

Statistical Brief # 17

Office of Quality and Patient Safety

Division of Information and Statistics

December, 2017

Acute Care Utilization by Out of State Residents: Focus on Inpatient, New York State 2016

Stephen Goins, MS, Tatiana Ledneva, MS

Introduction

Hospital inpatient use in New York State (NYS) by out of state (OOS) residents has historically represented a relatively small proportion of all discharges (just over 2% on an average) and to date there is a limited body of knowledge regarding OOS residents utilization of NYS health care resources. However, these visits still have a substantial impact on resource use in NYS hospitals and there is evidence that these patients have a different health and utilization profile than in-state residents. In 2015, inpatient discharges by OOS patients accounted for 2.3% of all inpatient events, however, when examining planned inpatient admissions only, this proportion grew by over 220% to 7.4% of planned inpatient events¹.

The objective of this brief is to examine inpatient utilization trends in NYS acute care facilities by OOS patients in comparison to utilization by NYS residents, with a specific emphasis on exploring trends within discharges following a planned admission. Given the propensity for planned admissions within the OOS subpopulation, an examination of their hospitalization patterns may help illustrate what inpatient services provided within NYS are most sought after by OOS patients. In addition, taking a closer look at the patient demographics, facility characteristics, service costs, and seasonal trends of these discharges will facilitate a better understanding of NYS acute care hospitals use by OOS residents.

Data Source

Hospital inpatient discharge data were obtained from the Statewide Planning and Research Cooperative System (SPARCS). SPARCS is an all payer hospital discharge data system established in 1979 through cooperation between the health care industry and government. SPARCS collects claim level detail on patient characteristics, diagnoses, treatments, services, and charges for every Article 28 (acute care) hospital discharge, ambulatory surgery visit, emergency room visit, and hospital-based outpatient service in New York State. More information on SPARCS may be found on the DOH public website at: <http://www.health.ny.gov/statistics/sparcs/>.

Highlights

- In 2016, inpatient discharges by OOS residents accounted for 2.82% of all inpatient discharges at NYS acute care hospitals
- 73.27% of discharges by OOS patients came from states neighboring NYS, with 46.96% from New Jersey alone
- 34.09% of OOS discharges resulted from a planned admission, compared to 13.33% among NYS discharges
- OOS patients were more likely to be male, white, and Non-Hispanic compared to NYS patients
- OOS discharges were more than twice as likely to have a Private insurance primary payer compared to NYS residents (47.68% and 22.67% of discharges respectively)
- Mean and median estimated cost were higher for OOS discharges compared to NYS discharges for the most common OOS Surgical APR-DRGs

Methods

Inpatient Event Identification

The analyses presented in this brief include all inpatient events reported to SPARCS with discharge dates between January 1, 2016 and December 31, 2016. Any discharges where the county or state of patient residence was reported as outside of NYS were identified as OOS patients; the remaining discharges were considered to be NYS resident patients, including 'Homeless' and 'Unknown Residence'. Throughout this brief, inpatient events for OOS patients are referred to as 'OOS discharges' while inpatient events for NYS patients are referred to as 'NYS discharges'.

Planned Admissions

Discharges that were the result of a planned admission were identified using a previously developed algorithm that is described in a previous brief¹. Admissions related to pregnancy, childbirth, or neonatal conditions are outside the scope of this algorithm and were not examined separately in this analysis; they are considered to be 'unplanned' for the purposes of this brief.

Estimated Costs

Estimated costs for inpatient stays were calculated using charges reported by facilities on the SPARCS record and annual Institutional Cost Report (ICR) facility filings to NYS Department of Health. The ICR is a standard report completed by NYS facilities to report income, expenses, assets, liabilities, and statistics to the NYS Department of Health (DOH). Under DOH regulations, (Part 86-1.2), Article 28 hospitals are required to electronically file financial and statistical data with DOH annually through a secure network. Facility-specific Ratio of Cost to Charges (RCCs) by revenue code are included in the ICRs. For example, if hospital charge is \$20,000 and the RCC is 50%, the estimated cost is \$10,000. RCCs were applied to each service charge reported to SPARCS and summed to the discharge level to calculate the estimated cost for that discharge. Cost data presented in this brief was calculated using facility specific 2013 audited RCCs file. Estimated costs represent the expenses to the hospital to provide the services and is not the same as the amount paid for services by the payers. More information on reported charges in SPARCS is available on page 259 of the SPARCS Submission Data Dictionary, located at:

http://www.health.ny.gov/statistics/sparcs/sysdoc/elements_837/index.htm

Statistical Analysis

This brief utilizes both the 3M™ APR-DRG Version 33 inpatient classification software, the Centers for Disease Control and Prevention (CDC) 2013 National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties, and the Healthcare Cost and Utilization Project (HCUP) Hospital Bedsize Classification. More information on each of these groupers can be found in the 'Definitions' section of this brief. Summary statistics (e.g., counts, mean, median, percent) and graphics were used to analyze and present findings. Ranking for the most common APR-DRGs were determined based on frequency of discharges with greatest number of discharges is ranked as 1. Supporting tables for most of the figures presented in this brief are included as an Appendix. All analyses were completed using SAS version 9.4 statistical software.

Findings

Figure 1a shows the overall inpatient discharge volume at NYS acute care hospitals by patient residence (NYS vs OOS) in 2016. While OOS discharges accounted for only 66,088 (43,556 unplanned and 22,532 planned) inpatient events compared to 2,280,964 (1,976,872 unplanned and 304,092 planned) NYS discharges, the proportion of those discharges that resulted from a planned admission was more than 2.5 times higher compared to NYS discharges (34.09% vs 13.33% respectively).

