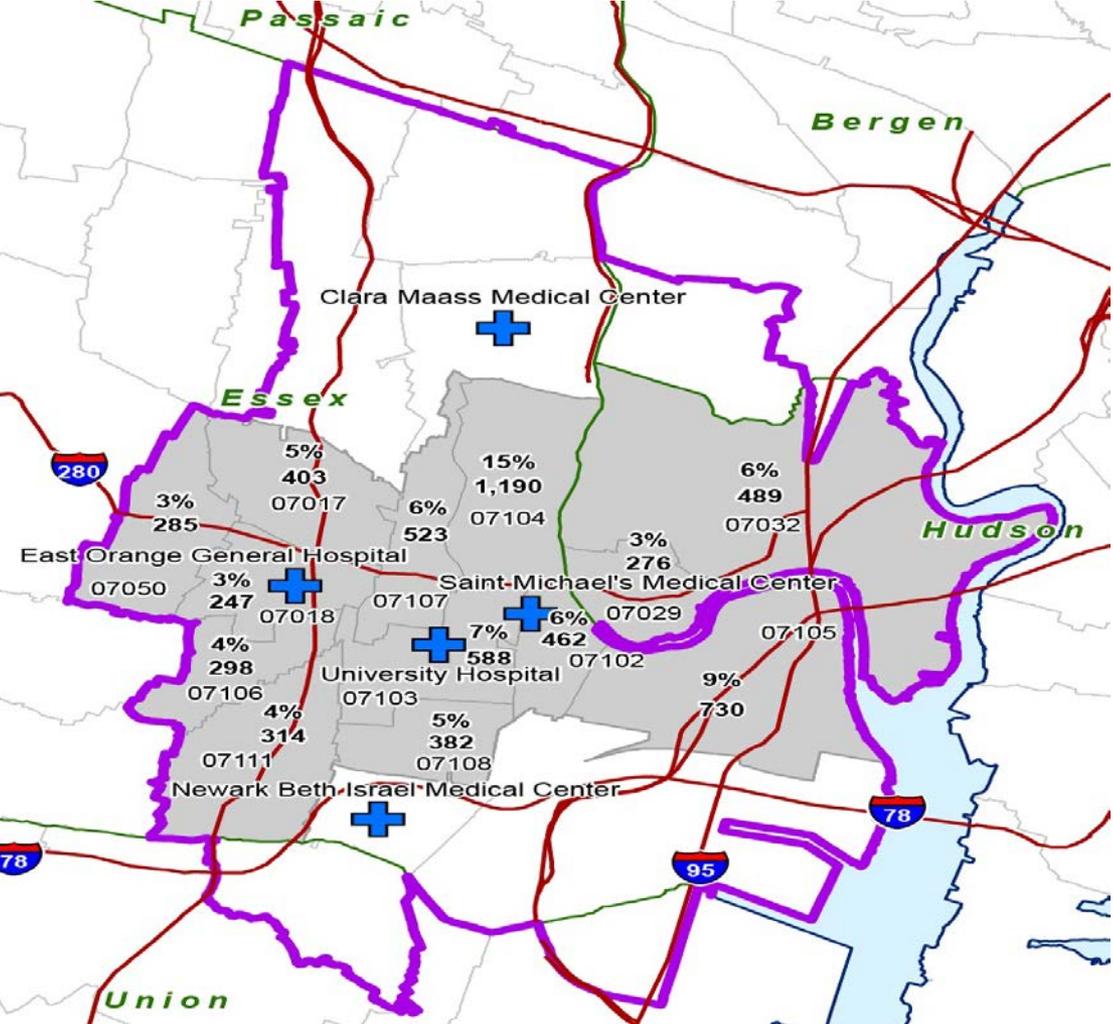
Stark Service Area Patient Origin and Market Share

2013 Patient Origin					2013 Market Share	
Zip Code	County	Hospital Volume	% Total	Cumulative %	Market Volume	Market Share
07111	Essex County	2,988	14%	14%	6,569	45%
07112	Essex County	2,212	11%	25%	3,811	58%
07108	Essex County	1,737	8%	33%	4,135	42%
07103	Essex County	1,159	6%	39%	4,998	23%
07106	Essex County	979	5%	44%	3,679	27%
07105	Essex County	717	3%	47%	3,800	19%
07017	Essex County	717	3%	51%	5,575	13%
07104	Essex County	731	4%	54%	6,974	10%
07018	Essex County	673	3%	57%	4,256	16%
07107	Essex County	608	3%	60%	4,980	12%
07050	Essex County	565	3%	63%	4,211	13%
07205	Union County	522	3%	66%	2,109	25%
07114	Essex County	520	3%	68%	1,575	33%
07102	Essex County	499	2%	70%	1,891	26%
07083	Union County	56	0%	71%	4,880	1%
07206	Union County	24	0%	71%	3,146	1%
07202	Union County	17	0%	71%	4,388	0%
07201	Union County	22	0%	71%	3,155	1%
Total in Stark Service Area		14,746	71%	-	74,132	20%
All Other Essex County Zip Codes		1,006	5%	76%	33,433	3%
All Other		5,017	24%	100%		
Total		20,769	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

Saint Michaels Medical Center Stark Service Area



- Planning Area
- SMMC Stark SA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

Note: CMMC and NBIMC are both part of Barnabas Health.



Saint Michaels Medical Center

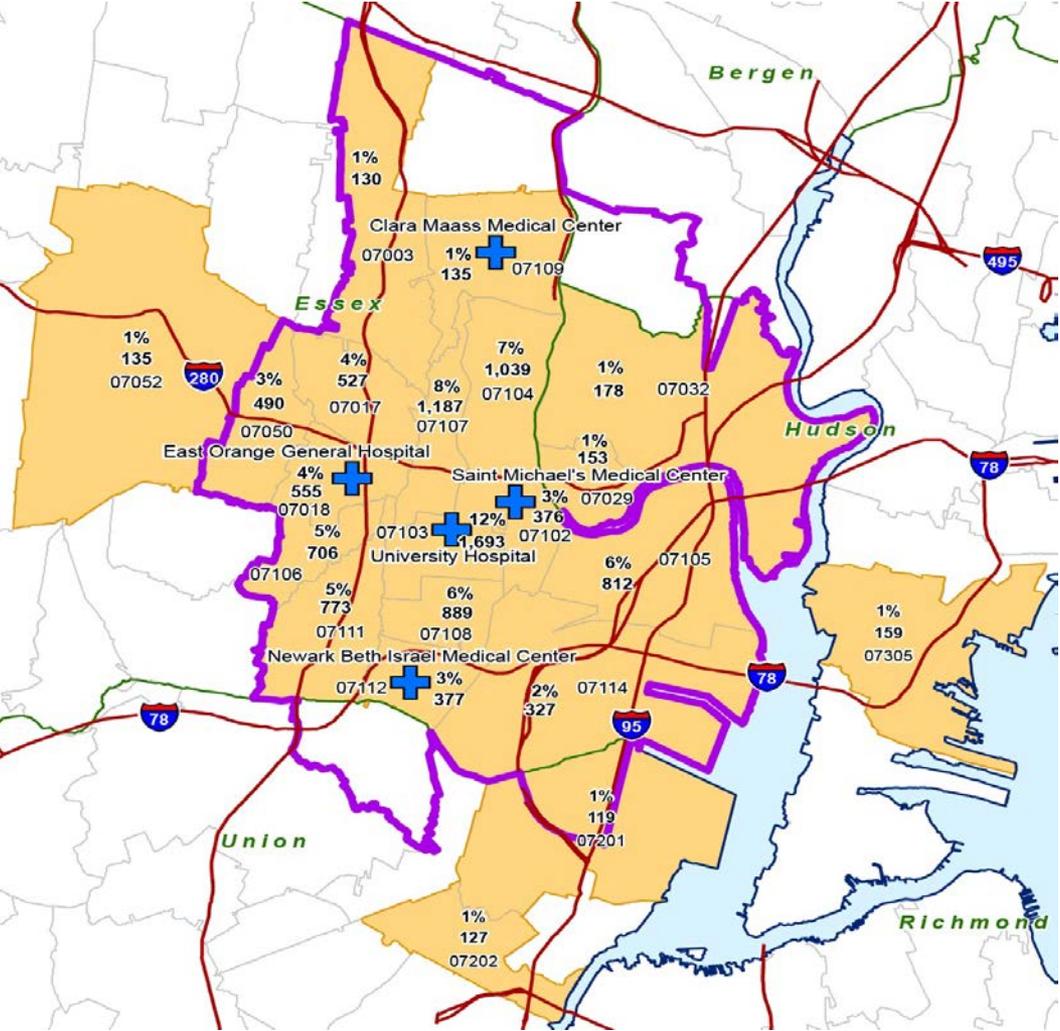
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07105	Essex County	730	9%	24%	3,800	19%
07103	Essex County	588	7%	31%	4,998	12%
07107	Essex County	523	6%	37%	4,980	11%
07032	Hudson County	489	6%	43%	3,710	13%
07102	Essex County	462	6%	49%	1,891	24%
07017	Essex County	403	5%	54%	5,575	7%
07108	Essex County	382	5%	59%	4,135	9%
07111	Essex County	314	4%	62%	6,569	5%
07106	Essex County	298	4%	66%	3,679	8%
07050	Essex County	285	3%	70%	4,211	7%
07029	Hudson County	276	3%	73%	1,448	19%
07018	Essex County	247	3%	76%	4,256	6%
Total in Stark Service Area		6,187	76%	-	56,226	11%
All Other Essex County Zip Codes		865	11%	87%	36,801	2%
All Other		1,091	13%	100%		
Total		8,143	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

University Hospital Stark Service Area



- Planning Area
- UH Stark SA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

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University Hospital

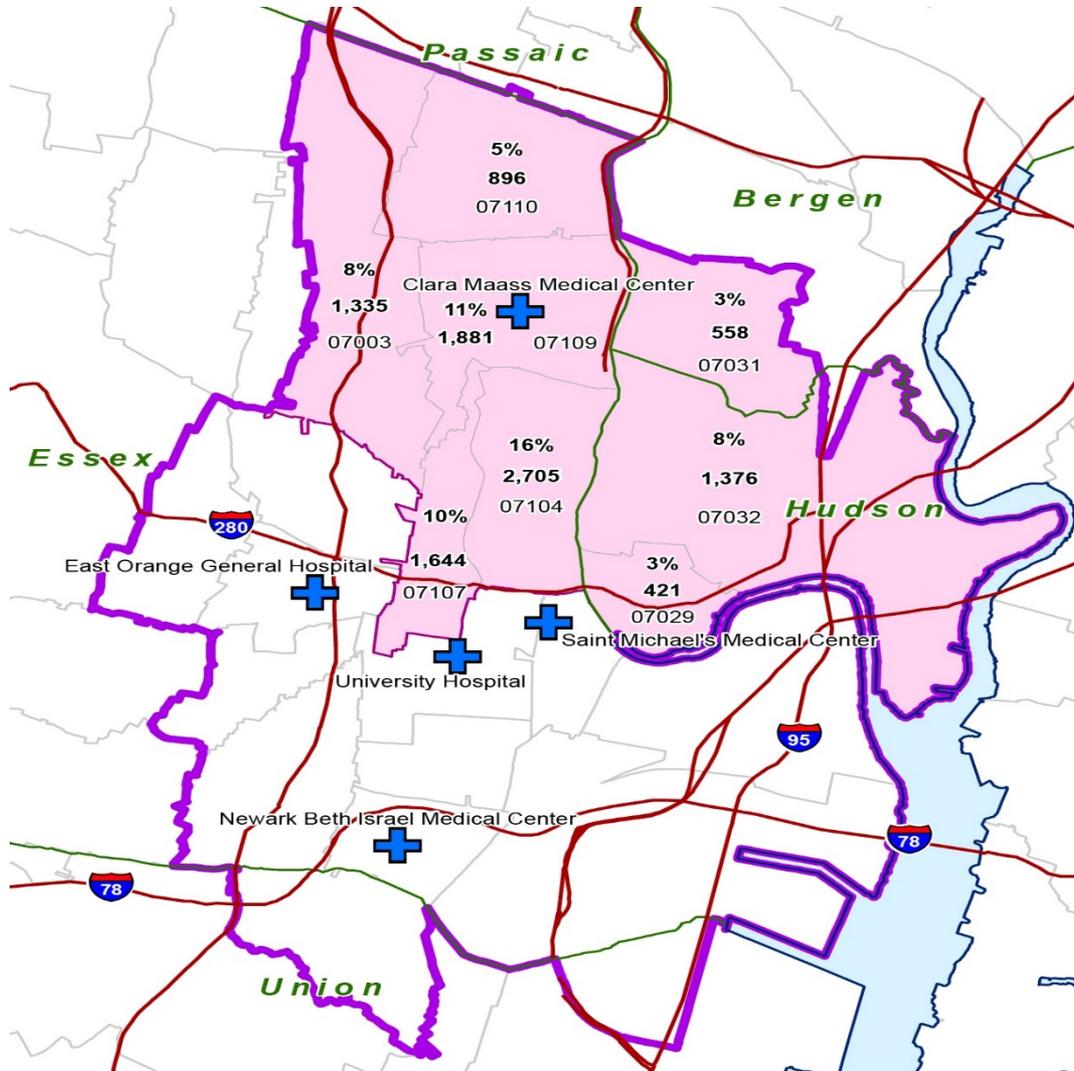
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07104	Essex County	1,039	7%	27%	6,974	15%
07108	Essex County	889	6%	33%	4,135	21%
07105	Essex County	812	6%	39%	3,800	21%
07111	Essex County	773	5%	44%	6,569	12%
07106	Essex County	706	5%	49%	3,679	19%
07018	Essex County	555	4%	53%	4,256	13%
07017	Essex County	527	4%	57%	5,575	9%
07050	Essex County	490	3%	60%	4,211	12%
07112	Essex County	377	3%	63%	3,811	10%
07102	Essex County	376	3%	66%	1,891	20%
07114	Essex County	327	2%	68%	1,575	21%
07032	Hudson County	178	1%	69%	3,710	5%
07029	Hudson County	153	1%	70%	1,448	11%
07052	Essex County	135	1%	71%	4,717	3%
07109	Essex County	135	1%	72%	3,804	4%
07003	Essex County	130	1%	73%	4,990	3%
Total in Stark Service Area		10,482	73%	-	75,123	14%
All Other Essex County Zip Codes		324	2%	75%	19,798	2%
All Other		3,569	25%	100%		
Total		14,375	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

Clara Maass Medical Center Core Service Area



Planning Area
 CMMC CSA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

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Clara Maass Medical Center

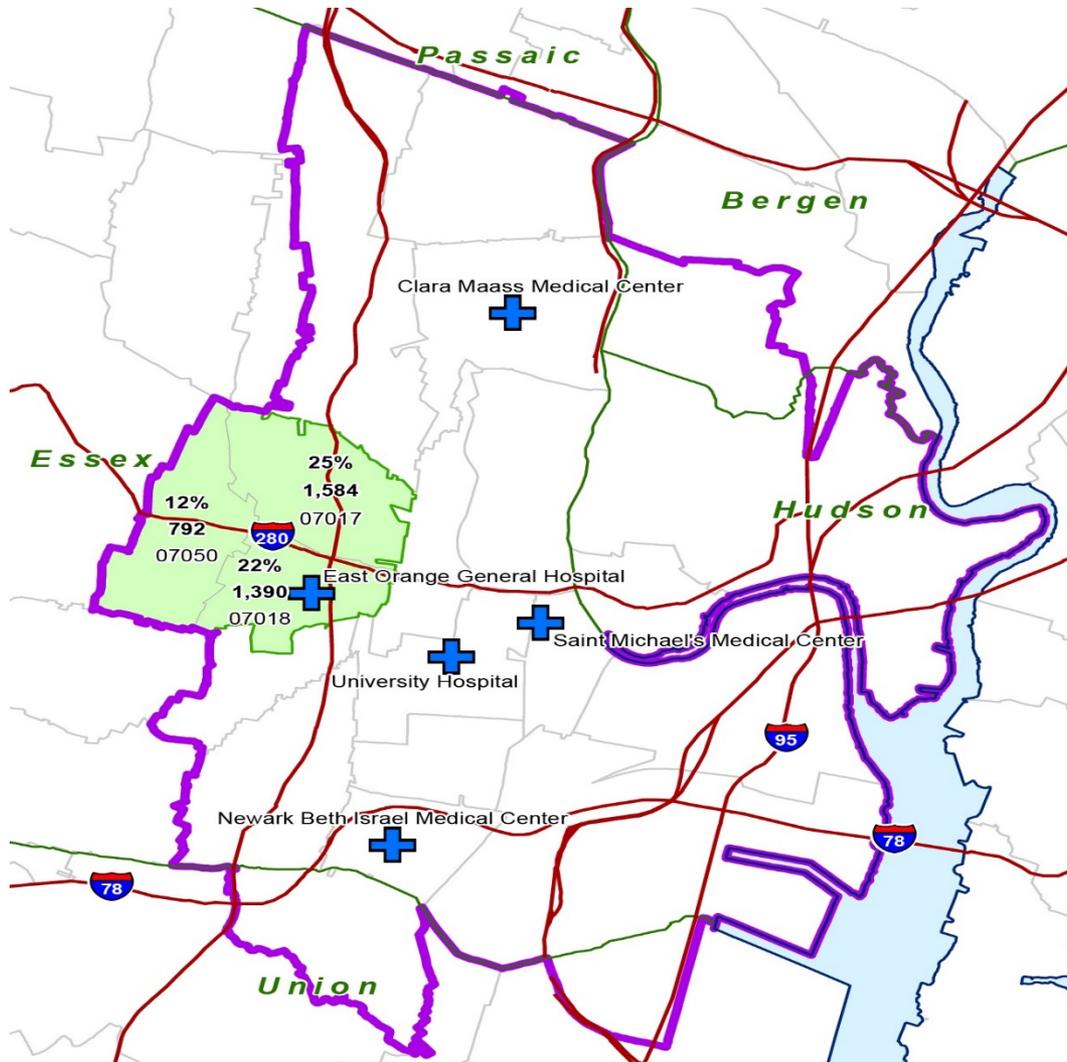
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07032	Hudson County	1,376	8%	45%	3,710	37%
07003	Essex County	1,335	8%	53%	4,990	27%
07110	Essex County	896	5%	58%	2,708	33%
07031	Bergen County	558	3%	62%	1,539	36%
07029	Hudson County	421	3%	64%	1,448	29%
Total in Core Service Area		10,816	64%	-	30,153	36%
All Other Essex County Zip Codes		3,095	18%	83%	66,431	5%
All Other		2,913	17%	100%		
Total		16,824	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

East Orange General Hospital Core Service Area



- Planning Area
- EOGH CSA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

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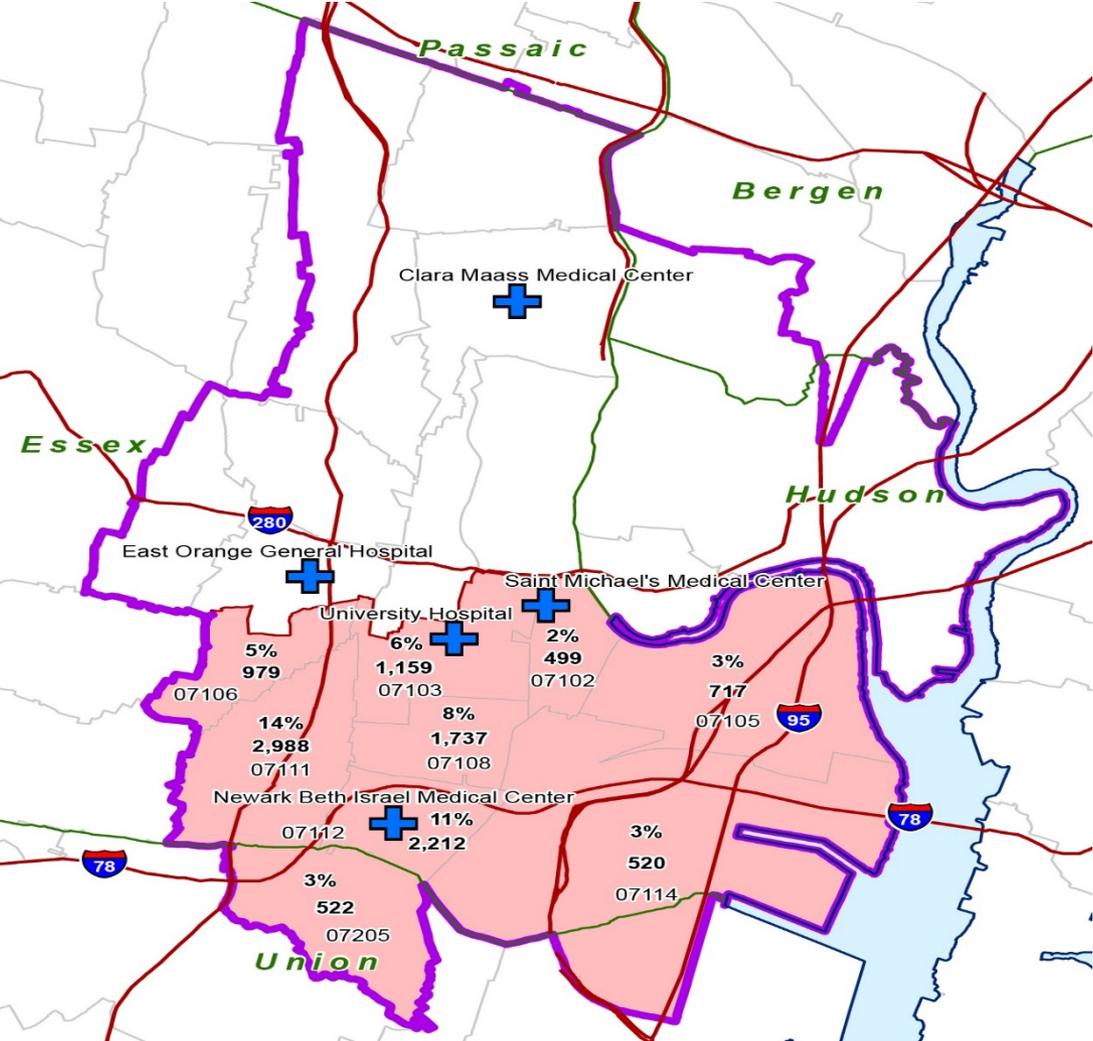
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07017	Essex County	1,584	25%	25%	5,575	28%
07018	Essex County	1,390	22%	47%	4,256	33%
07050	Essex County	792	12%	59%	4,211	19%
Total in Core Service Area		3,766	59%	-	14,042	27%
All Other Essex County Zip Codes		2,574	40%	99%	74,892	3%
All Other		33	1%	100%		
Total		6,373	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

Newark Beth Israel Medical Center Core Service Area



Planning Area
 NBIMC CSA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

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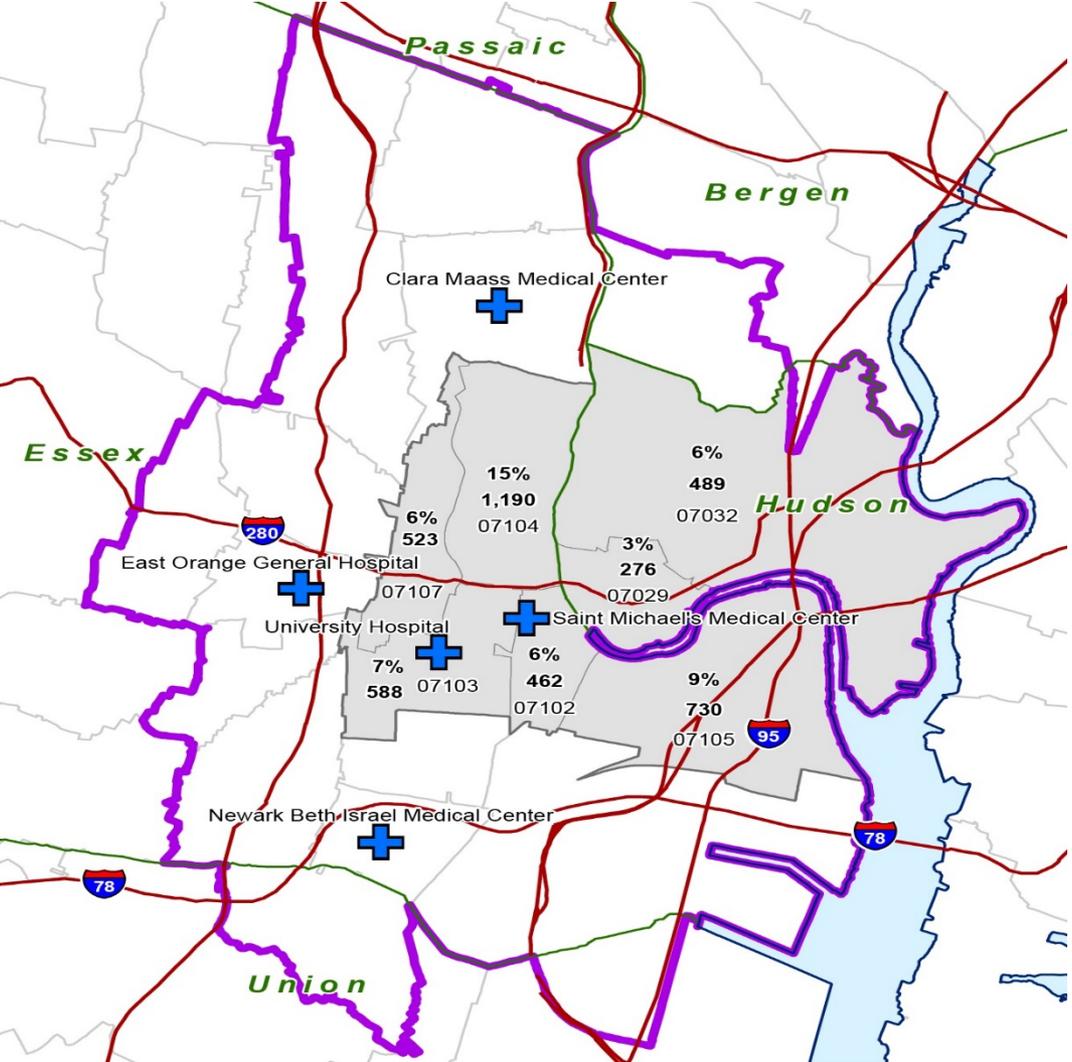
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07108	Essex County	1,737	8%	33%	4,135	42%
07103	Essex County	1,159	6%	39%	4,998	23%
07106	Essex County	979	5%	44%	3,679	27%
07105	Essex County	717	3%	47%	3,800	19%
07205	Union County	522	3%	50%	2,109	25%
07114	Essex County	520	3%	52%	1,575	33%
07102	Essex County	499	2%	55%	1,891	26%
Total in Core Service Area		11,333	55%	-	32,567	35%
All Other Essex County Zip Codes		4,300	21%	75%	59,429	7%
All Other		5,136	25%	100%		
Total		20,769	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

Saint Michaels Medical Center Core Service Area



- Planning Area
- SMMC CSA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

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Saint Michaels Medical Center

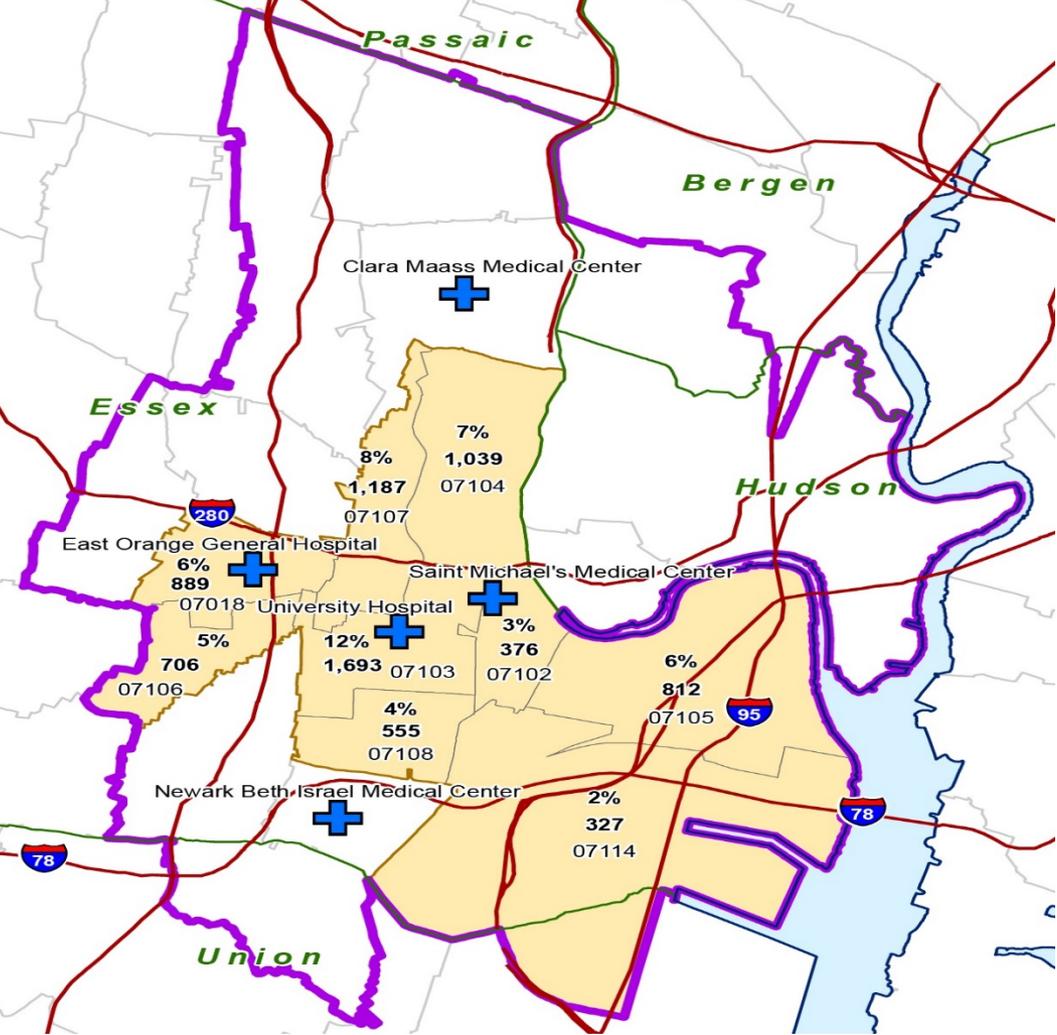
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07107	Essex County	523	6%	37%	4,980	11%
07032	Hudson County	489	6%	43%	3,710	13%
07102	Essex County	462	6%	49%	1,891	24%
07029	Hudson County	276	3%	52%	1,448	19%
Total in Core Service Area		4,258	52%	-	27,801	15%
All Other Essex County Zip Codes		2,891	36%	88%	65,226	4%
All Other		994	12%	100%		
Total		8,143	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

University Hospital Core Service Area



- Planning Area
- UH CSA

Note: Numbers above each zip code represent the hospital's discharges from that zip code, and the percent of its total discharges that are derived from that zip code, respectively.

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University Hospital

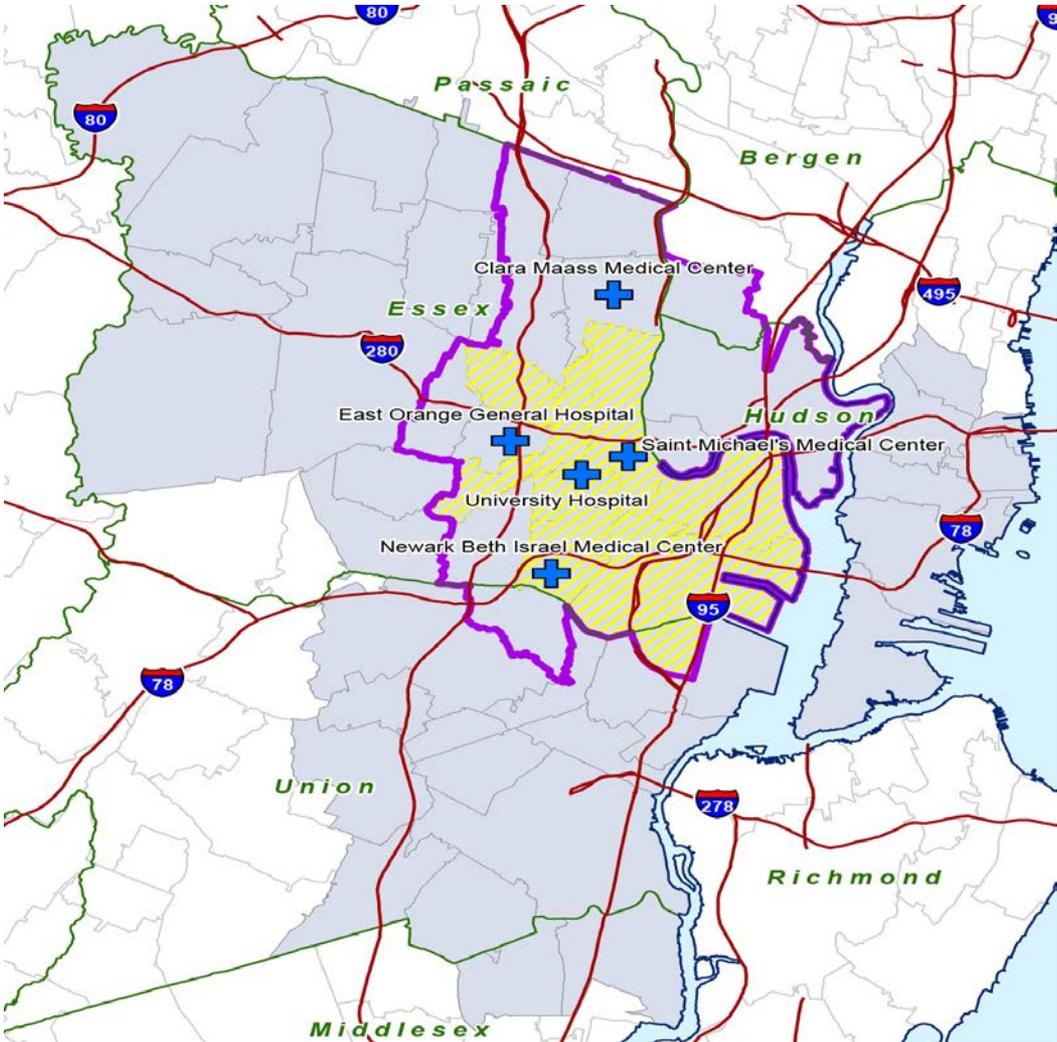
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Zip Code	County	Hospital Volume	% Total	Cumulative %	Market Volume	Market Share
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07107	Essex County	1,187	8%	20%	4,980	24%
07104	Essex County	1,039	7%	27%	6,974	15%
07108	Essex County	889	6%	33%	4,135	21%
07105	Essex County	812	6%	39%	3,800	21%
07106	Essex County	706	5%	44%	3,679	19%
07018	Essex County	555	4%	48%	4,256	13%
07102	Essex County	376	3%	50%	1,891	20%
07114	Essex County	327	2%	53%	1,575	21%
Total in Core Service Area		7,584	53%	-	36,288	21%
All Other Essex County Zip Codes		2,891	20%	73%	53,475	5%
All Other		3,900	27%	100%		
Total		14,375	100%			

Excludes normal newborns.

Source: Navigant analysis based on 2013 New Jersey State Discharge Database.

Dartmouth Atlas Newark HRR and HSA

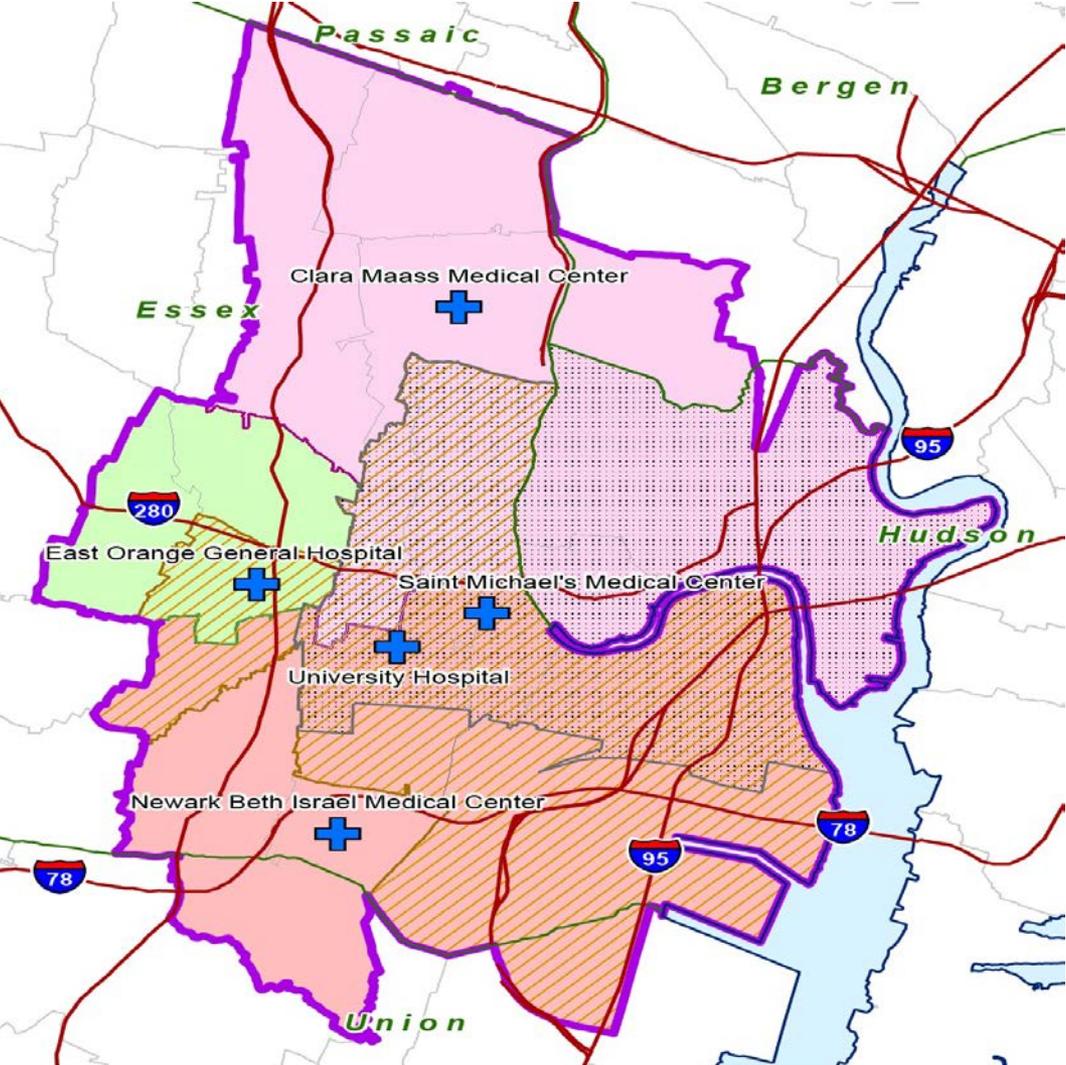


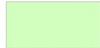
-  Planning Area
-  Dartmouth Newark HSA
-  Dartmouth Newark HRR

Source: Navigant analysis based on 2012 Dartmouth Atlas.
Note: CMMC and NBIMC are both part of Barnabas Health.



Final Planning Area for Study



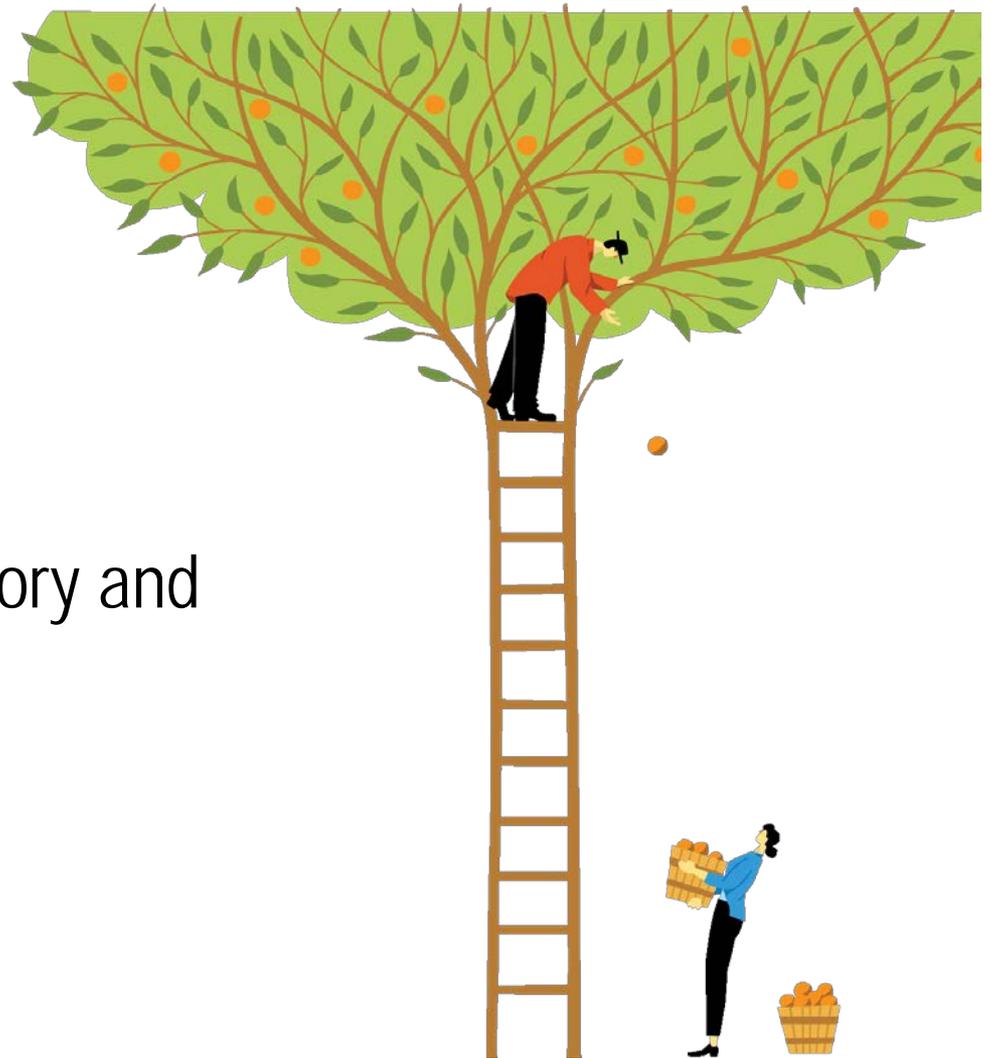
-  Planning Area
-  SMMC CSA
-  UH CSA
-  CMMC CSA
-  EOGH CSA
-  NBIMC CSA

» Conclusion: There is considerable overlap among the five hospitals' Core Service Areas

Note: CMMC and NBIMC are both part of Barnabas Health.

Appendix B

Healthcare Utilization History and Projections



Newark-Union MSA Hospital Statistics

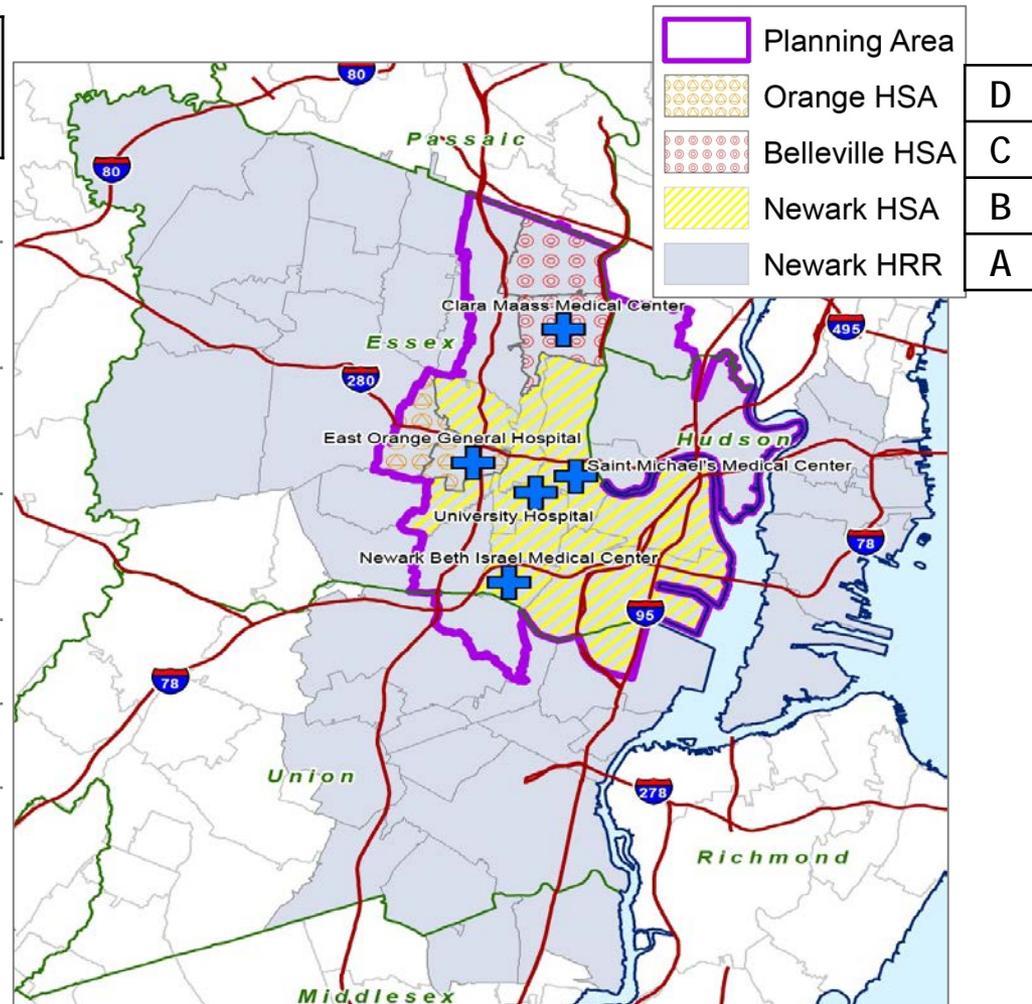
Area	Hospitals				Beds					ADC				
	1999	2003	2007	2012	1999	2003	2007	2012	% Change 1999-2012	1999	2003	2007	2012	% Change 1999-2012
Newark-Union MSA	23	21	16	19	8,298	7,230	5,727	5,843	(29.6%)	5,635	5,207	4,227	4,368	(22.5%)
New Jersey Total	81	78	73	77	24,570	22,807	21,544	21,162	(13.9%)	16,856	16,861	15,380	14,679	(12.9%)
United States Total	4,956	4,895	4,897	4,999	829,575	813,307	800,892	800,566	(3.5%)	525,744	538,797	533,250	507,292	(3.5%)

Source: AHA Statistics Guide 2014, 2009, 2005, 2001. AHA Guide Quick Disk 2011, 2014

Dartmouth Atlas Newark HRR and Area HSAs

Indicator	A Newark HRR	B Newark HSA	C Belleville HSA	D Orange HSA	NJ Average	US Average
Acute Hospital Beds Per 1,000	2.6	3.7	2.4	3.5	N/A	2.4
Total Hospital Discharges Per 1,000*	322	412	321	364	328	316
Medical Hospital Discharges Per 1,000*	235	307	229	266	239	226
Surgical Hospital Discharges Per 1,000*	86	102	92	95	89	90
Inpatient Days Per Enrollee*	1.9	2.6	1.9	2.3	1.9	1.6
Reimbursements Per Enrollee*	\$9,764	\$10,977	\$10,149	\$10,798	\$9,861	\$9,584
All Physicians per 100,000 Residents	223	193	203	250	N/A	202

*Medicare data

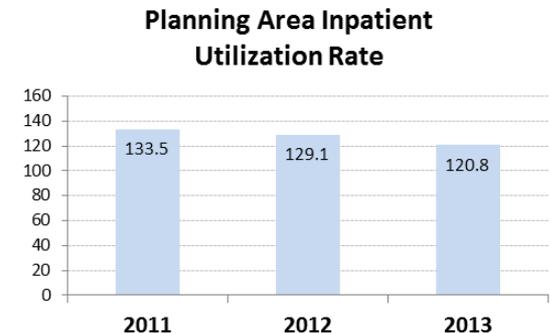
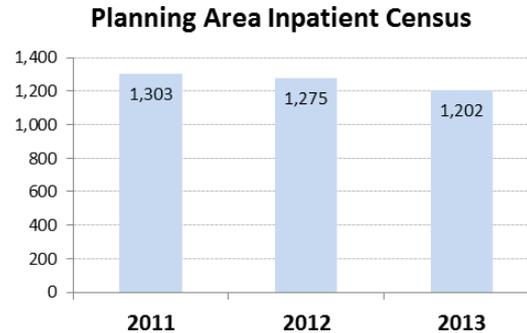
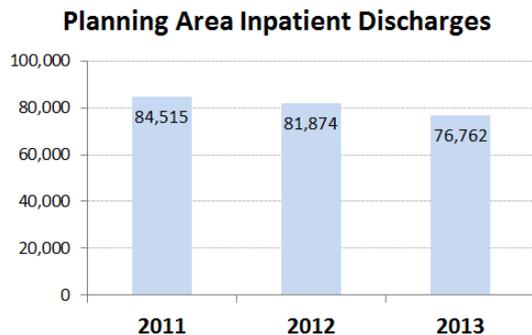


HEALTHCARE

Source: Navigant analysis based on 2012 Dartmouth Atlas.

Utilization Trends in the Planning Area

Planning Area Demand for Services	2011	2012	2013	CAGR '11-'13	Trend
Inpatient Discharges	84,515	81,874	76,762	(4.7%)	↓↓↓
Inpatient Days	475,413	465,265	438,821	(3.9%)	↓↓↓
Observation Days	14,721	13,525	14,329	(1.3%)	↓
ALOS	5.63	5.68	5.72	0.8%	↔
Use Rate per 1,000 Population	133.5	129.1	120.8	(4.9%)	↓↓↓
Inpatient ADC	1,303	1,275	1,202	(4.0%)	↓↓↓



Source: Navigant analysis



Historical Planning Area Use Rate by Service Line

Service Line	P.A. Volume			CAGR	Use Rate			CAGR
	2011	2012	2013	'11-'13	2011	2012	2013	'11-'13
Cardiac Services	11,134	10,554	9,478	(7.7%)	17.59	16.64	14.92	(7.9%)
Cardiac Surgery	522	523	529	0.7%	0.82	0.82	0.83	1.2%
ENT	1,192	1,023	994	(8.7%)	1.88	1.61	1.56	(8.9%)
General Medicine	25,851	24,974	23,336	(5.0%)	40.85	39.39	36.73	(5.2%)
General Surgery	6,047	6,052	6,057	0.1%	9.56	9.55	9.53	(0.1%)
Gynecology	1,417	1,291	1,044	(14.2%)	2.24	2.04	1.64	(14.3%)
Neonatology	3,287	3,235	3,015	(4.2%)	5.19	5.10	4.74	(4.4%)
Neurology	4,099	3,832	3,769	(4.1%)	6.48	6.04	5.93	(4.3%)
Neurosurgery	503	498	460	(4.4%)	0.79	0.79	0.72	(4.6%)
Obstetrics	10,228	10,203	9,824	(2.0%)	16.16	16.09	15.46	(2.2%)
Oncology/Hematology	3,534	3,564	3,306	(3.3%)	5.58	5.62	5.20	(3.5%)
Ophthalmology	175	153	142	(9.9%)	0.28	0.24	0.22	(10.1%)
Orthopedics	3,034	2,924	2,834	(3.4%)	4.79	4.61	4.46	(3.5%)
Rehabilitation	76	58	51	(18.1%)	0.12	0.09	0.08	(18.2%)
Spine	906	855	861	(2.5%)	1.43	1.35	1.36	(2.7%)
Thoracic Surgery	392	420	355	(4.8%)	0.62	0.66	0.56	(5.0%)
Transplant	10	11	8	(10.6%)	0.02	0.02	0.01	(10.7%)
Trauma	512	571	494	(1.8%)	0.81	0.90	0.78	(2.0%)
Urology	1,265	1,236	1,046	(9.1%)	2.00	1.95	1.65	(9.3%)
Vascular Services	1,856	1,746	1,716	(3.8%)	2.93	2.76	2.70	(4.0%)
Psychiatry	8,475	8,155	7,443	(6.3%)	13.39	12.86	11.71	(6.5%)
Service Line Total	84,515	81,895	76,762	(4.7%)	133.55	129.15	120.80	(4.9%)

Source: NJ State Data; Navigant analysis

Appendix for Final Report • Greater Newark Healthcare Services Evaluation

Inpatient Discharge Projections for the Planning Area

Scenarios and Assumptions

Historical Inpatient Utilization Rates
Total Discharges per 1,000 Population

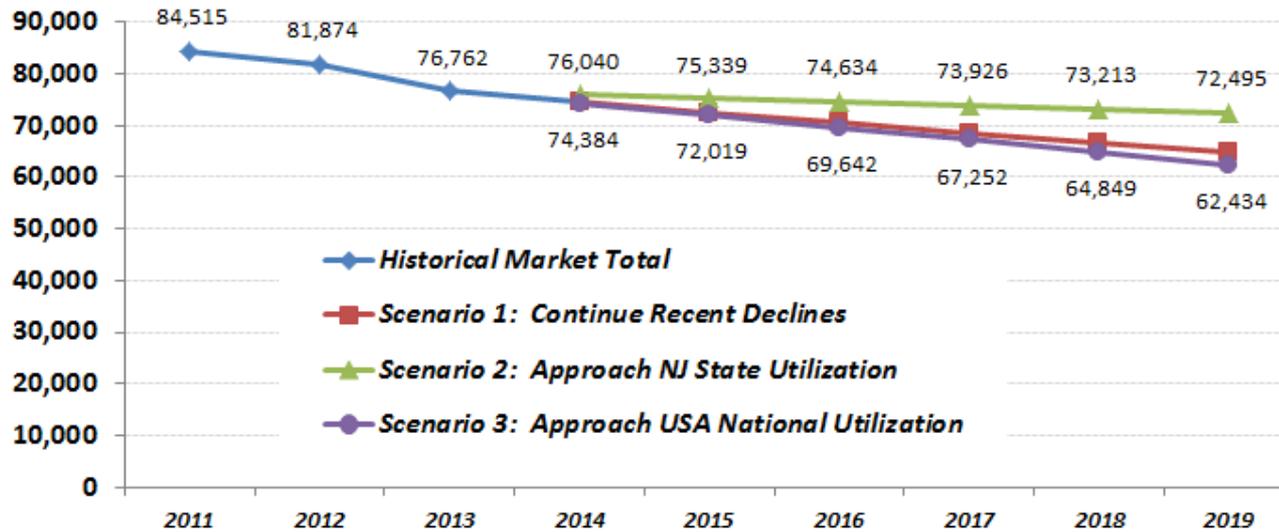
	2011	2012	2013	2011-13 CAGR
Planning Area	133.5	129.1	120.8	-4.9%
New Jersey Overall	119.1	118.2	114.0	-2.2%
US National	111.8	109.7	106.3	-2.5%

Sources: Planning Area data from NJ and NY state discharge databases. NJ and US data from AHA Hospital Statistics

Volume Scenario	Key Scenario Assumption
Scenario 1: Continue Recent Declines	<ul style="list-style-type: none"> Continued decline of 3% annually in the inpatient utilization model (slightly lower rate of decline than 2011-2013)
Scenario 2: Approach NJ State Utilization	<ul style="list-style-type: none"> Utilization rates in the planning area have historically been 7-14 points higher than for the state overall. This scenario drops IP utilization rates 7 points over the next 5 years in the planning area
Scenario 3: Approach USA National Utilization	<ul style="list-style-type: none"> Utilization rates in the planning area have historically been 19-22 pts higher than for the nation overall; this scenario drops IP utilization 20 points over the next 5 years

Inpatient Discharge Projections for the Planning Area

Total Planning Area Discharge Projection Scenarios



Projected Inpatient Utilization Rates in the Planning Area - Discharges per 1,000 Population

	2011	2012	2013	2014	2015	2016	2017	2018	2019
--	------	------	------	------	------	------	------	------	------

Planning Area Historical	133.5	129.1	120.8						
Scenario 1: Continue Recent Declines				117.2	113.7	110.3	106.9	103.7	100.6
Scenario 2: Approach NJ State Utilization				119.4	118.0	116.6	115.2	113.8	112.4
Scenario 3: Approach USA National Utilization				116.8	112.8	108.8	104.8	100.8	96.8

Source: Navigant analysis

HEALTHCARE

Inpatient Census Projections for the Planning Area

	Planning Area Total Inpatient Census								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
Constant ALOS (Scenarios A1, A2, A3)									
Planning Area Historical	1,303	1,275	1,202						
Scenario 1: Continue Recent Declines				1,169	1,137	1,106	1,075	1,046	1,017
Scenario 2: Approach NJ State Utilization				1,192	1,181	1,170	1,159	1,147	1,136
Scenario 3: Approach USA National Utilization				1,166	1,129	1,091	1,054	1,016	978
Decreasing ALOS (Scenarios B1, B2, B3) - ALOS decreases to NJ/National Averages									
Planning Area Historical	1,303	1,275	1,202						
Scenario 1: Continue Recent Declines				1,145	1,090	1,036	985	936	889
Scenario 2: Approach NJ State Utilization				1,167	1,131	1,096	1,061	1,027	993
Scenario 3: Approach USA National Utilization				1,141	1,081	1,023	965	910	855

Source: Navigant analysis

Appendix C

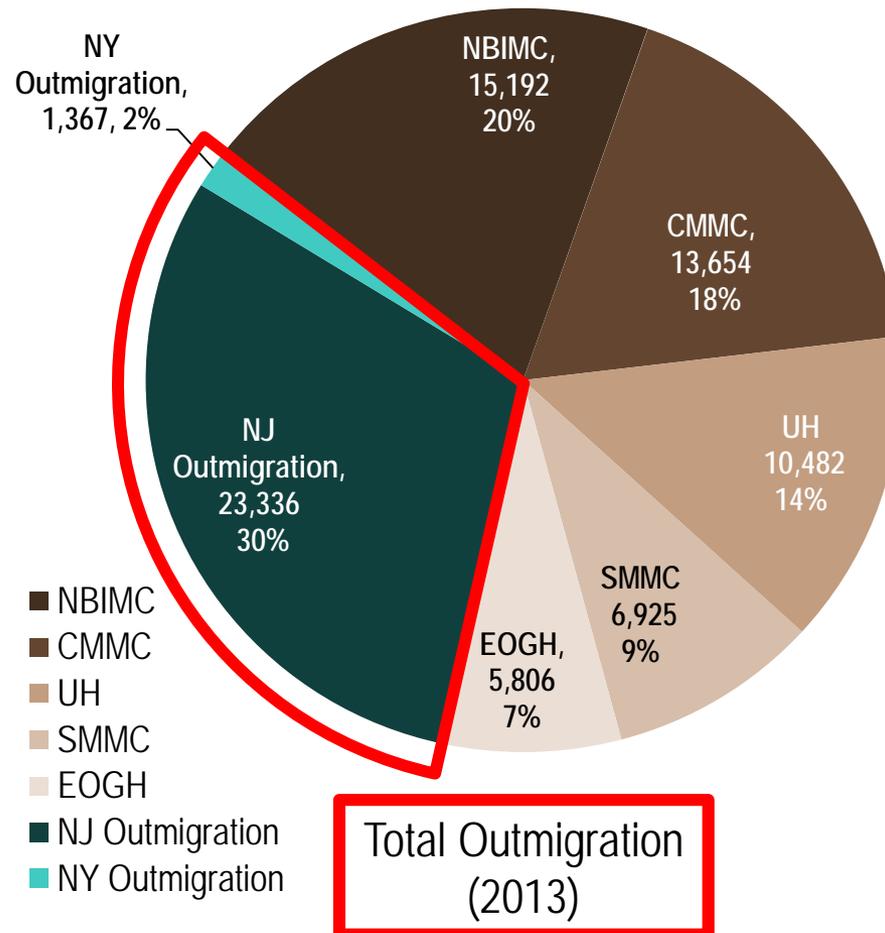
Outmigration Analysis



Outmigration Total Proportions

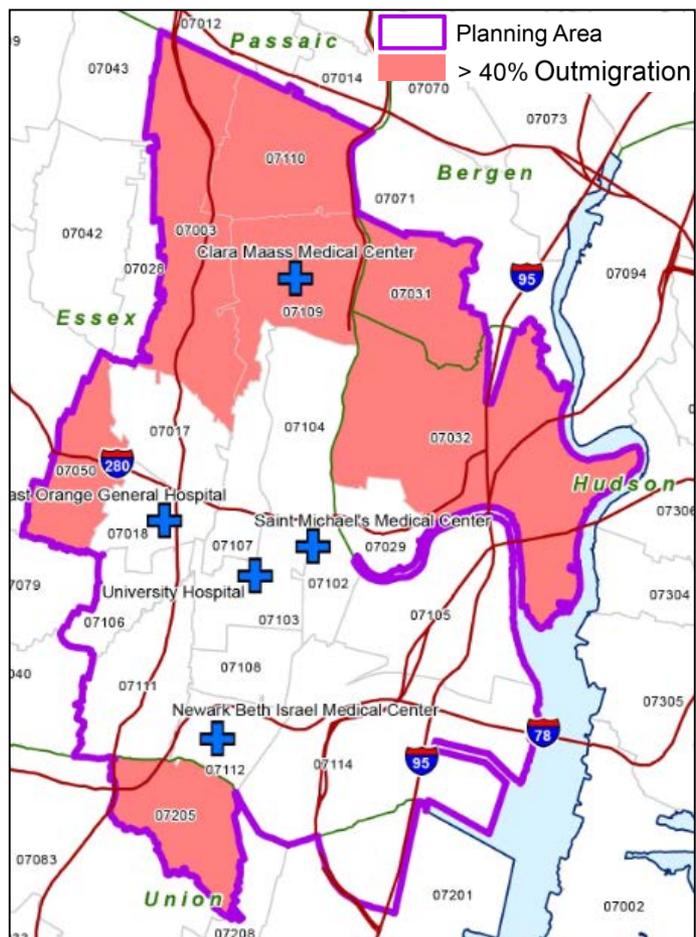
Planning Area Discharges (2013)

n = 76,762



Source: NJ State Data 2013

Locales Within Planning Area that have Highest Levels of Outmigration



ZIP Codes with >35% Outmigration (2013)

ZIP Code	City	5 Planning Area Hospitals	Total Outmigration	Total Market Size	% Outmigration (Total)
07205	Hillside	686	1,423	2,109	67.5%
07003	Bloomfield	1,791	3,199	4,990	64.1%
07110	Nutley	986	1,722	2,708	63.6%
07031	North Arlington	670	869	1,539	56.5%
07050	Orange	2,336	1,875	4,211	44.5%
07109	Belleville	2,258	1,546	3,804	40.6%
07032	Kearny	2,259	1,451	3,710	39.1%
07029	Harrison	923	525	1,448	36.3%

Source: NJ and NY state discharge databases. Note: Excludes DRG 795, LOS =0, and invalid DRGs.

Locales Within Planning Area that have Highest Levels of Outmigration

Zip Codes with 1,000+ Outmigrating Discharges (2013)

ZIP Code	City	5 Planning Area Hospitals	NJ & NY Outmigration	Total Discharges	% Outmigration
07003	Bloomfield	1,791	3,199	4,990	64.1%
07111	Irvington	4,634	1,935	6,569	29.5%
07050	Orange	2,336	1,875	4,211	44.5%
07110	Nutley	986	1,722	2,708	63.6%
07017	East Orange	3,970	1,605	5,575	28.8%
07109	Belleville	2,258	1,546	3,804	40.6%
07032	Kearny	2,259	1,451	3,710	39.1%
07205	Hillside	686	1,423	2,109	67.5%
07118	East Orange	3,072	1,184	4,256	27.8%
07104	Newark	5,799	1,175	6,974	16.8%
07106	Newark	2,510	1,169	3,679	31.8%

Outmigration by Service Line

Planning Area Outmigration (2013)

Service Line	5 Planning Area Hospitals	NJ Outmigration	NY Outmigration	Total Outmigration	Total Discharges	% PA Hospital % of Total Discharges	Outmigration as % of Total Discharges
Cardiac Services	7,165	2,186	127	2,313	9,478	75.6%	24.4%
Cardiac Surgery	257	231	41	272	529	48.6%	51.4%
ENT	699	269	26	295	994	70.3%	29.7%
General Medicine	17,089	6,001	246	6,247	23,336	73.2%	26.8%
General Surgery	3,861	2,038	158	2,196	6,057	63.7%	36.3%
Gynecology	595	424	25	449	1,044	57.0%	43.0%
Neonatology	1,871	1,090	54	1,144	3,015	62.1%	37.9%
Neurology	2,667	1,034	68	1,102	3,769	70.8%	29.2%
Neurosurgery	285	142	33	175	460	62.0%	38.0%
Obstetrics	5,984	3,704	136	3,840	9,824	60.9%	39.1%
Oncology/Hematology	2,303	924	79	1,003	3,306	69.7%	30.3%
Ophthalmology	106	32	4	36	142	74.6%	25.4%
Orthopedics	1,746	984	104	1,088	2,834	61.6%	38.4%
Psychiatry	4,598	2,737	108	2,845	7,443	61.8%	38.2%
Rehabilitation	0	33	18	51	51	0.0%	100.0%
Spine	353	455	53	508	861	41.0%	59.0%
Thoracic Surgery	208	133	14	147	355	58.6%	41.4%
Transplant	4	1	3	4	8	50.0%	50.0%
Trauma	329	152	13	165	494	66.6%	33.4%
Urology	691	327	28	355	1,046	66.1%	33.9%
Vascular Services	1,248	439	29	468	1,716	72.7%	27.3%
All Service Lines	52,059	23,336	1,367	24,703	76,762	67.8%	32.2%

Case Mix Index of Outmigrating Patients

2013 Planning Area Discharges

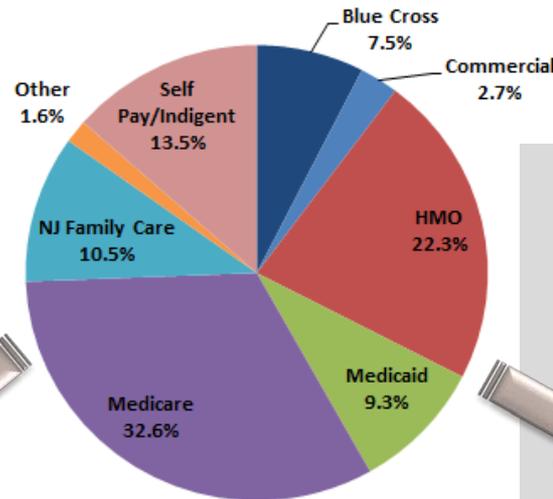
Metrics (2013)	5 Area Hospitals	NJ Outmigration	NY Outmigration	Total
Discharges	52,059	23,336	1,367	76,762
% of Total	67.8%	30.4%	1.8%	100.0%
ALOS	5.7	6.5	5.5	5.9
CMI	1.4	1.9	1.9	1.5

Source: NJ and NY state discharge databases. Note: Excludes DRG 795, LOS =0, and invalid DRGs.

Insurance Profile of Outmigrating Patients

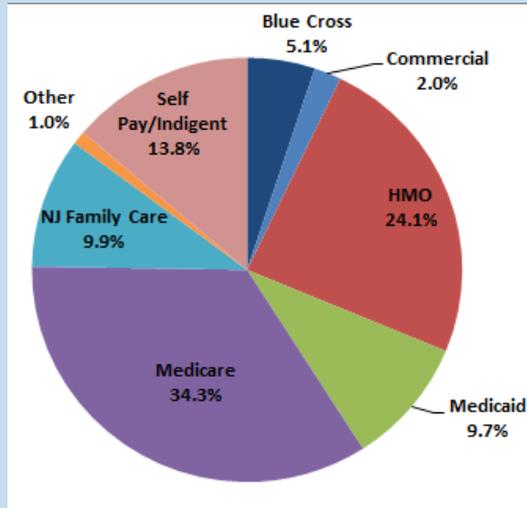
- The proportion of commercially insured patients (Blue Cross + Other Commercial) who outmigrate for care is more than twice the proportion of commercially insured patients who stay in the planning area

2013 Inpatient Payer Mix of Entire Planning Area
(regardless of where patients are discharged)



Patients Who Stay Local

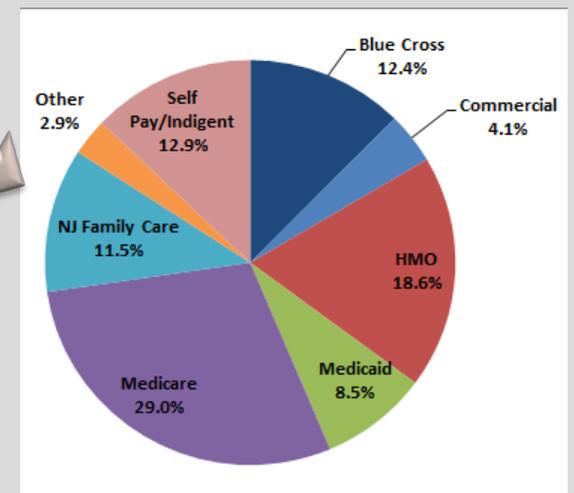
2013 Inpatient Payer Mix Planning Area Residents Who Stay Local for Care



(patients who live in the planning area and were discharged from one of the 5 study hospitals)

Outmigration

2013 Inpatient Payer Mix Planning Area Residents Who Outmigrate for Care



(patients who live in the planning area but were discharged from a hospital outside the planning area)

- ✓ In general, the payer mix of those who outmigrate shows: less self pay, more commercial, less Medicare, less Medicaid, less HMO

Source: NJ state discharge database

Appendix D

Medical Staff Detail



Medical Staff Overlap Analysis

Physician Overlap by Hospital				
Percent	CMMC	EOGH	NBIMC	SMMC
CMMC	-	15%	14%	34%
EOGH	6%	-	13%	16%
NBIMC	15%	34%	-	20%
SMMC	21%	25%	12%	-
Total Overlap	32%	45%	27%	48%
Number	CMMC	EOGH	NBIMC	SMMC
CMMC	-	42	106	148
EOGH	42	-	94	71
NBIMC	106	94	-	89
SMMC	148	71	89	-
Total Overlap	221	125	201	209
Total Staff	700	279	745	439

Specialty	# Overlapping Physicians	# Total Physicians	% Overlap
Cardiology	59	122	48%
Internal Medicine	45	259	17%
Nephrology	24	41	59%
Urology	17	34	50%
Diagnostic Radiology	16	147	11%
Infectious Disease	15	25	60%
Gastroenterology	13	31	42%
Neonatology	13	18	72%
Hematology/Oncology	12	24	50%
General Surgery	11	62	18%

Note that UH did not provide sufficient information to perform overlap analysis
Source: Navigant analysis.

Clara Maass Medical Center Physician Age Analysis

Speciality	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Primary Care							
Family/General Practice	2	5	2	8	9	26	65%
Internal Medicine	16	32	26	23	54	151	51%
Obstetrics/Gynecology	9	14	5	6	8	42	33%
Pediatrics	9	7	5	8	24	53	60%
Subtotal Primary Care	36	58	38	45	95	272	51%
Medical Subspecialties							
Allergy/Immunology	-	-	-	-	1	1	100%
Cardiology	2	16	8	6	12	44	41%
Dermatology	2	3	-	1	4	10	50%
Endocrinology	2	1	2	1	1	7	29%
Gastroenterology	-	-	3	4	2	9	67%
Hematology/Oncology	-	2	-	3	4	9	78%
Infectious Disease	-	4	3	2	2	11	36%
Neonatology	-	5	1	2	5	13	54%
Nephrology	4	4	-	2	4	14	43%
Neurology	1	1	-	1	5	8	75%
Perinatology	-	-	-	1	-	1	100%
Pulmonary Medicine	-	1	1	2	-	4	50%
Radiation Therapy	-	-	2	1	2	5	60%
Rheumatology	-	1	1	-	-	2	0%
Subtotal Medical Subspecialties	11	38	21	26	42	138	49%

Speciality	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Subsurgical Specialties							
CT Surgery	-	-	-	-	1	1	100%
ENT	-	3	-	-	2	5	40%
General Surgery	6	14	8	4	11	43	35%
Neurosurgery	-	-	-	-	1	1	100%
Oncology Surgery	-	4	-	-	-	4	0%
Ophthalmology	4	10	6	8	18	46	57%
Orthopedics	1	8	5	1	12	27	48%
Plastic Surgery	-	4	5	2	1	12	25%
Urology	-	13	-	2	5	20	35%
Vascular Surgery	-	1	-	-	2	3	67%
Subtotal Surgical Subspecialties	11	57	24	17	53	162	43%
Other Subspecialties							
Occupational Medicine	-	-	-	1	-	1	100%
Pediatric Subspecialty	-	3	3	2	5	13	54%
Physical Medicine/Rehab	-	-	2	2	4	8	75%
Podiatry	1	4	1	4	1	11	45%
Psychiatry	1	3	-	1	7	12	67%
Subtotal Other Subspecialties	2	10	6	10	17	45	60%
Hospital-Based Specialties							
Anesthesia & Pain Management	2	4	2	5	7	20	60%
Critical Care/Intensivist	-	-	1	-	1	2	50%
Diagnostic Radiology	9	13	12	1	-	35	3%
Emergency Medicine	6	6	2	2	1	17	18%
Pathology	-	3	2	1	3	9	44%
Subtotal Hospital-Based Specialties	17	26	19	9	12	83	25%
Grand Total	77	189	108	107	219	700	47%

Source: Navigant - Medical Roster - CMMC NBI Hosps with names v2.

Appendix for Final Report • Greater Newark Healthcare Services Evaluation

East Orange General Hospital Physician Age Analysis- *Limited to Physicians that Overlap at Study Hospitals*

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Primary Care							
Internal Medicine	3	1	8	6	7	25	52%
Obstetrics/Gynecology	-	-	-	-	2	2	100%
Subtotal Primary Care	3	1	8	6	9	27	56%
Medical Subspecialties							
Allergy/Immunology	-	-	-	-	1	1	100%
Cardiology	1	5	1	2	5	14	50%
Endocrinology	1	-	-	-	1	2	50%
Gastroenterology	-	-	2	1	4	7	71%
Hematology/Oncology	-	2	1	3	2	8	63%
Infectious Disease	-	1	1	2	3	7	71%
Nephrology	4	4	-	3	4	15	47%
Neurology	-	-	-	-	2	2	100%
PulmonaryMedicine	-	-	-	1	4	5	100%
Subtotal Medical Subspecialties	6	12	5	12	26	61	62%

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Subsurgical Specialties							
CT Surgery	-	-	-	-	1	1	100%
ENT	-	-	-	1	1	2	100%
General Surgery	2	-	3	-	1	6	17%
Oncology Surgery	-	1	1	-	1	3	33%
Ophthalmology	-	1	-	1	2	4	75%
Orthopedics	-	-	1	1	3	5	80%
Urology	-	1	1	1	1	4	50%
Vascular Surgery	-	-	-	-	2	2	100%
Subtotal Surgical Subspecialties	2	3	6	4	12	27	59%
Other Subspecialties							
Podiatry	-	-	1	2	1	4	75%
Psychiatry	-	-	-	-	3	3	100%
Subtotal Other Subspecialties	-	-	1	2	4	7	86%
Hospital-Based Specialties							
Anesthesia & Pain Management	-	1	-	-	-	1	0%
Critical Care/Intensivist	-	-	-	1	-	1	100%
Pathology	-	-	-	-	1	1	100%
Subtotal Hospital-Based Specialties	-	1	-	1	1	3	67%
Grand Total	11	17	20	25	52	125	62%

Note: EOGH was unable to provide information pertaining to their physician's age or birthdate; only EOGH physicians that overlapped with other study hospitals were included in the above analysis.

Source: EOGH Physician Directory.

Newark Beth Israel Medical Center Physician Age Analysis

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Primary Care							
Family/General Practice	2	5	4	2	2	15	27%
Geriatrics	-	1	3	1	-	5	20%
Internal Medicine	12	15	13	13	17	70	43%
Obstetrics/Gynecology	2	9	8	2	14	35	46%
Pediatrics	7	22	4	8	24	65	49%
Subtotal Primary Care	23	52	32	26	57	190	44%
Medical Subspecialties							
Allergy/Immunology	-	-	-	-	2	2	100%
Cardiology	6	31	11	16	26	90	47%
Dermatology	-	1	-	-	1	2	50%
Endocrinology	1	-	1	1	3	6	67%
Gastroenterology	1	1	2	4	7	15	73%
Hematology/Oncology	3	-	1	5	7	16	75%
Infectious Disease	2	1	1	4	3	11	64%
Neonatology	1	6	1	2	8	18	56%
Nephrology	8	9	1	6	8	32	44%
Neurology	-	-	1	2	2	5	80%
Perinatology	-	2	-	-	3	5	60%
Pulmonary Medicine	1	1	3	3	5	13	62%
Radiation Therapy	-	1	2	1	-	4	25%
Rheumatology	-	1	-	-	2	3	67%
Subtotal Medical Subspecialties	23	54	24	44	77	222	55%

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Subsurgical Specialties							
CT Surgery	-	1	3	3	4	11	64%
ENT	1	1	2	1	1	6	33%
General Surgery	1	1	3	-	4	9	44%
Neurosurgery	3	4	1	-	1	9	11%
Oncology Surgery	-	3	2	1	1	7	29%
Ophthalmology	-	-	2	4	3	9	78%
Orthopedics	3	2	1	1	6	13	54%
Plastic Surgery	1	2	1	-	3	7	43%
Transplant	3	3	1	1	1	9	22%
Urology	2	3	2	2	3	12	42%
Vascular Surgery	1	1	2	1	4	9	56%
Subtotal Surgical Subspecialties	15	21	20	14	31	101	45%
Other Subspecialties							
All Other	-	-	-	1	4	5	100%
Pediatric Subspecialty	12	25	13	11	16	77	35%
Physical Medicine/Rehab	2	1	1	-	3	7	43%
Podiatry	-	1	1	3	4	9	78%
Psychiatry	4	3	3	5	2	17	41%
Subtotal Other Subspecialties	18	30	18	20	29	115	43%
Hospital-Based Specialties							
Anesthesia & Pain Management	6	7	5	4	10	32	44%
Critical Care/Intensivist	-	2	1	2	3	8	63%
Diagnostic Radiology	9	9	4	2	4	28	21%
Emergency Medicine	19	12	1	-	-	32	0%
Hospitalist (PCP Only)	-	-	1	-	-	1	0%
Interventional Radiology	1	1	2	1	-	5	20%
Pathology	1	3	3	-	4	11	36%
Subtotal Hospital-Based Specialties	36	34	17	9	21	117	26%
Grand Total	115	191	111	113	215	745	44%

Note: All Other in Other Subspecialties includes Clinical Genetics (2), Occupational Medicine (1), Reproductive Endocrinology (1), and Toxicology (1).



Source: Medical Roster - CMMC NBI Hosps with names v2, Navigant analysis.

St. Michael's Medical Center Physician Age Analysis

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Primary Care							
Family/General Practice	-	4	-	-	4	8	50%
Internal Medicine	4	10	12	12	16	54	52%
Obstetrics/Gynecology	-	2	1	-	1	4	25%
Pediatrics	-	-	-	1	-	1	100%
Subtotal Primary Care	4	16	13	13	21	67	51%
Medical Subspecialties							
Cardiology	5	21	11	5	20	62	40%
Endocrinology	2	-	2	-	2	6	33%
Gastroenterology	2	2	5	6	3	18	50%
Hematology/Oncology	-	2	1	5	2	10	70%
Infectious Disease	-	3	3	5	5	16	63%
Nephrology	4	3	-	4	6	17	59%
Neurology	-	-	1	-	4	5	80%
Pulmonary Medicine	1	2	2	2	5	12	58%
Radiation Therapy	-	1	-	-	1	2	50%
Rheumatology	1	-	1	1	-	3	33%
Subtotal Medical Subspecialties	15	34	26	28	48	151	50%

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Subsurgical Specialties							
CT Surgery	-	2	-	2	-	4	50%
ENT	-	1	-	-	2	3	67%
General Surgery	5	2	2	1	6	16	44%
Oncology Surgery	-	7	2	-	3	12	25%
Ophthalmology	2	-	1	-	3	6	50%
Orthopedics	1	1	1	-	5	8	63%
Plastic Surgery	1	1	4	-	-	6	0%
Urology	-	9	-	2	3	14	36%
Vascular Surgery	1	2	1	-	4	8	50%
Subtotal Surgical Subspecialties	10	25	11	5	26	77	40%
Other Subspecialties							
Pediatric Subspecialty	-	1	-	-	1	2	50%
Physical Medicine/Rehab	-	-	1	-	1	2	50%
Podiatry	6	5	2	3	3	19	32%
Psychiatry	-	1	2	1	2	6	50%
Subtotal Other Subspecialties	6	7	5	4	7	29	38%
Hospital-Based Specialties							
Anesthesia & Pain Management	7	4	3	6	4	24	42%
Critical Care/Intensivist	-	-	1	1	-	2	50%
Diagnostic Radiology	17	15	12	4	7	55	20%
Emergency Medicine	9	7	2	1	1	20	10%
Hospitalist (PCP Only)	4	-	3	1	-	8	13%
Interventional Radiology	-	-	1	1	-	2	50%
Pathology	-	1	-	1	2	4	75%
Subtotal Hospital-Based Specialties	37	27	22	15	14	115	25%
Grand Total	72	109	77	65	116	439	41%

Source: Medical Staff_navigant FINAL, Navigant analysis

University Hospital Physician Age Analysis

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Primary Care							
Family/General Practice	1	3	-	2	-	6	33%
Internal Medicine	12	8	-	4	5	29	31%
Obstetrics/Gynecology	3	5	1	3	2	14	36%
Pediatrics	4	3	1	1	4	13	38%
Subtotal Primary Care	20	19	2	10	11	62	34%
Medical Subspecialties							
Allergy/Immunology	-	1	-	2	3	6	83%
Cardiology	3	9	6	2	3	23	22%
Dermatology	-	2	1	-	5	8	63%
Endocrinology	-	-	-	1	2	3	100%
Gastroenterology	-	2	3	1	-	6	17%
Hematology/Oncology	3	-	1	3	3	10	60%
Hepatology	3	1	-	-	-	4	0%
Infectious Disease	2	2	3	3	2	12	42%
Neonatology	-	-	2	3	2	7	71%
Nephrology	2	1	-	-	3	6	50%
Neurology	2	2	3	2	4	13	46%
Perinatology	1	-	1	1	1	4	50%
PulmonaryMedicine	2	2	1	-	2	7	29%
Radiation Therapy	3	1	1	-	1	6	17%
Subtotal Medical Subspecialties	21	23	22	18	31	115	43%

Specialty	< 40	40 - 49	50 - 54	55 - 59	60 +	Total	% 55 +
Subsurgical Specialties							
CT Surgery	-	1	1	-	1	3	33%
ENT	2	2	1	2	4	11	55%
General Surgery	1	1	2	1	1	6	33%
Neurosurgery	2	4	1	-	1	8	13%
Ophthalmology	2	14	11	18	22	67	60%
Orthopedics	4	8	1	3	3	19	32%
Plastic Surgery	3	-	1	1	7	12	67%
Transplant	-	1	-	2	1	4	75%
Urology	9	29	8	12	45	103	55%
Vascular Surgery	1	2	-	1	1	5	40%
Subtotal Surgical Subspecialties	24	62	26	40	86	238	53%
Other Subspecialties							
All Other	1	1	2	-	10	14	71%
Pediatric Subspecialty	4	6	11	10	23	54	61%
Physical Medicine/Rehab	3	4	1	-	1	9	11%
Podiatry	5	2	-	2	1	10	30%
Psychiatry	4	5	2	3	6	20	45%
Trauma	3	4	1	1	-	9	11%
Subtotal Other Subspecialties	20	22	17	16	41	116	49%
Hospital-Based Specialties							
Anesthesia & Pain Management	8	4	4	5	2	23	30%
Critical Care/Intensivist	1	1	-	1	1	4	50%
Diagnostic Radiology	4	6	5	2	3	20	25%
EmergencyMedicine	8	12	-	-	1	21	5%
Interventional Radiology	-	1	-	-	-	1	0%
Pathology	1	2	1	-	13	17	76%
Subtotal Hospital-Based Specialties	22	26	10	8	20	86	33%
Grand Total	107	152	77	92	189	617	46%

Note: All Other in Other Subspecialties includes Academic Medicine (2), Genetics (1), Global TB Institute (5), Occupational Medicine (3), and Reproductive Endocrinology (3).



Source: UH Response Item 10 Medical Staff Roster as of 8.14.14, Navigant analysis.

Age Distribution of Physicians in the US and NJ

Age Category	< 35	35-44	45-54	55-64	≥ 65	55 +
NJ (All Physicians)	12%	20%	22%	22%	24%	46%
US (All Physicians)	15%	21%	21%	20%	22%	43%
US (Patient Care Physicians)	17%	24%	25%	23%	11%	34%

Hospital	% 55+
CMMC	47%
EOGH (overlap staff only)	62%
NBIMC	44%
SMMC	41%
UH	46%
Combined Total	45%

Note: All Physicians include physicians in administrative, teaching and other non-patient care roles in addition to physicians listing patient care as their primary role

Source: Physician Characteristics and Distribution in the US 2014 edition (2012 data) published by the AMA

Planning Area Medical Staff Employed Physicians by Hospital

Hospital	# Employed Physicians	# Total Med Staff	% Employed
CMMC	78	700	11%
EOGH	5	279	2%
NBIMC	211	745	28%
SMMC	16	439	4%
UH	2	617	0%

"In some markets, such as northern New Jersey and Miami, the local culture of physician independence influences physicians' willingness to become employed by hospitals. And, if they are large enough, some single-specialty and multispecialty groups can remain independent, because they have sufficient leverage with payers."

-Center for Studying Health System Change, August 2011; employment data not available

Sources: HealthLeaders Northern New Jersey Market Overview Report 2014 edition, Study hospital provided medical staff rosters; Navigant analysis.

Physician FTE Demand – Current and Future

Specialty	Essex Co. Current 2014	Essex Co. Future 2019	Planning Area Current 2014	Planning Area Future 2019
Primary Care	711	734	560	581
Medical Subspecialties	321	331	246	255
Subsurgical Specialties	279	291	215	225
Other Subspecialties	186	196	145	152
Hospital-Based Specialties	270	286	207	220

Primary Care includes Family Medicine / General Practice, Internal Medicine, Pediatrics and OB / Gyn

Note: Future is a 5 year projection
Source: Navigant Analysis

Appendix E

Scenarios and Financial Projections



Baseline Financial Model

Patient Volume Assumptions

Scenario: **Baseline**

A. Patient Volumes

1 CY2013/FY2013 used as base year for patient volumes (all IP and OP volumes)

2 Market Inpatient utilization decreased from

2013	2014	2015	2016	2017	2018	2019
120.8	119.4	117.9	116.5	115.1	113.7	112.5

discharges per 1,000 excl. normal newborns

3 Market utilization decreased at the service line level that totals to aggregates listed above

4 Individual hospital market share held constant by service line

5 Immigration proportion held constant by service line

6 ALOS held constant at the service line level. ALOS at the 5 hospitals, the planning area overall, and for the state of NJ has actually increased slightly over last 3 years in conjunction with a small increase in CMI

7 OP volumes projected for key OP services:

- Emergency Department
- Ambulatory Surgery
- Imaging
- Observation
- Clinic Visits
- All Other

8 OP Volumes projected to increase at the same level as market overall (based on Truven market projections – generally +1-2% annually)

9 Bed Need calculations assume 80% occupancy for Med/Surg, 80% occupancy for OB, and 90% occupancy for behavioral

Baseline Financial Model

Charges, Reimbursement and Other Revenue

Scenario: **Baseline**

B. Charges and Reimbursement

- 1 Per unit charge inflation: 3% annual (both IP and OP)
- 2 IP per discharge reimbursement: modeled at rolled up service line level; projected payer mix changes included; overall unit reimbursement increase totals to between 0-1% annual increase overall; different for individual hospitals depending on individual payer mix

Medicare	0.0%
Medicaid	0.0%
Commercial	2.5%
Self-Pay	1.0%
Other	1.0%
- 3 Medicare readmissions penalty has been included; in general, the penalty was less than 1% of Medicare IP reimbursement for the 5 study hospitals
- 4 OP net revenue - composite of 2% annual increase per unit used

C. Other Revenue

1 Subsidies

NJ Charity Care	Tied to adjusted discharges; no inflation assumed
GME	Incorporated into the net revenue calculations above
Other Subsidy	Tied to adjusted discharges, no inflation assumed

2 Other Operating Revenue

Kept constant percentage of Total Gross Revenue

3 Bad Debt

Kept constant percentage of Total Gross Revenue

Baseline Financial Model

Operating Expenses

Operating Expenses

1 Salary and Wage Expense

Split into fixed and variable; variable FTEs assumed to be 50%; variable portion tied to Adjusted patient days average salary inflation of 2.2% per year (based on healthcare inflation data for last 12 months from BLS)

2 Fringe benefit expense

modeled as % of salary; kept constant at 2013 value (different for different hospitals)

3 Supply Expense

80% variable, tied to adjusted patient days; 2.2% inflation per unit

4 Purchased Services

50% variable, tied to adjusted patient days; 2.2% inflation per unit

5 Insurance

fixed expense; 2.2% inflation

6 Interest

based on debt schedules where available; assumes baseline capital borrowed at 4.5% over 30 years

7 Depreciation and amortization

2013 as base year, no inflation; projections based on capital needs identified by Navigant's facility team; 30 yr, straight line

8 Managed Fees/System Assessment

where appropriate; 100% variable tied to total operating revenue

9 Other

50% variable, tied to adjusted discharges; 2.2% inflation

Scenarios 2-9 Notes and Discussion of Modeling Approach

- » As the name suggest, the baseline scenario (#1) serves as the basis upon which the scenarios are built – volume, revenues, expenses, and capital.
- » In all the transformation scenarios, it is assumed that these facilities would close their inpatient units but would remain open in some capacity as outpatient facilities. This is particularly important regarding emergency and ambulatory surgery volume, which does not show excess capacity among the study hospitals in the way that inpatient services do. For example, the 5 study hospitals combined see 325,000 ED visits. In Navigant’s model, these are not all combined into 3 facilities (scenario 5) or 2 facilities (scenario 6)
- » Assumptions specific to each scenario are outlined prior to the volume and financial model results shown for each scenario; the impacts of capital spending on income statements for each scenario are included.
- » In scenarios 2-9, the impact of the changes is modeled beginning in 2015
- » Scenario 9 is modeled as a two-stage initiative, with the EOGH/SMMC transformation modeled in 2015 and the NBIMC/UH consolidation modeled in 2018
- » Scenario financials exclude certain one-time costs – e.g. moving costs, unit closure costs

Scenarios
Scenario 1: Baseline
Scenario 2: Service Rationalization
Scenario 3: Clara Maass Transformation
Scenario 4: EOGH Transformation
Scenario 5: SMMC Transformation
Scenario 6: NBIMC Transformation
Scenario 7: EOGH+SMMC Transformation
Scenario 8: UH Transformation
Scenario 9: EOGH/SMMC Transformation, UH/NBIMC Consolidation

Scenarios

Patient Volume Summary and Comparison

	Scenario 1: Baseline Scenario	Scenario 2: Rational- ization	Scenario 3: Clara Maass Transfor- mation	Scenario 4: EOGH Transfor- mation	Scenario 5: SMMC Transfor- mation	Scenario 6: NBIMC Transfor- mation	Scenario 7: SMMC + EOGH Transfor- mation	Scenario 8: UH Transfor- mation	Scenario 9: SMMC+ EOGH Transfor- mations + NBIMC/UH Consolidation
2013 Full Year	2019	2019	2019	2019	2019	2019	2019	2019	2019
Clara Maass									
Discharges	18,359	17,341	16,564	0	18,066	18,890	20,815	19,801	20,261
IP Census (All Services)	239	224	219	0	236	245	278	260	263
ED Visits	76,155	78,957	78,957	53,708	80,365	81,489	82,294	83,287	84,696
EOGH									
Discharges	6,933	6,410	6,275	7,127	0	6,940	7,718	0	7,442
IP Census (All Services)	112	104	101	114	0	111	127	0	121
ED Visits	34,042	35,200	35,200	36,470	22,912	36,065	37,795	22,912	38,200
NBIMC									
Discharges	23,116	21,845	24,620	24,446	23,400	23,467	0	25,116	25,990
IP Census (All Services)	382	361	392	396	387	383	0	409	419
ED Visits	83,159	86,245	86,245	89,575	89,265	88,894	56,158	92,002	95,543
SMMC									
Discharges	8,430	7,960	7,494	9,787	8,517	0	9,709	0	9,450
IP Census (All Services)	113	107	99	133	116	0	138	0	131
ED Visits	35,944	37,800	37,800	41,036	38,885	24,797	41,270	24,797	42,133
UH									
Discharges	16,205	15,587	14,190	18,550	16,530	16,975	20,778	18,345	0
IP Census (All Services)	254	242	226	283	258	261	327	283	0
ED Visits	96,070	101,031	101,031	105,002	102,863	103,378	107,774	105,885	64,660
5 Hospital Total									
Discharges	73,043	69,143	69,143	59,911	66,514	66,272	59,019	63,262	63,143
IP Census (All Services)	1,101	1,038	1,038	927	997	999	871	952	933
ED Visits	325,370	339,233	339,233	325,791	334,291	334,623	325,290	328,883	325,232

Summary of Operating Income by Scenario and Hospital

2013 Actual	Scenario 1: Baseline/ Status Quo	Scenario 2: Rationalization	Scenario 3: Clara Maass Transformation	Scenario 4: EOGH Transformation	Scenario 5: SMMC Transformation	Scenario 6: NBIMC Transformation	Scenario 7: SMMC + EOGH Transformation	Scenario 8: UH Transformation	Scenario 9: SMMC+ EOGH Transformations + NBIMC/UH Consolidation
2013	2019	2019	2019	2019	2019	2019	2019	2019	2019

Clara Maass

Operating Income	+\$14.2	(\$13.2)	(\$14.1)	(\$3.0)	(\$10.7)	(\$4.8)	(\$5.7)	(\$5.7)	(\$0.9)	(\$5.7)
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EOGH

Operating Income	(\$10.9)	(\$34.1)	(\$32.7)	(\$30.0)	(\$0.4)	(\$31.2)	(\$25.4)	(\$0.4)	(\$25.7)	(\$0.4)
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NBIMC

Operating Income	+\$3.7	(\$42.6)	(\$39.5)	(\$31.8)	(\$37.1)	(\$33.8)	(\$0.9)	(\$27.9)	(\$16.9)	(\$0.9)
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SMMC

Operating Income	(\$14.3)	(\$29.0)	(\$25.1)	(\$18.5)	(\$27.1)	(\$0.3)	(\$17.5)	(\$0.3)	(\$17.0)	(\$0.3)
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UH

Operating Income	(\$24.5)	(\$71.7)	(\$65.0)	(\$58.8)	(\$68.4)	(\$63.9)	(\$49.1)	(\$59.1)	(\$7.1)	+\$71.3
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5 Hospital Total

Operating Income	(\$31.8)	(\$190.6)	(\$176.5)	(\$142.2)	(\$143.6)	(\$134.0)	(\$98.6)	(\$93.4)	(\$67.6)	+\$64.0
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Scenarios 1-5

Aggregate Financial Performance and Comparison

	Scenario 1-8 Impact						Scenario 9 Impact	
	2013	2014	2015	2016	2017	2018	2019	
Scenario 1: Baseline								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,704.2	\$1,723.5	\$1,743.5	\$1,764.4	\$1,788.0	
Operating Expense	\$1,609.1	\$1,726.9	\$1,764.4	\$1,814.3	\$1,866.8	\$1,921.9	\$1,978.6	
Operating Income	(\$31.8)	(\$42.7)	(\$60.2)	(\$90.9)	(\$123.3)	(\$157.5)	(\$190.6)	
Operating Margin	-2.0%	-2.5%	-3.5%	-5.3%	-7.1%	-8.9%	-10.7%	
Scenario 2: Rationalization								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,704.2	\$1,724.3	\$1,744.3	\$1,765.2	\$1,788.9	
Operating Expense	\$1,609.1	\$1,726.9	\$1,753.1	\$1,803.0	\$1,853.5	\$1,908.6	\$1,965.3	
Operating Income	(\$31.8)	(\$42.7)	(\$48.9)	(\$78.7)	(\$109.2)	(\$143.4)	(\$176.5)	
Operating Margin	-2.0%	-2.5%	-2.9%	-4.6%	-6.3%	-8.1%	-9.9%	
Scenario 3: Clara Maass Transformation								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,585.2	\$1,603.2	\$1,622.0	\$1,641.6	\$1,663.7	
Operating Expense	\$1,609.1	\$1,726.9	\$1,621.4	\$1,664.7	\$1,709.1	\$1,756.7	\$1,805.9	
Operating Income	(\$31.8)	(\$42.7)	(\$36.3)	(\$61.4)	(\$87.1)	(\$115.2)	(\$142.2)	
Operating Margin	-2.0%	-2.5%	-2.3%	-3.8%	-5.4%	-7.0%	-8.5%	
Scenario 4: EOGH Transformation								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,669.1	\$1,688.3	\$1,708.3	\$1,729.1	\$1,752.6	
Operating Expense	\$1,609.1	\$1,726.9	\$1,703.8	\$1,749.4	\$1,793.9	\$1,844.2	\$1,896.2	
Operating Income	(\$31.8)	(\$42.7)	(\$34.6)	(\$61.1)	(\$85.6)	(\$115.1)	(\$143.6)	
Operating Margin	-2.0%	-2.5%	-2.1%	-3.6%	-5.0%	-6.7%	-8.2%	
Scenario 5: SMMC Transformation								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,646.0	\$1,664.5	\$1,683.8	\$1,703.9	\$1,726.7	
Operating Expense	\$1,609.1	\$1,726.9	\$1,670.2	\$1,716.1	\$1,757.9	\$1,808.4	\$1,860.6	
Operating Income	(\$31.8)	(\$42.7)	(\$24.2)	(\$51.6)	(\$74.1)	(\$104.5)	(\$134.0)	
Operating Margin	-2.0%	-2.5%	-1.5%	-3.1%	-4.4%	-6.1%	-7.8%	

Scenarios 6-9

Aggregate Financial Performance and Comparison

	Scenario 1-8 Impact						Scenario 9 Impact	
	2013	2014	2015	2016	2017	2018	2019	
Scenario 6: NBIMC Transformation								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,477.9	\$1,495.5	\$1,513.7	\$1,532.8	\$1,553.8	
Operating Expense	\$1,609.1	\$1,726.9	\$1,482.7	\$1,522.2	\$1,563.7	\$1,607.3	\$1,652.4	
Operating Income	(\$31.8)	(\$42.7)	(\$4.8)	(\$26.7)	(\$50.0)	(\$74.6)	(\$98.6)	
Operating Margin	-2.0%	-2.5%	-0.3%	-1.8%	-3.3%	-4.9%	-6.3%	
Scenario 7: SMMC + EOGH Transformation								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,601.0	\$1,619.4	\$1,638.5	\$1,658.4	\$1,680.9	
Operating Expense	\$1,609.1	\$1,726.9	\$1,607.2	\$1,648.7	\$1,681.4	\$1,727.0	\$1,774.3	
Operating Income	(\$31.8)	(\$42.7)	(\$6.1)	(\$29.3)	(\$42.8)	(\$68.6)	(\$93.4)	
Operating Margin	-2.0%	-2.5%	-0.4%	-1.8%	-2.6%	-4.1%	-5.6%	
Scenario 8: UH Transformation								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,514.9	\$1,532.8	\$1,551.6	\$1,571.1	\$1,593.3	
Operating Expense	\$1,609.1	\$1,726.9	\$1,497.8	\$1,535.7	\$1,575.6	\$1,617.4	\$1,660.9	
Operating Income	(\$31.8)	(\$42.7)	\$17.1	(\$2.8)	(\$24.0)	(\$46.4)	(\$67.6)	
Operating Margin	-2.0%	-2.5%	1.1%	-0.2%	-1.5%	-3.0%	-4.2%	
Scenario 9: SMMC/EOGH Transformation + NBIMC/UH Consolidation								
Operating Revenue	\$1,577.3	\$1,684.2	\$1,601.0	\$1,619.4	\$1,638.5	\$1,600.5	\$1,622.3	
Operating Expense	\$1,609.1	\$1,726.9	\$1,607.2	\$1,648.7	\$1,681.4	\$1,521.6	\$1,558.3	
Operating Income	(\$31.8)	(\$42.7)	(\$6.1)	(\$29.3)	(\$42.8)	\$78.9	\$64.0	
Operating Margin	-2.0%	-2.5%	-0.4%	-1.8%	-2.6%	4.9%	3.9%	

Scenario 1: Baseline Model – Aggregate Patient Volumes

(Patient volumes projected for each individual hospital and then aggregated)

	5 Hospital Total						
	2013	2014	2015	2016	2017	2018	2019
Inpatient Discharges							
Med/Surg	53,519	53,147	52,783	52,432	52,093	51,766	51,560
Obstetrics	7,024	6,968	6,912	6,857	6,802	6,747	6,693
Normal Newborn	4,084	4,051	4,019	3,987	3,955	3,923	3,892
Neonatology	2,405	2,386	2,367	2,348	2,329	2,310	2,292
Behavioral	6,011	5,771	5,540	5,318	5,105	4,901	4,705
Total	73,043	72,322	71,621	70,941	70,284	69,648	69,143
Inpatient ADC	817.9	812.6	807.6	802.7	798.1	793.8	790.8
Med/Surg	56.7	56.2	55.8	55.3	54.9	54.4	54.0
Obstetrics	26.5	26.3	26.1	25.8	25.6	25.4	25.2
Normal Newborn	68.3	67.7	67.2	66.7	66.1	65.6	65.1
Neonatology	131.5	126.3	121.2	116.4	111.7	107.2	103.0
Behavioral	1,100.8	1,089.1	1,077.8	1,066.9	1,056.5	1,046.5	1,038.0
Total							
Key Outpatient/Ancillary Volumes							
Total ED	325,370	327,599	329,854	332,138	334,449	336,789	339,233
Ambulatory Surgery	30,019	30,603	31,198	31,805	32,424	33,055	33,698
IP Surgery	16,667	16,551	16,438	16,329	16,224	16,123	16,060
Total Surgery	46,686	47,154	47,637	48,134	48,648	49,178	49,758

Scenario 1: Baseline Model

Individual Hospital Patient Volumes

BASELINE PROJECTIONS						
Patient Volume Indicator	Clara Maass	EOGH	NBIMC	SMMC	University Hospital	5 Hospital Total
Inpatient						
Med/Surg Discharges						
2013	13,665	5,599	14,674	7,713	11,868	53,519
2019	13,116	5,363	14,044	7,394	11,643	51,560
Total Discharges - All Services						
2013	18,359	6,933	23,116	8,430	16,205	73,043
2019	17,341	6,410	21,845	7,960	15,587	69,143
Med/Surg Census						
2013	181.2	89.5	259.9	100.9	186.4	817.9
2019	174.6	86.5	249.6	96.9	183.2	790.8
Total Census - All Services						
2013	239.4	111.6	382.3	113.5	254.0	1,100.8
2019	224.0	103.9	361.0	106.8	242.3	1,038.0
Outpatient/Ancillary						
Total ED Volume						
2013	76,155	34,042	83,159	35,944	96,070	325,370
2019	78,957	35,200	86,245	37,800	101,031	339,233
Ambulatory Surgery						
2013	7,918	2,435	6,207	5,009	8,450	30,019
2019	8,888	2,733	6,968	5,623	9,486	33,698

Scenario 1: Baseline Financial Model

Aggregate and Individual Results

	Scenario 1 - Baseline						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$267.4	\$271.2	\$275.1	\$279.2	\$283.7
Operating Expense	\$246.7	\$250.6	\$258.9	\$267.8	\$277.1	\$286.9	\$297.0
Operating Income	\$14.2	\$13.2	\$8.5	\$3.5	-\$1.9	-\$7.7	-\$13.2
Operating Margin	5.4%	5.0%	3.2%	1.3%	-0.7%	-2.7%	-4.7%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$571.3	\$577.9	\$584.8	\$592.0	\$600.6
Operating Expense	\$556.4	\$565.1	\$579.2	\$594.1	\$609.7	\$626.1	\$643.2
Operating Income	\$3.7	-\$0.1	-\$7.9	-\$16.2	-\$24.9	-\$34.1	-\$42.6
Operating Margin	0.7%	0.0%	-1.4%	-2.8%	-4.3%	-5.8%	-7.1%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$100.4	\$100.9	\$101.6	\$102.2	\$103.0
Operating Expense	\$110.6	\$112.3	\$116.7	\$121.4	\$126.5	\$131.8	\$137.1
Operating Income	-\$10.9	-\$12.4	-\$16.3	-\$20.5	-\$24.9	-\$29.6	-\$34.1
Operating Margin	-10.9%	-12.4%	-16.3%	-20.3%	-24.5%	-28.9%	-33.1%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$199.1	\$202.3	\$205.7	\$209.2	\$213.1
Operating Expense	\$206.6	\$209.6	\$215.4	\$221.5	\$228.1	\$235.0	\$242.2
Operating Income	-\$14.3	-\$13.6	-\$16.3	-\$19.2	-\$22.4	-\$25.8	-\$29.0
Operating Margin	-7.4%	-7.0%	-8.2%	-9.5%	-10.9%	-12.3%	-13.6%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$566.0	\$571.0	\$576.3	\$581.7	\$587.5
Operating Expense	\$488.9	\$589.3	\$594.2	\$609.5	\$625.5	\$642.2	\$659.2
Operating Income	-\$24.5	-\$29.8	-\$28.2	-\$38.4	-\$49.2	-\$60.5	-\$71.7
Operating Margin	-5.3%	-5.3%	-5.0%	-6.7%	-8.5%	-10.4%	-12.2%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,704.2	\$1,723.5	\$1,743.5	\$1,764.4	\$1,788.0
Operating Expense	\$1,609.1	\$1,726.9	\$1,764.4	\$1,814.3	\$1,866.8	\$1,921.9	\$1,978.6
Operating Income	-\$31.8	-\$42.7	-\$60.2	-\$90.9	-\$123.3	-\$157.5	-\$190.6
Operating Margin	-2.0%	-2.5%	-3.5%	-5.3%	-7.1%	-8.9%	-10.7%

Scenario 2: Service Line Rationalization Assumptions

» Service line reconfiguration occurs as follows:

- › SMMC and UH CV surgery programs are closed with volume to NBIMC. Rationale: volume does not meet minimum goals for quality and safety
- › Psych services remain distributed because they are all operating at a fairly high occupancy, capital investment would be required to add psych capacity sufficient to consolidate IP units
- › Neurosurgery has already been rationalized de facto as UH has the majority of the volume of the 5 hospitals
- › IP Pediatrics is consolidated at NBIMC
- › OB/NICU remain as is given that both UH and NBIMC have sufficient volume and neither has current capacity to absorb the other's volume

» The financial impact of the reconfiguration is estimated as follows

- › The contribution margin for the cardiac surgery volume is moved from SMMC/UH to NBIMC. The fixed expense associated with these programs is removed from SMMC's and UH's operating expenses.
- › Pediatric med/surg inpatient volume is moved from Clara Maass, SMMC, University, and EOGH to NBIMC. The contribution margin for this patient volume is moved to NBIMC (revenue and fixed costs). Fixed expenses associated with the pediatric inpatient volume at the other 4 study hospitals is removed from the operating expenses

Conclusion: Insufficient as does not address fundamental overcapacity in the market

Scenario 2: Patient Volume Impacts

	Clara Maass	EOGH	NBIMC	SMMC	University Hospital	5 Hospital Total
Cardiac Surgery Cases						
2013	-	-	678	127	61	866
2019	-	-	840	-	-	840
Cardiac Surgery ADC						
2013	-	-	26.1	2.9	1.9	30.9
2019	-	-	30.0	-	-	30.0
Pediatric Med/Surg Cases						
2013	817	142	2,047	360	1,407	4,773
2019	-	-	4,537	-	-	4,537
Pediatric Med/Surg ADC						
2013	5.2	2.5	24.0	4.8	15.5	52.0
2019	-	-	49.5	-	-	49.5

*Volume switch
projected to
occur in 2015
for modeling
purposes*

Scenario 2: Financial Projections

	Scenario 2 - Rationalization of Cardiac Surgery, Pediatrics						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$262.5	\$266.3	\$270.3	\$274.4	\$278.9
Operating Expense	\$246.7	\$250.6	\$254.9	\$263.8	\$273.1	\$283.0	\$293.1
Operating Income	\$14.2	\$13.2	\$7.6	\$2.5	-\$2.9	-\$8.6	-\$14.1
Operating Margin	5.4%	5.0%	2.9%	0.9%	-1.1%	-3.1%	-5.1%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$599.0	\$605.4	\$612.2	\$619.3	\$627.8
Operating Expense	\$556.4	\$565.1	\$605.3	\$620.2	\$633.8	\$650.1	\$667.3
Operating Income	\$3.7	-\$0.1	-\$6.4	-\$14.8	-\$21.6	-\$30.9	-\$39.5
Operating Margin	0.7%	0.0%	-1.1%	-2.4%	-3.5%	-5.0%	-6.3%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$99.5	\$100.9	\$101.6	\$102.2	\$103.0
Operating Expense	\$110.6	\$112.3	\$115.3	\$120.0	\$125.1	\$130.4	\$135.7
Operating Income	-\$10.9	-\$12.4	-\$15.7	-\$19.1	-\$23.5	-\$28.2	-\$32.7
Operating Margin	-10.9%	-12.4%	-15.8%	-18.9%	-23.2%	-27.6%	-31.8%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$189.5	\$192.7	\$196.1	\$199.6	\$203.5
Operating Expense	\$206.6	\$209.6	\$202.2	\$208.3	\$214.7	\$221.5	\$228.6
Operating Income	-\$14.3	-\$13.6	-\$12.7	-\$15.6	-\$18.6	-\$21.9	-\$25.1
Operating Margin	-7.4%	-7.0%	-6.7%	-8.1%	-9.5%	-11.0%	-12.3%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$553.8	\$558.9	\$564.3	\$569.8	\$575.6
Operating Expense	\$488.9	\$589.3	\$575.4	\$590.7	\$606.8	\$623.6	\$640.7
Operating Income	-\$24.5	-\$29.8	-\$21.6	-\$31.8	-\$42.5	-\$53.8	-\$65.0
Operating Margin	-5.3%	-5.3%	-3.9%	-5.7%	-7.5%	-9.5%	-11.3%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,704.2	\$1,724.3	\$1,744.3	\$1,765.2	\$1,788.9
Operating Expense	\$1,609.1	\$1,726.9	\$1,753.1	\$1,803.0	\$1,853.5	\$1,908.6	\$1,965.3
Operating Income	-\$31.8	-\$42.7	-\$48.9	-\$78.7	-\$109.2	-\$143.4	-\$176.5
Operating Margin	-2.0%	-2.5%	-2.9%	-4.6%	-6.3%	-8.1%	-9.9%

Scenario 3: Clara Maas Converted to Ambulatory Campus

- » Clara Maass is transformed and its IP volume is redistributed to the other study hospitals and hospitals outside of the planning area based upon current IP split for each of the planning area zip codes
 - › Important to note that only about 47% of CM's volume is picked up by the other 4 study hospitals as its patient origin has a very different profile than the other 4 hospitals (fewer patients from Newark proper).
 - › Transformation assumed in 2015 for modeling purposes
 - › IP ED volume transferred to other facilities
 - › Portion of OP ED volume retained; FSED (Free Standing Emergency Department) envisioned as mechanism here; While there is significant IP overcapacity among study hospitals, there is not capacity at other study hospital EDs to readily absorb all the visits in the event of a complete ED closure.
 - › Portion of OP Ambulatory Surgery and other OP revenue retained

- » The financial impact of this scenario is estimated as follows
 - › The contribution margin for patient volume that moves (revenue and direct expense) is applied to income statement for the destination hospital. Majority of projected operating expenses for Clara Maass are removed from the model.

Conclusions:

1. Takes the hospital with the highest operating income/best operating efficiency out of the market and redistributes volume to less efficient, less profitable facilities
2. Improves aggregate financial performance over baseline, but is not a sustainable model

Scenario 3: Patient Volume Impacts

Scenario 3	2013	2014	2015	2016	2017	2018	2019
CMMC Volume/Revenue that Remains Behind							
IP Discharges	18,359	18,173	-	-	-	-	-
ED Visits	76,155	76,602	51,935	52,372	52,814	53,259	53,708
Ambulatory Surgery	7,918	8,072	6,583	6,711	6,842	6,975	7,111
Total Revenue	\$260.9	\$263.8	\$42.4	\$43.8	\$45.4	\$46.9	\$48.6
CMMC Volume Picked Up by Other Hospitals							
Discharges							
EOGH			905	896	888	879	872
SMMC			2,306	2,283	2,261	2,240	2,222
NBIMC			2,373	2,350	2,327	2,305	2,287
UH			2,830	2,802	2,775	2,749	2,727
ED Visits							
EOGH			1,263	1,265	1,266	1,267	1,270
SMMC			3,219	3,222	3,225	3,229	3,236
NBIMC			3,313	3,316	3,319	3,323	3,330
UH			3,951	3,955	3,959	3,963	3,971

Volume switch projected to occur in 2015 for modeling purposes

Scenario 3: Financial Projections

	Scenario 3 - Clara Maass Transformation (2015)						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$43.8	\$45.4	\$46.9	\$48.6	\$50.3
Operating Expense	\$246.7	\$250.6	\$47.0	\$48.5	\$50.0	\$51.6	\$53.3
Operating Income	\$14.2	\$13.2	-\$3.1	-\$3.1	-\$3.1	-\$3.0	-\$3.0
Operating Margin	5.4%	5.0%	-7.1%	-6.8%	-6.5%	-6.3%	-6.0%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$600.8	\$607.7	\$614.9	\$622.4	\$631.4
Operating Expense	\$556.4	\$565.1	\$599.4	\$614.5	\$629.3	\$645.8	\$663.2
Operating Income	\$3.7	-\$0.1	\$1.4	-\$6.8	-\$14.4	-\$23.4	-\$31.8
Operating Margin	0.7%	0.0%	0.2%	-1.1%	-2.3%	-3.8%	-5.0%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$111.6	\$112.3	\$113.0	\$113.8	\$114.8
Operating Expense	\$110.6	\$112.3	\$124.0	\$128.8	\$133.9	\$139.3	\$144.7
Operating Income	-\$10.9	-\$12.4	-\$12.4	-\$16.5	-\$20.9	-\$25.5	-\$30.0
Operating Margin	-10.9%	-12.4%	-11.1%	-14.7%	-18.5%	-22.4%	-26.1%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$227.8	\$231.3	\$235.0	\$238.8	\$243.1
Operating Expense	\$206.6	\$209.6	\$234.0	\$240.4	\$247.1	\$254.2	\$261.6
Operating Income	-\$14.3	-\$13.6	-\$6.3	-\$9.1	-\$12.1	-\$15.4	-\$18.5
Operating Margin	-7.4%	-7.0%	-2.7%	-3.9%	-5.2%	-6.5%	-7.6%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$601.1	\$606.6	\$612.2	\$618.0	\$624.2
Operating Expense	\$488.9	\$589.3	\$617.1	\$632.5	\$648.8	\$665.8	\$683.0
Operating Income	-\$24.5	-\$29.8	-\$15.9	-\$26.0	-\$36.6	-\$47.8	-\$58.8
Operating Margin	-5.3%	-5.3%	-2.6%	-4.3%	-6.0%	-7.7%	-9.4%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,585.2	\$1,603.2	\$1,622.0	\$1,641.6	\$1,663.7
Operating Expense	\$1,609.1	\$1,726.9	\$1,621.4	\$1,664.7	\$1,709.1	\$1,756.7	\$1,805.9
Operating Income	-\$31.8	-\$42.7	-\$36.3	-\$61.4	-\$87.1	-\$115.2	-\$142.2
Operating Margin	-2.0%	-2.5%	-2.3%	-3.8%	-5.4%	-7.0%	-8.5%

Scenario 4: EOGH Converted to Ambulatory Campus

- » **EOGH is transformed and its IP volume is redistributed to the other study hospitals and hospitals outside of the planning area based upon current IP split for each of the planning area zip codes**
 - › Important to note that only about 60% of EOGH's volume is picked up by the other 4 study hospitals
 - › Transformation assumed in 2015 for modeling purposes
 - › IP ED volume transferred to other facilities
 - › Portion of OP ED volume retained; FSED (Free Standing Emergency Department) envisioned as mechanism here; While there is significant IP overcapacity among study hospitals, there is not capacity at other study hospital EDs to readily absorb all the visits in the event of a complete ED closure.
 - › Portion of OP Ambulatory Surgery and other OP revenue retained

- » **The financial impact of this scenario is estimated as follows**
 - › The contribution margin for patient volume that moves (revenue and direct expense) is applied to income statement for the destination hospital. Majority of projected operating expenses for EOGH are removed from the model.
 - › Due to uncertain nature of services left behind, these are financially modeled as break-even

Conclusions:

1. **Takes a very outdated facility out of the market and reduces excess capacity somewhat but is insufficient to eliminate overcapacity in the market**
2. **Taking EOGH fixed expenses out of the financial model improves performance, but patient volume being moved still has relatively low contribution margin**

Scenario 4: Patient Volume Impacts

Scenario 4	2013	2014	2015	2016	2017	2018	2019
EOGH Volume/Revenue that Remains Behind							
IP Discharges	6,933	6,837	-	-	-	-	-
ED Visits	34,042	34,225	22,188	22,367	22,549	22,734	22,912
Ambulatory Surgery	2,435	2,482	2,025	2,064	2,104	2,145	2,187
Total Revenue	\$99.7	\$100.4	\$12.6	\$13.0	\$13.5	\$13.9	\$14.4
EOGH Volume Picked Up by Other Hospitals							
Discharges							
Clara Maass			771	759	747	736	725
NBIMC			1,654	1,627	1,602	1,578	1,555
UH			1,003	987	972	957	943
SMMC			594	585	576	567	559
ED Visits							
Clara Maass			1,405	1,405	1,405	1,406	1,408
NBIMC			3,012	3,013	3,014	3,015	3,020
UH			1,827	1,828	1,828	1,829	1,832
SMMC			1,082	1,083	1,083	1,084	1,085

Volume switch projected to occur in 2015 for modeling purposes

Scenario 4: Financial Projections

	Scenario 4 - EOGH Transformation						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$277.6	\$281.3	\$285.3	\$289.4	\$293.9
Operating Expense	\$246.7	\$250.6	\$268.0	\$276.9	\$284.7	\$294.5	\$304.6
Operating Income	\$14.2	\$13.2	\$9.5	\$4.5	\$0.6	-\$5.1	-\$10.7
Operating Margin	5.4%	5.0%	3.4%	1.6%	0.2%	-1.8%	-3.6%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$593.0	\$599.6	\$606.5	\$613.8	\$622.5
Operating Expense	\$556.4	\$565.1	\$595.5	\$610.4	\$626.0	\$642.4	\$659.6
Operating Income	\$3.7	-\$0.1	-\$2.5	-\$10.8	-\$19.5	-\$28.6	-\$37.1
Operating Margin	0.7%	0.0%	-0.4%	-1.8%	-3.2%	-4.7%	-6.0%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$12.6	\$13.0	\$13.5	\$13.9	\$14.4
Operating Expense	\$110.6	\$112.3	\$15.0	\$15.4	\$13.9	\$14.3	\$14.8
Operating Income	-\$10.9	-\$12.4	-\$2.4	-\$2.4	-\$0.4	-\$0.4	-\$0.4
Operating Margin	-10.9%	-12.4%	0.0%	0.0%	0.0%	0.0%	0.0%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$206.9	\$210.1	\$213.5	\$217.1	\$221.0
Operating Expense	\$206.6	\$209.6	\$221.2	\$227.4	\$234.0	\$240.9	\$248.1
Operating Income	-\$14.3	-\$13.6	-\$14.3	-\$17.3	-\$20.4	-\$23.8	-\$27.1
Operating Margin	-7.4%	-7.0%	-6.9%	-8.2%	-9.6%	-11.0%	-12.2%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$579.1	\$584.2	\$589.5	\$594.9	\$600.8
Operating Expense	\$488.9	\$589.3	\$604.1	\$619.3	\$635.3	\$652.1	\$669.1
Operating Income	-\$24.5	-\$29.8	-\$24.9	-\$35.1	-\$45.9	-\$57.2	-\$68.4
Operating Margin	-5.3%	-5.3%	-4.3%	-6.0%	-7.8%	-9.6%	-11.4%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,669.1	\$1,688.3	\$1,708.3	\$1,729.1	\$1,752.6
Operating Expense	\$1,609.1	\$1,726.9	\$1,703.8	\$1,749.4	\$1,793.9	\$1,844.2	\$1,896.2
Operating Income	-\$31.8	-\$42.7	-\$34.6	-\$61.1	-\$85.6	-\$115.1	-\$143.6
Operating Margin	-2.0%	-2.5%	-2.1%	-3.6%	-5.0%	-6.7%	-8.2%

Scenario 5: SMMC Converted to Ambulatory Campus

- » **SMMC is transformed and its IP volume is redistributed to the other study hospitals and hospitals outside of the planning area based upon current IP split for each of the planning area zip codes**
 - › Important to note that only about 65% of SMMC's volume is picked up by the other 4 study hospitals
 - › Transformation assumed in 2015 for modeling purposes
 - › IP ED volume transferred to other facilities
 - › Portion of OP ED volume retained; FSED (Free Standing Emergency Department) envisioned as mechanism here; While there is significant IP overcapacity among study hospitals, there is not capacity at other study hospital EDs to readily absorb all the visits in the event of a complete ED closure.
 - › Portion of OP Ambulatory Surgery and other OP revenue retained, including cancer center

- » **The financial impact of this scenario is estimated as follows**
 - › The contribution margin for patient volume that moves (revenue and direct expense) is applied to income statement for the destination hospital. Majority of projected operating expenses for SMMC are removed from the model.
 - › Due to uncertain nature of services left behind, these are financially modeled as break-even

Conclusions:

1. **Takes some capacity out of the market to reduce excess capacity somewhat but is insufficient to eliminate overcapacity in the market**
2. **Taking SMMC fixed expenses out of the financial model improves performance, but patient volume being moved still has relatively low contribution margin**

Scenario 5: Patient Volume Impacts

Scenario 5	2013	2014	2015	2016	2017	2018	2019
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SMMC Volume/Revenue that Remains Behind

IP Discharges	8,430	8,343	-	-	-	-	-
ED Visits	35,944	36,247	23,978	24,180	24,384	24,590	24,797
Ambulatory Surgery	5,009	5,106	4,165	4,246	4,328	4,412	4,498
Total Revenue	\$192.3	\$197.0	\$34.8	\$36.0	\$37.3	\$38.7	\$40.0

SMMC Volume Picked Up by Other Hospitals

Discharges

Clara Maass	1,608	1,592	1,576	1,561	1,550
NBIMC	1,682	1,665	1,649	1,633	1,621
UH	1,491	1,476	1,461	1,448	1,437
EOGH	550	544	539	534	530

ED Visits

Clara Maass	2,448	2,468	2,489	2,510	2,531
NBIMC	2,561	2,583	2,605	2,627	2,649
UH	2,270	2,289	2,308	2,328	2,347
EOGH	837	844	851	858	865

Volume switch projected to occur in 2015 for modeling purposes

Scenario 5: Financial Projections

	Scenario 5 - SMMC Transformation						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$299.4	\$303.6	\$307.9	\$312.4	\$317.4
Operating Expense	\$246.7	\$250.6	\$282.9	\$292.0	\$301.7	\$311.8	\$322.2
Operating Income	\$14.2	\$13.2	\$16.5	\$11.6	\$6.3	\$0.7	-\$4.8
Operating Margin	5.4%	5.0%	5.5%	3.8%	2.0%	0.2%	-1.5%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$604.8	\$611.8	\$619.1	\$626.7	\$635.9
Operating Expense	\$556.4	\$565.1	\$605.3	\$620.5	\$635.4	\$652.1	\$669.7
Operating Income	\$3.7	-\$0.1	-\$0.5	-\$8.7	-\$16.4	-\$25.4	-\$33.8
Operating Margin	0.7%	0.0%	-0.1%	-1.4%	-2.6%	-4.1%	-5.3%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$111.3	\$112.0	\$112.8	\$113.6	\$114.5
Operating Expense	\$110.6	\$112.3	\$124.9	\$129.7	\$134.9	\$140.3	\$145.8
Operating Income	-\$10.9	-\$12.4	-\$13.6	-\$17.7	-\$22.1	-\$26.7	-\$31.2
Operating Margin	-10.9%	-12.4%	-12.2%	-15.8%	-19.6%	-23.5%	-27.3%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$34.8	\$36.0	\$37.3	\$38.7	\$40.0
Operating Expense	\$206.6	\$209.6	\$40.6	\$41.8	\$37.6	\$39.0	\$40.3
Operating Income	-\$14.3	-\$13.6	-\$5.8	-\$5.8	-\$0.3	-\$0.3	-\$0.3
Operating Margin	-7.4%	-7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$595.6	\$601.1	\$606.7	\$612.5	\$618.8
Operating Expense	\$488.9	\$589.3	\$616.4	\$632.0	\$648.3	\$665.3	\$682.6
Operating Income	-\$24.5	-\$29.8	-\$20.8	-\$30.9	-\$41.6	-\$52.8	-\$63.9
Operating Margin	-5.3%	-5.3%	-3.5%	-5.1%	-6.9%	-8.6%	-10.3%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,646.0	\$1,664.5	\$1,683.8	\$1,703.9	\$1,726.7
Operating Expense	\$1,609.1	\$1,726.9	\$1,670.2	\$1,716.1	\$1,757.9	\$1,808.4	\$1,860.6
Operating Income	-\$31.8	-\$42.7	-\$24.2	-\$51.6	-\$74.1	-\$104.5	-\$134.0
Operating Margin	-2.0%	-2.5%	-1.5%	-3.1%	-4.4%	-6.1%	-7.8%

Scenario 6: NBIMC Converted to Ambulatory Campus

- » NBIMC closes as an inpatient campus and its IP volume is redistributed to the other study hospitals and hospitals outside of the planning area based upon current IP split for each of the planning area zip codes
 - › Approximately 1/2 of NBIMC volume is picked up by the other 4 study hospitals.
 - › Transformation assumed in 2015 for modeling purposes
 - › IP ED volume transferred to other facilities
 - › Portion of OP ED volume retained; FSED (Free Standing Emergency Department) envisioned as mechanism here; While there is significant IP overcapacity among study hospitals, there is not capacity at other study hospital EDs to readily absorb all the visits in the event of a complete ED closure.
 - › Portion of OP Ambulatory Surgery and other OP revenue retained

- » The financial impact of this scenario is estimated as follows
 - › The contribution margin for patient volume that moves (revenue and direct expense) is applied to income statement for the destination hospital. Majority of projected operating expenses for NBIMC are removed from the model.
 - › Due to uncertain nature of services that remain, these are financially modeled as break-even

Conclusions:

1. Takes the largest hospital – that is near breakeven financially – and distributes volumes to less efficient hospitals (except Clara Maass)
2. Removal of NBIMC's capacity requires significant capital expenditure at the other facilities, hampering financial performance of this scenario

Scenario 6 – NBIMC Transformation

Volume Impacts

Scenario 6	2013	2014	2015	2016	2017	2018	2019
NBIMC Transformation							
NBIMC Volume/Revenue that Remains Behind							
IP Discharges	23,116	22,881	0	0	0	0	0
ED Visits	83,159	83,646	54,119	54,627	55,138	55,652	56,158
Ambulatory Surgery	6,207	6,328	5,161	5,261	5,363	5,468	5,574
NBIMC Volume Picked Up by Other Hospitals							
Discharges							
EOGH			1,359	1,344	1,330	1,316	1,308
SMMC			1,817	1,797	1,778	1,760	1,749
UH			5,381	5,329	5,277	5,228	5,191
CM			3,598	3,564	3,532	3,500	3,474
ED Visits							
EOGH			2,589	2,589	2,589	2,589	2,595
SMMC			3,462	3,461	3,461	3,462	3,470
UH			6,728	6,727	6,727	6,728	6,743
CM			3,330	3,329	3,329	3,330	3,337

Source: Navigant observation, client data, census and bed need excludes all newborns

Scenario 6: Financial Projections

	Scenario 6 – NBIMC Transformation (2015)						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$321.5	\$325.7	\$330.0	\$334.6	\$339.6
Operating Expense	\$246.7	\$250.6	\$306.0	\$315.1	\$324.8	\$334.9	\$345.4
Operating Income	\$14.2	\$13.2	\$15.5	\$10.5	\$5.3	-\$0.3	-\$5.7
Operating Margin	5.4%	5.0%	4.8%	3.2%	1.6%	-0.1%	-1.7%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$83.9	\$86.9	\$90.0	\$93.1	\$96.5
Operating Expense	\$556.4	\$565.1	\$84.8	\$87.7	\$90.8	\$94.0	\$97.3
Operating Income	\$3.7	-\$0.1	-\$0.9	-\$0.9	-\$0.9	-\$0.9	-\$0.9
Operating Margin	0.7%	0.0%	-1.0%	-1.0%	-1.0%	-0.9%	-0.9%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$142.4	\$143.3	\$144.2	\$145.2	\$146.5
Operating Expense	\$110.6	\$112.3	\$150.3	\$155.3	\$160.6	\$166.2	\$171.9
Operating Income	-\$10.9	-\$12.4	-\$7.9	-\$12.0	-\$16.4	-\$21.0	-\$25.4
Operating Margin	-10.9%	-12.4%	-5.6%	-8.4%	-11.4%	-14.4%	-17.3%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$254.9	\$258.6	\$262.4	\$266.3	\$270.7
Operating Expense	\$206.6	\$209.6	\$260.0	\$266.5	\$273.4	\$280.7	\$288.2
Operating Income	-\$14.3	-\$13.6	-\$5.1	-\$8.0	-\$11.0	-\$14.3	-\$17.5
Operating Margin	-7.4%	-7.0%	-2.0%	-3.1%	-4.2%	-5.4%	-6.5%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$675.20	\$681.08	\$687.18	\$693.50	\$700.50
Operating Expense	\$488.9	\$589.3	\$681.58	\$697.49	\$714.17	\$731.62	\$749.57
Operating Income	-\$24.5	-\$29.8	-\$6.4	-\$16.4	-\$27.0	-\$38.1	-\$49.1
Operating Margin	-5.3%	-5.3%	-0.9%	-2.4%	-3.9%	-5.5%	-7.0%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,477.9	\$1,495.5	\$1,513.7	\$1,532.8	\$1,553.8
Operating Expense	\$1,609.1	\$1,726.9	\$1,482.7	\$1,522.2	\$1,563.7	\$1,607.3	\$1,652.4
Operating Income	-\$31.8	-\$42.7	-\$4.8	-\$26.7	-\$50.0	-\$74.6	-\$98.6
Operating Margin	-2.0%	-2.5%	-0.3%	-1.8%	-3.3%	-4.9%	-6.3%

Scenario 7: EOGH and SMMC Converted to Ambulatory Campuses

- » EOGH and SMMC are transformed. Both facilities are repurposed to maintain ambulatory volume (in particular ED). SMMC outpatient Cancer Center remains at current site.
 - › Important to note that only about 60% of SMMC+EOGH's volume is picked up by the other 4 study hospitals
 - › Transformation assumed in 2015 for modeling purposes
 - › IP ED volume transferred to other facilities
 - › Portion of OP ED volume retained at each campus; FSEDs (Free Standing Emergency Departments) envisioned as mechanism here; while there is significant IP overcapacity among study hospitals, there is not capacity at other study hospital EDs to readily absorb all the visits in the event of a complete ED closure.
 - › Portion of OP Ambulatory Surgery and other OP revenue retained, including cancer center

- » **The financial impact of this scenario is estimated as follows**
 - › The contribution margin for patient volume that moves (revenue and direct expense) is applied to income statement for the destination hospital. Majority of projected operating expenses for SMMC+EOGH and are removed from the model.
 - › Due to uncertain nature of services left behind, these are financially modeled as break-even

Conclusions:

1. **Scenario approaches break even from an operations standpoint in near term, but still shows negative operating margins in later years of projections. Scenario financials show large improvement over baseline case.**

Scenario 7: Patient Volume Impacts

Scenario 7	2013	2014	2015	2016	2017	2018	2019
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SMMC+ EOGH Volume/Revenue that Remains Behind

IP Discharges	15,363	15,180	-	-	-	-	-
ED Visits	69,986	70,472	46,166	46,548	46,933	47,324	47,709
Ambulatory Surgery	7,444	7,589	6,189	6,310	6,432	6,557	6,685
Total Revenue	\$292.0	\$297.4	\$47.4	\$49.1	\$50.8	\$52.6	\$54.5

SMMC Volume Picked Up by Other Hospitals

Discharges

Clara Maass	2,568	2,539	2,510	2,483	2,460
NBIMC	2,879	2,846	2,814	2,783	2,758
UH	3,415	3,376	3,338	3,301	3,271
Total	8,862	8,760	8,662	8,567	8,489

ED Visits

Clara Maass	4,246	4,266	4,286	4,306	4,330
NBIMC	5,645	5,671	5,698	5,725	5,757
UH	4,759	4,781	4,804	4,827	4,854
Total	14,649	14,718	14,788	14,858	14,941

Volume switch projected to occur in 2015 for modeling purposes

Scenario 7: Financial Projections

	Scenario 7 - SMMC and EOGH Transformation						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$310.6	\$314.7	\$319.1	\$323.6	\$328.5
Operating Expense	\$246.7	\$250.6	\$295.1	\$304.2	\$313.8	\$323.9	\$334.3
Operating Income	\$14.2	\$13.2	\$15.5	\$10.5	\$5.3	-\$0.3	-\$5.7
Operating Margin	5.4%	5.0%	5.0%	3.3%	1.7%	-0.1%	-1.7%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$628.7	\$635.8	\$643.2	\$650.9	\$660.2
Operating Expense	\$556.4	\$565.1	\$622.5	\$637.7	\$653.7	\$670.4	\$688.1
Operating Income	\$3.7	-\$0.1	\$6.2	-\$1.9	-\$10.5	-\$19.6	-\$27.9
Operating Margin	0.7%	0.0%	1.0%	-0.3%	-1.6%	-3.0%	-4.2%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$12.6	\$13.0	\$13.5	\$13.9	\$14.4
Operating Expense	\$110.6	\$112.3	\$18.5	\$18.9	\$13.9	\$14.3	\$14.8
Operating Income	-\$10.9	-\$12.4	-\$5.9	-\$5.9	-\$0.4	-\$0.4	-\$0.4
Operating Margin	-10.9%	-12.4%	0.0%	0.0%	0.0%	0.0%	0.0%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$34.8	\$36.0	\$37.3	\$38.7	\$40.0
Operating Expense	\$206.6	\$209.6	\$40.6	\$41.8	\$37.6	\$39.0	\$40.3
Operating Income	-\$14.3	-\$13.6	-\$5.8	-\$5.8	-\$0.3	-\$0.3	-\$0.3
Operating Margin	-7.4%	-7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$614.34	\$619.83	\$625.51	\$631.39	\$637.74
Operating Expense	\$488.9	\$589.3	\$630.48	\$646.05	\$662.37	\$679.44	\$696.85
Operating Income	-\$24.5	-\$29.8	-\$16.1	-\$26.2	-\$36.9	-\$48.1	-\$59.1
Operating Margin	-5.3%	-5.3%	-2.6%	-4.2%	-5.9%	-7.6%	-9.3%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,601.0	\$1,619.4	\$1,638.5	\$1,658.4	\$1,680.9
Operating Expense	\$1,609.1	\$1,726.9	\$1,607.2	\$1,648.7	\$1,681.4	\$1,727.0	\$1,774.3
Operating Income	-\$31.8	-\$42.7	-\$6.1	-\$29.3	-\$42.8	-\$68.6	-\$93.4
Operating Margin	-2.0%	-2.5%	-0.4%	-1.8%	-2.6%	-4.1%	-5.6%

Scenario 8: University Hospital Converted to Ambulatory Campus

- » University Hospital is transformed and its IP volume is redistributed to the other study hospitals and hospitals outside of the planning area based upon current IP split for each of the planning area zip codes
 - › Approximately 2/3rds of University Hospital's volume is picked up by the other 4 study hospitals.
 - › Transformation assumed in 2015 for modeling purposes
 - › IP ED volume transferred to other facilities
 - › Portion of OP ED volume retained; FSED (Free Standing Emergency Department) envisioned as mechanism here; While there is significant IP overcapacity among study hospitals, there is not capacity at other study hospital EDs to readily absorb all the visits in the event of a complete ED closure.
 - › Portion of OP Ambulatory Surgery and other OP revenue retained
- » The financial impact of this scenario is estimated as follows
 - › The contribution margin for patient volume that moves (revenue and direct expense) is applied to income statement for the destination hospital. Majority of projected operating expenses for University Hospital are removed from the model.
 - › Due to uncertain nature of services left behind, these are financially modeled as break-even

Conclusions:

1. Takes the hospital with the highest operating loss (and highest cost per CMI and wage adjusted discharge) out of the market; volume is distributed to other hospitals; achieves near breakeven in 2015-2017
2. However, in some respects, UH is the most indispensable hospital in the market and would be the hardest to transform to an ambulatory campus given its charity care and educational missions. Additionally, it was given the best overall facility ratings of the study hospitals.
3. With the exception of the NBIMC/UH consolidation scenario, shows the strongest financial performance of the modeled scenarios; Scenario achieves break even from an operations standpoint in near term, but still shows negative operating margins in later years of projections. Scenario financials show large improvement over baseline case.

Scenario 8: Patient Volume Impacts

Scenario 8	2013	2014	2015	2016	2017	2018	2019
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UH Volume/Revenue that Remains Behind

IP Discharges	16,205	16,088	0	0	0	0	0
ED Visits	96,070	96,880	62,525	63,052	63,584	64,120	64,660
Ambulatory Surgery	8,450	8,614	7,026	7,162	7,302	7,444	7,588
Total Revenue	\$464.4	\$559.5	\$74.1	\$75.9	\$77.7	\$79.6	\$81.5

Volume switch projected to occur in 2015 for modeling purposes

UH Volume Picked Up by Other Hospitals

Discharges

EOGH	1,318	1,309	1,300	1,292	1,286
SMMC	1,903	1,891	1,878	1,867	1,857
NBIMC	4,084	4,057	4,031	4,006	3,985
CM	2,521	2,504	2,488	2,473	2,459

ED Visits

EOGH	2,901	2,925	2,950	2,975	3,000
SMMC	4,190	4,226	4,261	4,297	4,333
NBIMC	8,991	9,067	9,143	9,220	9,298
CM	5,550	5,596	5,644	5,691	5,739

Scenario 8: Financial Projections

	Scenario 8 - University Hospital Transformation (2015)						
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$345.1	\$349.4	\$353.8	\$358.5	\$363.6
Operating Expense	\$246.7	\$250.6	\$324.9	\$334.1	\$343.8	\$354.0	\$364.5
Operating Income	\$14.2	\$13.2	\$20.2	\$15.3	\$10.0	\$4.5	-\$0.9
Operating Margin	5.4%	5.0%	5.9%	4.4%	2.8%	1.2%	-0.3%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$697.1	\$704.5	\$712.2	\$720.3	\$730.0
Operating Expense	\$556.4	\$565.1	\$680.0	\$695.6	\$711.9	\$728.9	\$746.9
Operating Income	\$3.7	-\$0.1	\$17.0	\$8.9	\$0.4	-\$8.6	-\$16.9
Operating Margin	0.7%	0.0%	2.4%	1.3%	0.1%	-1.2%	-2.3%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$141.0	\$141.8	\$142.7	\$143.6	\$144.8
Operating Expense	\$110.6	\$112.3	\$149.2	\$154.1	\$159.4	\$164.9	\$170.5
Operating Income	-\$10.9	-\$12.4	-\$8.2	-\$12.3	-\$16.7	-\$21.3	-\$25.7
Operating Margin	-10.9%	-12.4%	-5.8%	-8.7%	-11.7%	-14.8%	-17.8%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$257.7	\$261.3	\$265.1	\$269.1	\$273.4
Operating Expense	\$206.6	\$209.6	\$262.3	\$268.7	\$275.6	\$282.9	\$290.4
Operating Income	-\$14.3	-\$13.6	-\$4.6	-\$7.4	-\$10.5	-\$13.8	-\$17.0
Operating Margin	-7.4%	-7.0%	-1.8%	-2.8%	-4.0%	-5.1%	-6.2%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$74.1	\$75.9	\$77.7	\$79.6	\$81.5
Operating Expense	\$488.9	\$589.3	\$81.5	\$83.2	\$84.9	\$86.7	\$88.6
Operating Income	-\$24.5	-\$29.8	-\$7.4	-\$7.3	-\$7.2	-\$7.1	-\$7.1
Operating Margin	-5.3%	-5.3%	-9.9%	-9.6%	-9.3%	-9.0%	-8.7%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,514.9	\$1,532.8	\$1,551.6	\$1,571.1	\$1,593.3
Operating Expense	\$1,609.1	\$1,726.9	\$1,497.8	\$1,535.7	\$1,575.6	\$1,617.4	\$1,660.9
Operating Income	-\$31.8	-\$42.7	\$17.1	-\$2.8	-\$24.0	-\$46.4	-\$67.6
Operating Margin	-2.0%	-2.5%	1.1%	-0.2%	-1.5%	-3.0%	-4.2%

Scenario 9: EOGH, SMMC, and NBIMC Converted to Ambulatory Campuses University Hospital Expanded

- » Scenario six plus construction of new University Hospital replacing both NBIMC and UH
 - › SMMC+EOGH transformation assumed in 2015 for modeling purposes, New hospital operational 2018
 - › ALOS reductions assumed in operations of new facility (starting in 2018)
 - › Modeled as NBIMC transformation with new UH; Portion of OP ED volume retained at each closed campus (EOGH, SMMC, NBIMC); FSEDs (Free Standing Emergency Departments) envisioned as mechanism here; While there is significant IP overcapacity, Navigant did not desire to overly concentrate ED volume at remaining facilities. The 5 study hospitals in aggregate have ~325,000 ED visits annually. Splitting this between two facilities (Clara Maass and the new UH facility) is not realistic
 - › Portion of OP Ambulatory Surgery and other OP revenue retained at NBIMC campus after 2018
 - › Estimated that 10% of NBIMC's volume will be lost in the combination of NBIMC and UH volume
- » The financial impact of this scenario is estimated as follows.
 - › Due to uncertain nature of remaining services at the converted hospitals, these are financially modeled as break-even
 - › The combined operating expense profile for a renovated and merged UH/NBIMC was estimated by:
 - A) Carrying forward UH's relatively high operating expenses (both fixed and variable)
 - B) Assuming the combined entity reduces length of stay 10% (approximately 0.5 days overall)
 - C) Assuming that all direct expense at NBIMC moves over with its patient volume as well as a portion of fixed expenses. The financial impact of this assumption means that the contribution margin of the patient volume that moves from NBIMC to UH is assumed to be lower at the merged entity than it is currently at NBIMC (a more financially conservative assumption than in other transformation scenarios).

Conclusions:

1. As modeled, this is the only scenario that generates sustainable positive operating incomes

Scenario 9: Patient Volume Impacts

- Modeled as a two step scenario – SMMC+EOGH transformation in 2015; UH+NBIMC merger in 2018

Scenario 9	2013	2014	2015	2016	2017	2018	2019
			<i>EOGH+SMMC Transformation</i>			<i>UH + NBIMC Merger</i>	
Clara Maass							
Discharges	18,359	18,173	20,560	20,355	20,155	19,962	19,801
ED Visits	76,155	76,602	81,300	81,780	82,267	82,762	83,287
EOGH							
Discharges	6,933	6,837	-	-	-	-	-
ED Visits	34,042	34,225	22,188	22,367	22,549	22,734	22,912
NBIMC							
Discharges	23,116	22,881	26,066	25,803	25,548	-	-
ED Visits	83,159	83,646	89,785	90,314	90,852	58,122	61,375
SMMC							
Discharges	8,430	8,343	-	-	-	-	-
ED Visits	35,944	36,247	23,978	24,180	24,384	24,590	24,797
UH							
Discharges	16,205	16,088	18,855	18,715	18,580	41,222	40,949
ED Visits	96,070	96,880	102,455	103,301	104,153	134,961	133,449

Scenario 9: Financial Projections

Scenario 9 - SMMC and EOGH Transformation; renovated UH & NBIMC merger in 2018							
	2013	2014	2015	2016	2017	2018	2019
Clara Maass							
Operating Revenue	\$260.9	\$263.8	\$310.6	\$314.7	\$319.1	\$323.6	\$328.5
Operating Expense	\$246.7	\$250.6	\$295.1	\$304.2	\$313.8	\$323.9	\$334.3
Operating Income	\$14.2	\$13.2	\$15.5	\$10.5	\$5.3	-\$0.3	-\$5.7
Operating Margin	5.4%	5.0%	5.0%	3.3%	1.7%	-0.1%	-1.7%
Newark Beth Israel							
Operating Revenue	\$560.0	\$565.0	\$628.7	\$635.8	\$643.2	\$71.7	\$74.3
Operating Expense	\$556.4	\$565.1	\$622.5	\$637.7	\$653.7	\$72.6	\$75.1
Operating Income	\$3.7	-\$0.1	\$6.2	-\$1.9	-\$10.5	-\$0.9	-\$0.9
Operating Margin	0.7%	0.0%	1.0%	-0.3%	-1.6%	0.0%	0.0%
East Orange							
Operating Revenue	\$99.7	\$99.9	\$12.6	\$13.0	\$13.5	\$13.9	\$14.4
Operating Expense	\$110.6	\$112.3	\$18.5	\$18.9	\$13.9	\$14.3	\$14.8
Operating Income	-\$10.9	-\$12.4	-\$5.9	-\$5.9	-\$0.4	-\$0.4	-\$0.4
Operating Margin	-10.9%	-12.4%	0.0%	0.0%	0.0%	0.0%	0.0%
St. Michaels							
Operating Revenue	\$192.3	\$196.0	\$34.8	\$36.0	\$37.3	\$38.7	\$40.0
Operating Expense	\$206.6	\$209.6	\$40.6	\$41.8	\$37.6	\$39.0	\$40.3
Operating Income	-\$14.3	-\$13.6	-\$5.8	-\$5.8	-\$0.3	-\$0.3	-\$0.3
Operating Margin	-7.4%	-7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
University Hospital							
Operating Revenue	\$464.4	\$559.5	\$614.3	\$619.8	\$625.5	\$1,152.6	\$1,165.1
Operating Expense	\$488.9	\$589.3	\$630.5	\$646.0	\$662.4	\$1,071.9	\$1,093.8
Operating Income	-\$24.5	-\$29.8	-\$16.1	-\$26.2	-\$36.9	\$80.8	\$71.3
Operating Margin	-5.3%	-5.3%	-2.6%	-4.2%	-5.9%	7.0%	6.1%
5 Hospital Total							
Operating Revenue	\$1,577.3	\$1,684.2	\$1,601.0	\$1,619.4	\$1,638.5	\$1,600.5	\$1,622.3
Operating Expense	\$1,609.1	\$1,726.9	\$1,607.2	\$1,648.7	\$1,681.4	\$1,521.6	\$1,558.3
Operating Income	-\$31.8	-\$42.7	-\$6.1	-\$29.3	-\$42.8	\$78.9	\$64.0
Operating Margin	-2.0%	-2.5%	-0.4%	-1.8%	-2.6%	4.9%	3.9%

Capital Expense Projection per Scenario

Scenarios: 1-3

Description	Baseline Improvements - Building	Baseline Improvements - Infrastructure	Baseline Improvements - Total	Demolition	Additional Renovation/ Restoration	New Construction	Total
Scenario 1: Baseline							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$0	\$0	\$92,000,000
Newark Beth Israel	\$59,000,000	\$48,500,000	\$108,000,000	\$0	\$0	\$0	\$108,000,000
St. Michael's	\$39,000,000	\$18,000,000	\$57,000,000	\$0	\$0	\$0	\$57,000,000
East Orange	\$43,000,000	\$15,000,000	\$58,000,000	\$0	\$0	\$0	\$58,000,000
University	\$66,000,000	\$27,000,000	\$96,000,000	\$0	\$0	\$0	\$96,000,000
Total	\$261,000,000	\$146,500,000	\$411,000,000	\$0	\$0	\$0	\$411,000,000
Scenario 2: Service Rationalization							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$0	\$0	\$92,000,000
Newark Beth Israel	\$59,000,000	\$48,500,000	\$108,000,000	\$0	\$4,000,000	\$0	\$112,000,000
St. Michael's	\$39,000,000	\$18,000,000	\$57,000,000	\$0	\$0	\$0	\$57,000,000
East Orange	\$43,000,000	\$15,000,000	\$58,000,000	\$0	\$0	\$0	\$58,000,000
University	\$66,000,000	\$27,000,000	\$96,000,000	\$0	\$0	\$0	\$96,000,000
Total	\$261,000,000	\$146,500,000	\$411,000,000	\$0	\$4,000,000	\$0	\$415,000,000
Scenario 3: Transform Clara Maass Medical Center							
Clara Maass	\$15,000,000	\$10,000,000	\$19,000,000	\$11,000,000	\$29,000,000	\$0	\$59,000,000
Newark Beth Israel	\$59,000,000	\$48,500,000	\$108,000,000	\$0	\$2,000,000	\$0	\$110,000,000
St. Michael's	\$39,000,000	\$18,000,000	\$57,000,000	\$0	\$0	\$0	\$57,000,000
East Orange	\$43,000,000	\$15,000,000	\$58,000,000	\$0	\$0	\$0	\$58,000,000
University	\$66,000,000	\$27,000,000	\$96,000,000	\$0	\$0	\$0	\$96,000,000
Total	\$222,000,000	\$118,500,000	\$338,000,000	\$11,000,000	\$31,000,000	\$0	\$380,000,000

Capital Expense Projection per Scenario

Scenarios: 4-6

Description	Baseline Improvements - Building	Baseline Improvements - Infrastructure	Baseline Improvements - Total	Demolition	Additional Renovation/ Restoration	New Construction	Total
Scenario 4: Transform East Orange Hospital							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$3,000,000	\$0	\$95,000,000
Newark Beth Israel	\$59,000,000	\$48,500,000	\$108,000,000	\$0	\$0	\$0	\$108,000,000
St. Michael's	\$39,000,000	\$18,000,000	\$57,000,000	\$0	\$0	\$0	\$57,000,000
East Orange	\$27,000,000	\$9,000,000	\$36,000,000	\$4,000,000	\$12,000,000	\$0	\$52,000,000
University	\$66,000,000	\$27,000,000	\$96,000,000	\$0	\$0	\$0	\$96,000,000
Total	\$245,000,000	\$140,500,000	\$389,000,000	\$4,000,000	\$15,000,000	\$0	\$408,000,000
Scenario 5: Transform St. Michael's Medical Center							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$0	\$0	\$92,000,000
Newark Beth Israel	\$59,000,000	\$48,500,000	\$108,000,000	\$0	\$2,000,000	\$0	\$110,000,000
St. Michael's	\$7,000,000	\$3,000,000	\$10,000,000	\$11,000,000	\$9,000,000	\$0	\$30,000,000
East Orange	\$43,000,000	\$15,000,000	\$58,000,000	\$0	\$0	\$0	\$58,000,000
University	\$66,000,000	\$27,000,000	\$96,000,000	\$0	\$0	\$0	\$96,000,000
Total	\$229,000,000	\$131,500,000	\$364,000,000	\$11,000,000	\$11,000,000	\$0	\$386,000,000
Scenario 6: Transform Newark Beth Israel Medical Center							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$6,000,000	\$43,000,000	\$141,000,000
Newark Beth Israel	\$15,000,000	\$12,000,000	\$27,000,000	\$23,000,000	\$3,000,000	\$0	\$53,000,000
St. Michael's	\$39,000,000	\$18,000,000	\$57,000,000	\$0	\$0	\$0	\$57,000,000
East Orange	\$43,000,000	\$15,000,000	\$58,000,000	\$0	\$0	\$0	\$58,000,000
University	\$66,000,000	\$27,000,000	\$96,000,000	\$0	\$0	\$0	\$96,000,000
Total	\$217,000,000	\$110,000,000	\$330,000,000	\$23,000,000	\$9,000,000	\$43,000,000	\$405,000,000

Capital Expense Projection per Scenario

Scenarios: 7-9

Description	Baseline Improvements - Building	Baseline Improvements - Infrastructure	Baseline Improvements - Total	Demolition	Additional Renovation/ Restoration	New Construction	Total
Scenario 7: Transform St. Michael's Medical Center and East Orange Hospital							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$6,000,000	\$43,000,000	\$141,000,000
Newark Beth Israel	\$59,000,000	\$48,500,000	\$108,000,000	\$0	\$6,000,000	\$0	\$114,000,000
St. Michael's	\$7,000,000	\$3,000,000	\$10,000,000	\$11,000,000	\$9,000,000	\$0	\$30,000,000
East Orange	\$27,000,000	\$9,000,000	\$36,000,000	\$4,000,000	\$12,000,000	\$0	\$52,000,000
University	\$66,000,000	\$27,000,000	\$96,000,000	\$0	\$0	\$0	\$96,000,000
Total	\$213,000,000	\$125,500,000	\$342,000,000	\$15,000,000	\$33,000,000	\$43,000,000	\$433,000,000
Scenario 8: Transform University Hospital							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$6,000,000	\$43,000,000	\$141,000,000
Newark Beth Israel	\$59,000,000	\$48,500,000	\$108,000,000	\$0	\$6,000,000	\$0	\$114,000,000
St. Michael's	\$39,000,000	\$18,000,000	\$57,000,000	\$0	\$0	\$0	\$57,000,000
East Orange	\$43,000,000	\$15,000,000	\$58,000,000	\$0	\$0	\$0	\$58,000,000
University	\$0	\$0	\$0	\$18,000,000	\$76,000,000	\$0	\$94,000,000
Total	\$195,000,000	\$119,500,000	\$315,000,000	\$18,000,000	\$88,000,000	\$43,000,000	\$464,000,000
Scenario 9: Transform EOGH and SMMC; Merger of NBIMC and UH							
Clara Maass	\$54,000,000	\$38,000,000	\$92,000,000	\$0	\$6,000,000	\$43,000,000	\$141,000,000
Newark Beth Israel	\$15,000,000	\$12,000,000	\$27,000,000	\$23,000,000	\$3,000,000	\$0	\$53,000,000
St. Michael's	\$7,000,000	\$3,000,000	\$10,000,000	\$11,000,000	\$9,000,000	\$0	\$30,000,000
East Orange	\$27,000,000	\$9,000,000	\$36,000,000	\$4,000,000	\$12,000,000	\$0	\$52,000,000
University	\$59,000,000	\$27,000,000	\$89,000,000	\$4,000,000	\$37,000,000	\$611,000,000	\$741,000,000
Total	\$162,000,000	\$89,000,000	\$254,000,000	\$42,000,000	\$67,000,000	\$654,000,000	\$1,017,000,000

Appendix F

Facility Assessments and Transformation Plans



Summary of Study Hospital Facility Findings

Facility	Necessary Baseline Improvements	Average Age of Plant (yrs)
Baseline Capital Improvements		
Clara Maass	\$92M	19.9
East Orange	\$58 M	16.0
Newark Beth Israel	\$108 M	16.4
St. Michael's	\$57M	8.3
University Hospital	\$96 M	22.1
Total	\$411 M	18.1

	Capex as % of Depreciation	Average Age of Plant
5 Hospital Total	2012: 130% 2013: 112%	2013: 18.1 yrs
<i>Fitch Median Ratios - 2014</i>	<i>116%</i>	<i>10.6 yrs</i>

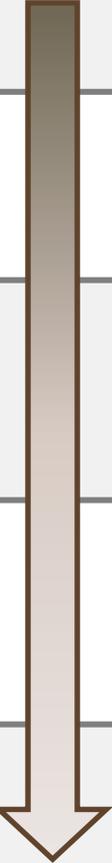
Source: Hospital financials, Navigant analysis; Fitch Ratings from 2014 Median Ratios for Nonprofit Hospitals and Healthcare Systems

Summary of Study Hospital Facility Findings

Facility and Infrastructure Assessments

Descriptions		Facility Assessment							Infrastructure Assessment					Capital Expense (Cost/Sq. Ft.)		
1	Poor	Diagnostic and Treatment	Nursing Units	Support Areas	Office Areas	Clinics/Physician Offices	Public Areas	Overall	Site	Building Exteriors	Building Interiors	Infrastructure	Overall	Facility Assessment	Infrastructure Assessment	Overall
2	Marginal															
3	Adequate															
4	Very Good															
5	Optimal															
University Hospital		3.0	2.0	3.0	3.0	3.0	2.9	2.8	4.2	3.4	3.0	3.4	3.5	\$54	\$25	\$79
St. Michael's Medical Center		3.2	1.5	3.3	3.0	2.7	3.6	2.8	3.8	3.0	3.1	3.5	3.4	\$57	\$27	\$84
Newark Beth Israel Medical Center		3.0	2.2	2.9	2.9	2.7	2.6	2.7	2.7	2.6	3.0	3.1	2.9	\$55	\$46	\$101
Clara Maass Medical Center		2.8	2.3	3.3	3.0	3.0	3.0	2.9	3.1	2.4	2.8	2.7	2.7	\$77	\$54	\$132
East Orange General Hospital		2.5	1.6	2.9	2.9	2.6	2.1	2.3	3.6	3.1	2.5	3.0	3.1	\$107	\$37	\$144

Summary of Study Hospital Facility Impressions and Rating

Campus	Remaining Scope of Services	Overall Rating
 <p>UNIVERSITY HOSPITAL Newark, New Jersey</p> <p><i>Bed Tower</i> <i>built: 1979</i></p>	<p>Diagnostic and Treatment Emergency and Surgery facilities are in good condition but capacities are very tight.</p> <ul style="list-style-type: none"> ▪ Nursing Units All units require upgrade; 63% of staffed beds are private; some excess capacity exists. ▪ Infrastructure Facility is best condition of the 5 hospitals regarding baseline facility/infrastructure needs. Primary infrastructure needs include major upgrade of emergency power system, new roofs, fire sprinklers and ventilation. 	<p><i>Best</i></p> 
 <p>Saint Michael's MEDICAL CENTER A MEMBER OF CATHOLIC HEALTH EAST</p> <p><i>Bed Tower</i> <i>built: 1983</i></p>	<ul style="list-style-type: none"> ▪ Diagnostic and Treatment Emergency capacity adequate and facilities are new; Surgery capacity and condition is adequate; Cath Lab suite significantly oversized; Cancer Center easily accessible and very good condition. ▪ Nursing Units All units except Behavioral Health require upgrade; only 21% of beds are private; significant excess capacity exists ▪ Infrastructure Facility is in 2nd best condition of the 5 hospitals in terms of baseline facility and infrastructure needs. Primary infrastructure needs include new cooling towers, air handlers, chiller and generator. 	
 <p>Newark Beth Israel Medical Center Newark, New Jersey</p> <p><i>Bed Tower</i> <i>built: 1975</i></p>	<ul style="list-style-type: none"> ▪ Diagnostic and Treatment Emergency capacity adequate but facilities are fragmented and require upgrade; Surgery facilities adequate; Cancer Center access not optimum but facility in good condition. ▪ Nursing Units Most units require upgrade; NICU is congested and lacks privacy; ICU works well; overall capacity is adequate. ▪ Infrastructure Facility is in the middle of the 5 hospitals in terms of baseline facility/infrastructure needs. Primary infrastructure needs include new exterior paving, new roofs, ACM abatement, additional fire sprinklers, HVAC upgrades, separation of electrical wiring branches. Energy upgrades targeted. 	
 <p>Clara Maass Medical Center Barnabas Health</p> <p><i>Bed Tower</i> <i>built: 1971</i></p>	<ul style="list-style-type: none"> ▪ Diagnostic and Treatment Surgery, Emergency, Lab and Imaging departments constrained in space; Emergency capacity tight; Cancer Center works well ▪ Nursing Units Unit sizes are constrained; only 26% of staffed beds are private; ICU has 15 open bays (not best practice); there is not much excess capacity in nursing units (new expansion is currently planned). ▪ Infrastructure Facility is in worst condition among the 5 hospitals in terms of baseline facility and infrastructure needs. Primary infrastructure needs include new domestic water piping, separation of wiring branches, new exterior paving, new roofs and generator. 	
 <p>EAST ORANGE GENERAL HOSPITAL</p> <p><i>Bed Tower</i> <i>built: 1971</i></p>	<ul style="list-style-type: none"> ▪ Diagnostic and Treatment Emergency and Surgery capacities are adequate but facilities require upgrade. The Emergency Department has mostly open cubicles and is significantly undersized. ▪ Nursing Units All units except Behavioral Health require upgrade; only 14% of staffed beds are private: significant excess capacity exists; ICU has open bays and does not provide privacy or best practice facilities. ▪ Infrastructure Facility is in 2nd worst condition of the 5 hospitals in terms of baseline facility and infrastructure needs. Primary infrastructure needs include 50% new roofs, 50% new windows, major heating and ventilation upgrades, upgraded elevators and upgraded fire alarm system. 	

Campus Transformation Scenarios:

Scope of Services by Campus

Campus	Scope of Services
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Scenario 3

- Projected building area for ambulatory center: 230,000 sq. ft.
- Services would include Freestanding Emergency, Ambulatory Surgery, Cancer Center, Physician Offices and selected outpatient services
- Maintain first floor portion of hospital at Emergency area; maintain currently planned new addition (treated in analysis as existing since construction start is imminent) including Physician Offices on first 2 floors and Ambulatory Surgery on 3rd floor
- Maintain Continuing Care Building and Parking Garage



Scenarios 6 and 9

- Projected building area for ambulatory center: 260,000 sq. ft.
- Services would include Freestanding Emergency, Ambulatory Surgery, Imaging, Cancer Center, Physician Offices and select OP services
- Maintain Cancer Center, outpatient wing (south of Osborne Terrace) and old apartment tower at main hospital; maintain Ambulatory Building including bridge to outpatient wing; maintain 182 Lyons Building



Scenarios 4, 7, 9

- Building area for ambulatory center: 248,000 sq. ft.
- Services include Freestanding Emergency, Ambulatory Surgery, Physician Offices and select outpatient services
- Maintain 2-story 1990's era building with existing Surgery on lower level and upper level adapted for Freestanding Emergency
- Maintain Medical Arts Building, Hope Gardens, East Pavilion
- Relocate Forensic inpatient unit to "hardened" 8-bed vacant unit in another hospital (possibly South Annex at Clara Maass Medical Center)



Scenarios 5, 7, 9

- Building area for ambulatory center: 130,000 sq. ft.
- Services would include Freestanding Emergency, Ambulatory Surgery, Imaging, Cancer Center, Physician Offices and select OP services
- Maintain new Cancer Center
- Maintain 6-story wing adjacent to Cancer Center ("M" Wing) - currently houses Emergency, Surgery, Imaging and other services

Scenario 8:

- Building area for ambulatory center: 410,000 sq. ft.
- Services would include Freestanding Emergency, Ambulatory Surgery, Imaging, Cancer Center, Physician Offices and select OP services
- Maintain facilities in Cancer Center Building; maintain Ambulatory Care Center Building; maintain facilities in other campus buildings (Bergen Building, EMS Building, DOCS Building and administrative buildings)
- Replace hospital with a 100,000 sq. ft. ambulatory building with 40 Emergency treatment rooms and 4-OR ASC

Scenario 9:

- Scenario 9 involves major expansion of UH campus (addition of 325 beds)



Scenario 8,9

Major Facility and Bed Need Considerations: Scenarios: 1,2,3

Scenario 1: Baseline

- ♦All 5 hospitals remain as is
- ♦Results in 316 more total beds than required (1,208 beds required; 1,557 beds provided)
- ♦UH has some excess capacity; SMMC and EOGH have significant excess capacity

Scenario 2 Service Rationalization

- ♦Requires additional 23 beds at Newark Beth Israel Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦Results in 340 more total beds than required (1,207 beds required; 1,579 beds provided)
- ♦Other 4 hospitals remain as is
- ♦UH has some excess capacity; SMMC and EOGH have significant excess capacity

Scenario 3: Transform Clara Maass Medical Center

- ♦Clara Maass Medical Center closes IP units - maintain ambulatory presence, including freestanding Emergency, ambulatory Surgery, Cancer Center and physician offices - maintain first floor portion of hospital at Emergency area; maintain new addition, transition 3rd floor from beds to ambulatory Surgery center; maintain Continuing Care Building and parking garage
- ♦Requires additional 14 beds at Newark Beth Israel Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦Results in 181 more total beds than required (1,070 beds required; 1,251 beds provided)
- ♦Other 3 hospitals remains as is
- ♦UH has some excess capacity; SMMC and EOGH have significant excess capacity

Bed Need Considerations: Scenarios 4, 5, 6

Scenario 4: Transform East Orange General Hospital

- ♦ East Orange General Hospital closes IP units - maintain ambulatory presence, including freestanding Emergency, ambulatory Surgery and physician offices - maintain 1990 wing of hospital for Emergency and Surgery; also maintain Hope Gardens, Medical Arts Building and East Pavilion - Relocate Forensic inpatient unit to 2 South Annex at Clara Maass Medical Center
- ♦ Requires additional 10 beds at Newark Beth Israel Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Results in 172 more total beds than required (1,154 beds required; 1,326 beds provided)
- ♦ Other 3 hospitals remain as is
- ♦ UH has some excess capacity; SMMC has significant excess capacity

Scenario 5: Transform St. Michael's Medical Center

- ♦ St. Michael's Medical Center closes IP units - maintain ambulatory presence, including freestanding Emergency, ambulatory Surgery, Imaging, Cancer Center and physician offices - maintain new Cancer Center wing and adjacent 6-story "M" wing to the west
- ♦ Requires additional 13 beds at Clara Maass Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Requires additional 9 beds at Newark Beth Israel Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Results in 140 more total beds than required (1,157 beds required; 1,317 beds provided)
- ♦ Other 2 hospitals remain as is
- ♦ UH has some excess capacity; EOGH has significant excess capacity

Scenario 6: Transform Newark Beth Israel Medical Center

- ♦ Consolidate Newark Beth Israel Medical Center and University Hospital - maintain ambulatory presence at Newark Beth Israel, including freestanding Emergency, ambulatory Surgery, Imaging, Cancer Center and physician offices - maintain Cancer wing, outpatient wing and old apartment tower at main hospital; maintain Ambulatory Building; maintain 182 Lyons Building
- ♦ Requires additional 17 beds at Clara Maass Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Results in 167 more total beds than required (1,036 beds required; 1,203 beds provided)
- ♦ Other 3 hospitals remain as is
- ♦ UH has some excess capacity; SMMC and EOGH have significant excess capacity

Bed Need Considerations: Scenarios 7, 8, 9

Scenario 7: Transform St. Michael's Medical Center and East Orange General Hospital

- ♦ East Orange General Hospital closes IP Units and ambulatory presence is maintained as described in scenario #4.
- ♦ St. Michael's Medical Center closes IP Units and ambulatory presence is maintained as described in scenario #5
- ♦ Requires additional 29 beds at Clara Maass Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Requires additional 36 beds at Newark Beth Israel Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Closely matches required bed need (1,095 beds required; 1,137 beds provided)
- ♦ University Hospital remains as is; Emergency would be tight (61 treatment stations provided vs. 63 projected need)

Scenario 8 Transform University Hospital

- ♦ University Hospital closes IP Units - maintain ambulatory presence, including freestanding Emergency, ambulatory Surgery, Cancer Center and physician offices - maintain Ambulatory Care Center, Cancer Center and other campus buildings except for hospital - replace hospital with a new 100,000 sq. ft. ambulatory building
- ♦ Requires additional 14 beds at Newark Beth Israel Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Results in 179 more total beds than required (1,080 beds required; 1,267 beds provided)
- ♦ Other 3 hospitals remain as is
- ♦ NBIMC has some excess capacity; SMMC and EOGH have significant excess capacity

Scenario 9: Transform SMMC and EOGH; Consolidate NBIMC and UH

- ♦ East Orange General Hospital closes IP Units and ambulatory presence is maintained as described in scenario #4.
- ♦ St. Michael's Medical Center closes IP Units and ambulatory presence is maintained as described below in scenario #5
- ♦ Requires additional 29 beds at Clara Maass Medical Center - additional nursing unit rooms exist to allow beds to be added with minimal renovation
- ♦ Consolidate Newark Beth Israel Medical Center and University Hospital - maintain ambulatory presence at Newark Beth Israel, including freestanding Emergency, ambulatory Surgery, Imaging, Cancer Center and physician offices - maintain Cancer wing, outpatient wing and old apartment tower at main hospital; maintain Ambulatory Building; maintain 182 Lyons Building
- ♦ Closely matches required bed need (996 beds required; 998 beds provided)
- ♦ Requires major 325-bed expansion of University Hospital - (1) some of the old Rutgers metal office buildings would be relocated into Newark area leased space; (2) the existing DOC parking garage would be relocated to the north of 12th Avenue: and, (3) an expansion of the existing hospital would occur northward into the area of the relocated DOC parking garage between the Dental School and DOC Buildings.

Scenario Overview: Eight Scenarios Identified / Evaluated, in Addition to a Baseline Scenario

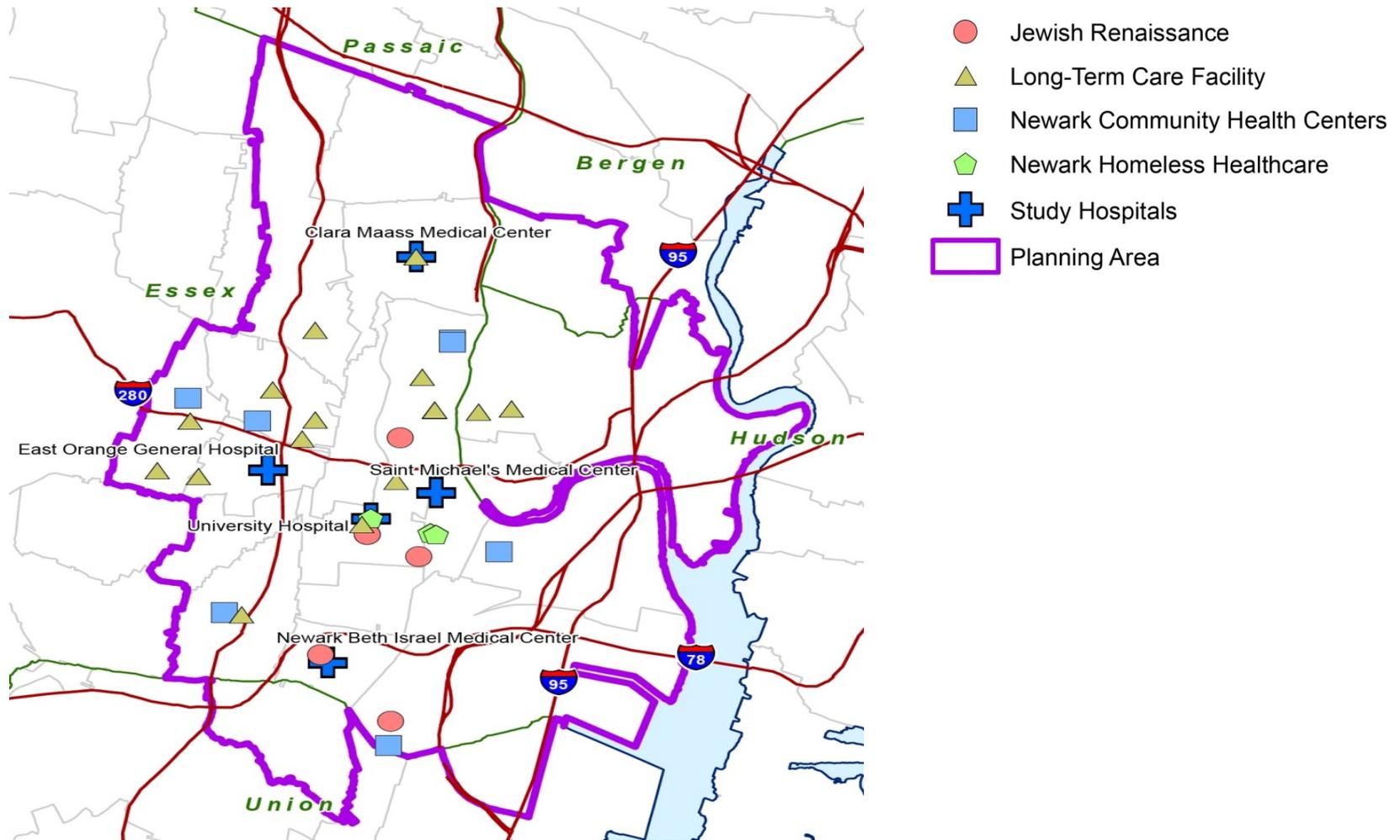
Scenario	Clara Maas Medical Center	East Orange General Hospital	NBIMC	St. Michael's Medical Center	University Hospital
1. Baseline	Current performance projected forward with baseline capital spending				
2. Service line rationalization;	Inpatient pediatrics and cardiac surgery both consolidated at NBIMC campus				
3. Reposition/transform CMMC into a state-of-the-art ambulatory care facility	Transformed into ambulatory campus	Absorbs volume from CMMC	Absorbs volume from CMMC	Absorbs volume from CMMC	Absorbs volume from CMMC
4. Reposition/transform EOGH into a state-of-the-art ambulatory care facility	Absorbs volume from EOGH	Transformed into ambulatory campus	Absorbs volume from EOGH	Absorbs volume from EOGH	Absorbs volume from EOGH
5. Reposition/transform SMMC into a state-of-the-art ambulatory care facility	Absorbs volume from SMMC	Absorbs volume from SMMC	Absorbs volume from SMMC	Transformed into ambulatory campus	Absorbs volume from SMMC
6. Reposition/transform NBIMC into a state-of-the-art ambulatory care facility	Absorbs volume from NBIMC	Absorbs volume from NBIMC	Transformed into ambulatory campus	Absorbs volume from NBIMC	Absorbs volume from NBIMC
7. EOGH and SMMC are both repositioned as state-of-the-art ambulatory care facilities	Absorbs volume from SMMC/EOGH	Transformed into ambulatory campus	Absorbs volume from SMMC/EOGH	Transformed into ambulatory campus	Absorbs volume from SMMC/EOGH
8. Reposition/transform UH into a state-of-the-art ambulatory care facility	Absorbs volume from UH	Absorbs volume from UH	Absorbs volume from UH	Absorbs volume from UH	Transformed into ambulatory campus
9. EOGH, SMMC, NBIMC are all repositioned as state-of-the-art ambulatory care facilities and an appropriately sized world-class regional medical center is developed on the UH site	Absorbs volume from SMMC/EOGH	Transformed into ambulatory campus	Transformed into ambulatory campus/IP volume moved to UH	Transformed into ambulatory campus	Substantially renovated and expanded, consolidated with NBIMC

Appendix G

Area Ambulatory Healthcare Facilities



Map of Study Hospitals, LTC Facilities, and FQHCs



Source: State of New Jersey Department of Health website; rmc.us; nchcfqhc.org; and njpca.org.

Note: CMMC and NBIMC are both part of Barnabas Health.

Outpatient Facilities in Essex County

Facility Name	Type of Facility	City
ADVANCED IMAGING CENTER LLC	AMBULATORY CARE FACILITY	NEWARK
ADVANCED PRACTICE IMAGING	AMBULATORY CARE FACILITY	NEWARK
AMERICAN DIAGNOSTIC IMAGING INC	AMBULATORY CARE FACILITY	NEWARK
AMERICAN IMAGING OF WEST ORANGE, L.L.C.	AMBULATORY CARE FACILITY	WEST ORANGE
AMERICAN SLEEP MEDICINE	AMBULATORY CARE FACILITY	LIVINGSTON
AP DIAGNOSTIC IMAGING INC IRONBOUND	AMBULATORY CARE FACILITY	NEWARK
CANFIELD MEDICAL IMAGING ASSOCIATE PA	AMBULATORY CARE FACILITY	FAIRFIELD
CENTRAL IMAGING ASSOCIATES, INC	AMBULATORY CARE FACILITY	ORANGE
COLUMBUS IMAGING CENTER L.L.C.	AMBULATORY CARE FACILITY	NEWARK
COVENANT HOUSE NEW JERSEY MEDICAL SERVICES	AMBULATORY CARE FACILITY	NEWARK
DIAGNOSTIC IMAGING OF NORTHFIELD	AMBULATORY CARE FACILITY	WEST ORANGE
IRONBOUND OPEN MRI	AMBULATORY CARE FACILITY	NEWARK
IRVINGTON MEDICAL IMAGING CENTER	AMBULATORY CARE FACILITY	IRVINGTON
MAGNETIC RESONANCE OF NJ	AMBULATORY CARE FACILITY	NUTLEY
MILLBURN MEDICAL IMAGING, P.A.	AMBULATORY CARE FACILITY	MAPLEWOOD
MONTCLAIR BREAST CENTER	AMBULATORY CARE FACILITY	MONTCLAIR
MONTCLAIR RADIOLOGY	AMBULATORY CARE FACILITY	WEST CALDWELL
MONTCLAIR RADIOLOGY	AMBULATORY CARE FACILITY	NUTLEY
MONTCLAIR RADIOLOGY	AMBULATORY CARE FACILITY	MONTCLAIR
MOUNTAINSIDE FAMILY PRACTICE ASSOCIATES AT VERONA	AMBULATORY CARE FACILITY	VERONA
NJU CANCER TREATMENT CENTERS	AMBULATORY CARE FACILITY	BLOOMFIELD
ODI DIAGNOSTIC IMAGING OF NEWARK, L.L.C.	AMBULATORY CARE FACILITY	NEWARK
PLANNED PARENTHOOD OF METROPOLITAN NEW JERSEY	AMBULATORY CARE FACILITY	NEWARK
PROGRESSIVE IMAGING OF BELLEVILLE	AMBULATORY CARE FACILITY	BELLEVILLE
PROSPECT PRIMARY CARE	AMBULATORY CARE FACILITY	EAST ORANGE
PROSTATE CANCER CENTER OF NEW JERSEY	AMBULATORY CARE FACILITY	WEST ORANGE
RUTGERS FOCUS WELLNESS CENTER	AMBULATORY CARE FACILITY	NEWARK
SINUS & DENTAL IMAGING OF NJ, L.L.C.	AMBULATORY CARE FACILITY	NUTLEY
SOUTH MOUNTAIN IMAGING CENTER	AMBULATORY CARE FACILITY	MILLBURN
THE STONE CENTER OF NEW JERSEY	AMBULATORY CARE FACILITY	NEWARK

Source: State of New Jersey Department of Health website.

Outpatient Facilities in Essex County

Facility Name	Type of Facility	City
UNIVERSITY RADIOLOGY GROUP PC	AMBULATORY CARE FACILITY	NUTLEY
THE HEALTH ZONE AT GEORGE WASHINGTON CARVER/BRUCE STREET SCHOOL	AMBULATORY CARE FACILITY - SATELLITE	NEWARK
NEW JERSEY CHILDREN'S HEALTH PROJECT/MOBILE HEALTH	AMBULATORY CARE FACILITY - SATELLITE	NEWARK
NEWARK DEPARTMENT OF HEALTH AND COMMUNITY WELLNESS	AMBULATORY CARE FACILITY - SATELLITE	NEWARK
NORTH WARD PARK ELEMENTARY SCHOOL	AMBULATORY CARE FACILITY - SATELLITE	NEWARK
PLANNED PARENTHOOD OF METROPOLITAN NJ - MONTCLAIRE	AMBULATORY CARE FACILITY - SATELLITE	MONTCLAIR
PLANNED PARENTHOOD OF METROPOLITAN NEW JERSEY	AMBULATORY CARE FACILITY - SATELLITE	IRONBOUND
PLANNED PARENTHOOD OF METROPOLITAN NEW JERSEY	AMBULATORY CARE FACILITY - SATELLITE	EAST ORANGE
AMBULATORY CENTER FOR EXCELLENCE IN SURGERY	AMBULATORY SURGICAL CENTER	BLOOMFIELD
BARNABAS HEALTH AMBULATORY CARE CENTER	AMBULATORY SURGICAL CENTER	LIVINGSTON
CENTER FOR SPECIAL SURGERY OF ESSEX COUNTY	AMBULATORY SURGICAL CENTER	ROSELAND
ESSEX ENDOSCOPY CENTER, L.L.C.	AMBULATORY SURGICAL CENTER	NEWARK
ESSEX SPECIALIZED SURGICAL INSTITUTE	AMBULATORY SURGICAL CENTER	WEST ORANGE
MOUNTAIN SURGERY CENTER LLC	AMBULATORY SURGICAL CENTER	WEST ORANGE
PILGRIM MEDICAL CENTER, INC	AMBULATORY SURGICAL CENTER	MONTCLAIR
PLEASANTDALE AMBULATORY CARE L.L.C.	AMBULATORY SURGICAL CENTER	WEST ORANGE
PREMIER SURGICAL PAVILION, LLC	AMBULATORY SURGICAL CENTER	NEWARK
SHORT HILLS SURGERY CENTER LLC	AMBULATORY SURGICAL CENTER	MILLBURN
SUBURBAN ENDOSCOPY CENTER, LLC	AMBULATORY SURGICAL CENTER	VERONA
SURGICAL CENTER AT MILLBURN, LLC	AMBULATORY SURGICAL CENTER	MILLBURN
BIO-MEDICAL APPLICATIONS OF IRVINGTON	END STAGE RENAL DIALYSIS	IRVINGTON
BIO-MEDICAL APPLICATIONS OF NEW JERSEY, INC	END STAGE RENAL DIALYSIS	NEWARK
DIALYSIS CENTER OF WEST ORANGE	END STAGE RENAL DIALYSIS	WEST ORANGE
EAST ORANGE DIALYSIS	END STAGE RENAL DIALYSIS	EAST ORANGE
FRESENIUS MEDICAL CARE IRONBOUND	END STAGE RENAL DIALYSIS	NEWARK
FRESENIUS MEDICAL CARE, L.L.C.	END STAGE RENAL DIALYSIS	LIVINGSTON
FRESENIUS MEDICAL CARE NORTH MONTCLAIR	END STAGE RENAL DIALYSIS	MONTCLAIR
FMC DIALYSIS SERVICES OF NORTH NEWARK	END STAGE RENAL DIALYSIS	NEWARK
KIDNEY LIFE, L.L.C.	END STAGE RENAL DIALYSIS	NEWARK
MILLBURN DIALYSIS CENTER	END STAGE RENAL DIALYSIS	MILLBURN

Source: State of New Jersey Department of Health website.

Outpatient Facilities in Essex County

Facility Name	Type of Facility	City
PARKSIDE DIALYSIS	END STAGE RENAL DIALYSIS	NEWARK
RENAL CARE GROUP MAPLEWOOD	END STAGE RENAL DIALYSIS	MAPLEWOOD
RENEX DIALYSIS CLINIC OF BLOOMFIELD, INC	END STAGE RENAL DIALYSIS	BLOOMFIELD
RENEX DIALYSIS CLINIC OF EAST ORANGE	END STAGE RENAL DIALYSIS	EAST ORANGE
RENEX DIALYSIS CLINIC OF ORANGE	END STAGE RENAL DIALYSIS	ORANGE
NNA-SAINT BARNABAS-LIVINGSTON, LLC	END STAGE RENAL DIALYSIS	LIVINGSTON
WEST ORANGE DIALYSIS	END STAGE RENAL DIALYSIS	WEST ORANGE
EAST ORANGE PRIMARY CARE CENTER	FEDERALLY QUALIFIED HEALTH CENTERS	EAST ORANGE
JEWISH RENAISSANCE MED CENTER AT CENTRAL HIGH SCHOOL	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
JEWISH RENAISSANCE MEDICAL CENTER	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
SHABAZZ HEALTH CLINIC AT MALCOLM X SHABAZZ HIGH SCHOOL	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
THE HEALTH PLACE AT QUITMAN COMMUNITY SCHOOL	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
ORANGE COMMUNITY HEALTH CENTER	FEDERALLY QUALIFIED HEALTH CENTERS	ORANGE
NCHC-DAYTON STREET HEALTH CENTER	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
NEWARK COMMUNITY HEALTH CENTERS, INC	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
NEWARK COMMUNITY HEALTH CENTERS INC	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
NEWARK COMMUNITY HEALTH CENTERS, INC.	FEDERALLY QUALIFIED HEALTH CENTERS	IRVINGTON
NEWARK COMMUNITY HEALTH CENTERS, INC	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
NEWARK DEPARTMENT OF HEALTH AND COMMUNITY WELLNESS	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
NEWARK DEPARTMENT OF HEALTH AND COMMUNITY WELLNESS	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
NEWARK DEPARTMENT OF HEALTH AND COMMUNITY WELLNESS	FEDERALLY QUALIFIED HEALTH CENTERS	NEWARK
ZUFALL HEALTH CENTER INC	FEDERALLY QUALIFIED HEALTH CENTERS	WEST ORANGE
BARNABAS HEALTH HOME CARE-ESSEX	HOME HEALTH AGENCY	WEST ORANGE
CHRILL VISITING NURSE ASSOCIATION	HOME HEALTH AGENCY	VERONA
PATIENT CARE MEDICAL SERVICES, INC	HOME HEALTH AGENCY	WEST ORANGE
BARNABAS HEALTH SLEEP LABORATORY AT MILLBURN	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	MILLBURN
CENTER FOR WOUND SCIENCE & HEALING AT COLUMBUS	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	NEWARK
CSH OUTPATIENT CENTER NEWARK	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	NEWARK
EAST ORANGE GEN HOSP HYPERBARIC WOUND CARE CENTER	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	EAST ORANGE
EAST ORANGE GENERAL HOSP	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	EAST ORANGE

Outpatient Facilities in Essex County

Facility Name	Type of Facility	City
EAST ORANGE GENERAL HOSPITAL FAMILY HEALTH CENTER	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	EAST ORANGE
EAST ORANGE GENERAL HOSPITAL LABORATORY	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	EAST ORANGE
EAST ORANGE GENERAL HOSPITAL-HEMODIALYSIS	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	EAST ORANGE
JAMES WHITE MANOR	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	NEWARK
MAGNUS IMAGING OF ENGLEWOOD HOSPITAL & MED CTR	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	GLEN RIDGE
ST JOSEPH'S CARDIOVASCULAR CENTER-NUTLEY	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	NUTLEY
UNIVERSITY HOSPITAL AMBULATORY CARE CENTER	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	NEWARK
WAYMON C LATTIMORE CLINIC	HOSPITAL-BASED, OFF-SITE AMBULATORY CARE FACILITY	NEWARK
SAINT BARNABAS WOMEN'S CENTER FOR GYNECOLOGICAL SURGERY	HOSPITAL-BASED, OFF-SITE AMBULATORY SURGICAL CTR	WEST ORANGE
DIAMOND INSTITUTE OF INFERTILITY & MENOPAUSE	SURGICAL PRACTICE	MILLBURN
ESSEX EYE SURGERY & LASER CENTER	SURGICAL PRACTICE	BLOOMFIELD
ESSEX SURGICAL ARTS SURGERY CENTER, LLC	SURGICAL PRACTICE	BELLEVILLE
ESSEX SURGICAL, LLC	SURGICAL PRACTICE	WEST ORANGE
GARDEN STATE SURGERY CENTER, LLC	SURGICAL PRACTICE	MONTCLAIR
GLEN RIDGE SURGI CENTER, LLC	SURGICAL PRACTICE	GLEN RIDGE
IRONBOUND ENDO-SURGICAL CENTER, PA	SURGICAL PRACTICE	NEWARK
NEW JERSEY UROLOGY, LLC	SURGICAL PRACTICE	BLOOMFIELD
NEW JERSEY VEIN & COSMETIC SURGERY	SURGICAL PRACTICE	WEST ORANGE
NJ GASTRO LLC	SURGICAL PRACTICE	NEWARK
NORTH FULLERTON SURGERY CENTER	SURGICAL PRACTICE	MONTCLAIR
NORTHERN NJ EYE INSTITUE	SURGICAL PRACTICE	SOUTH ORANGE
NORTHFIELD SURGICAL CENTER, LLC	SURGICAL PRACTICE	WEST ORANGE
PAUL J LO VERME, MD	SURGICAL PRACTICE	VERONA
UNION OB/GYN AND INFERTILITY GROUP PA	SURGICAL PRACTICE	SOUTH ORANGE
UROLOGY GROUP OF NEW JERSEY, LLC	SURGICAL PRACTICE	WEST ORANGE

Source: State of New Jersey Department of Health website.

Appendix H

Other Supporting Analyses



Study Hospital Operating Efficiency Indicators

Operating Efficiency Indicator	2013					5 Hosp Total
	Clara Maass	NBIMC	SMMC	EOGH	UH	
FTE per Adjusted Occupied Bed (CMI Adjusted)	3.45	3.42	3.55	5.01	4.60	3.91
Operating Expense per Adjusted Discharges (CMI and Wage-Index Adjusted)	\$6,182	\$9,554	\$7,996	\$8,025	\$12,874	\$9,384

Classification vs. Benchmarks

Large Community

Major Teaching/ Large Community

Medium Community Medium Community

Major Teaching



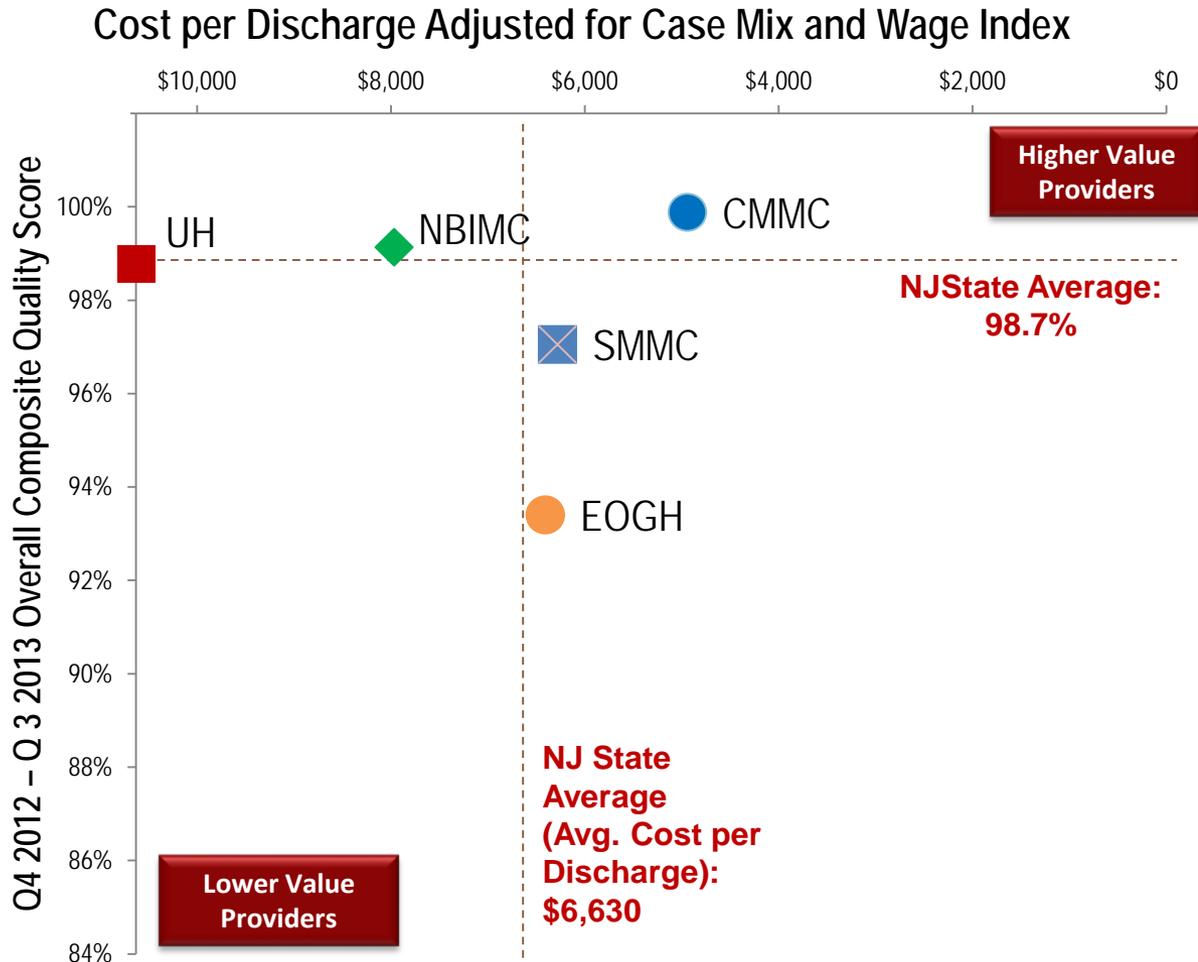
Poor performance relative to benchmarks

Performance near benchmark medians

Strong performance relative to benchmark medians

Truven Median National Benchmarks (2013)	Major Teaching	Minor Teaching	Large Community	Medium Community	Small Community	All Hospitals
FTE per Adjusted Occupied Bed (CMI Adjusted)	3.90	3.64	3.64	3.80	4.33	3.84
Operating Expense per Adjusted Discharges (CMI and Wage-Index Adjusted)	\$10,797	\$8,006	\$7,697	\$7,203	\$7,232	\$7,940

Study Hospital Quality/Cost and Satisfaction Metrics



Patient Satisfaction HCAHPS* Performance

Hospital	HCAHPS Performance: % of Patients Highly Satisfied (Q4/12-Q3/13)
NBIMC	60%
UH	58%
CMMC	57%
SMMC	57%
EOGH	52%
NJ State Average	64%

*Hospital Consumer Assessment of Healthcare Providers and Systems



Source: Hospital Benchmarks and whynotthebest.org. Note: Cost per discharge based on 2013 data for all facilities except SMMC which is based on 2012 data.