Figure 1b shows the distribution of discharge volume and the proportion of discharges resulting from a planned admission by patient residence for OOS residents only. New Jersey accounted for the largest number of discharges overall, with 18,574 unplanned admissions and 12,459 planned admissions. Among individual states, Pennsylvania (6,429 unplanned and 2,294 planned) and Connecticut (3,572 unplanned and 2,743 planned) had the next highest discharge volume. Connecticut also had the highest proportion of discharges resulting from a planned admission (43.44%), while New Jersey had the second highest. OOS patients whose explicit residence was not identified accounted for 386 total discharges (350 unplanned and 36 planned admissions) and had the lowest proportion of planned admissions among OOS discharges (9.33%).

Figure 2 contrasts the distribution of inpatient discharge volume between NYS and OOS residents by select patient demographics. OOS discharges had a higher proportion of male patients relative to NYS discharges (49.70% vs 44.31% respectively) and a lower proportion of younger patients (8.70% vs 12.40% respectively). Within race and ethnicity distributions, the proportion of OOS discharges among Hispanic and Black patients was less than half that of NYS discharges. Only 6.23% of OOS discharges reported a Hispanic ethnicity (compared to 13.49% among NYS) and only 8.37% reported race as Black (compared to 18.64% among NYS discharges). OOS discharges had higher proportions of both Non-Hispanic and White patients.

Figure 3 contrasts the proportion of discharges that resulted from a planned admission between NYS and OOS residents by patient demographics. While patterns in the proportion of planned admissions are similar between NYS and OOS discharges (for example, males and Non-Hispanics have more planned admissions within both NYS and OOS residence categories), the proportion of planned admissions was higher among OOS discharges across virtually every demographic category. There is a particularly stark difference among children aged 6-18 years old, where 42.88% of OOS discharges resulted from a planned admission in this age group compared to only 13.46% of NYS discharges, and adults 65+ years old, where 40.27% of OOS discharges resulted from a planned admission in this age group compared to only 14.95% of NYS discharges.

Figure 4 contrasts the distribution of inpatient discharge volume between NYS and OOS residents by the characteristics of the hospital at which the event occurred. There were fewer OOS discharges from Medium sized hospitals (13.30%) compared to NYS discharges (29.63%); and while the majority of both OOS and NYS discharges occurred at Urban (compared to Rural) and Teaching (compared to Non-Teaching) facilities, there was a slightly higher proportion of OOS discharges at Urban and Teaching hospitals compared to NYS discharges. By HCUP Hospital Bedsize, while Large Urban (Teaching) hospitals accounted for the largest proportion of discharges for both residence categories, this majority was much more pronounced for OOS discharges; 63.16% occurred at these facilities compared to 47.21% of NYS discharges. In contrast, 24.56% of NYS discharges occurred at Medium Urban (Teaching) facilities compared to only 10.41% of OOS discharges. When examining hospital Health Service Area (HSA), 69.16% of OOS discharges occurred in New York City compared to 45.37% of NYS discharges. Two other HSAs had a higher proportion of OOS discharges compared to NYS discharges: Southern Tier and Hudson Valley, accounting for 2.05% and 10.99% of OOS discharges respectively.

Figure 5 contrasts the proportion of discharges that resulted from a planned admission between NYS and OOS residents by facility characteristics. Unlike patient demographics, there are a number of hospital characteristics within which the proportion of planned admissions is higher among NYS discharges compared to OOS discharges, notably Small Rural hospitals (13.32% NYS vs 5.56% OOS planned) and within the Finger Lakes (15.40% NYS vs 13.80% OOS planned), Central NY (13.94% NYS vs 8.45% OOS planned), and Capital/Adirondacks (15.96% NYS vs 12.83% OOS planned) HSAs. In contrast, while the New York City HSA and Small Urban (Teaching) hospitals (within hospital HSA and HCUP Bedsize respectively) represented some of the smallest proportions of planned admissions among NYS discharges, among OOS discharges these levels had the highest proportion of planned admissions within their respective hospital characteristics. In New York City only 11.66% of NYS discharges resulted from a planned admission compared to 41.67% of OOS

discharges, and in Small Urban (Teaching) hospitals only 17.88% of NYS discharges resulted from a planned admission compared to 62.08% of OOS discharges.

Figure 6 presents the seasonal distribution of OOS discharges by HSA based on date of admission, with each box in the grid representing the percentage of OOS discharges within that HSA admitted on that day. HSAs with a higher volume of discharges (including Statewide) show little seasonal variation with regards to OOS discharges. Where seasonal trends are apparent (notably within Central NY), a higher volume of discharges occur during the summer months.

Figure 7 contrasts the distribution of inpatient discharge volume between NYS and OOS residents by primary payer. Private insurance accounts for a much larger proportion of OOS discharges (47.68%) compared to NYS discharges (22.67%). In contrast, only 8.14% of OOS discharges had Medicaid as the primary payer compared to 33.21% of NYS discharges. Self-Pay was also better represented among OOS discharges, with 4.24% Self-Pay compared to 2.12% of NYS discharges.

Figure 8 contrasts the proportion of discharges that resulted from a planned admission between NYS and OOS residents by primary payer. Proportions of discharges resulting from a planned admission was higher among OOS discharges across all primary payers. Also, while Medicare discharges had the third highest percentage of planned admissions among NYS discharges (14.37%), they had the highest percentage of planned admissions among OOS discharges (37.67%).

Figures 9a-9d contrasts the OOS top 5 most common Medical APR-DRGs between NYS and OOS residents by the percentage of discharges within each residence category, average length of stay, mean estimated cost, and median estimated cost. 'Normal Newborn or Neonate w/ Other Problem' is the most common OOS medical APR-DRG, representing 5.34% of all OOS discharges; though this is less than the 8.42% this APR-DRG represents among NYS discharges. Of the top five most common APR-DRGs, only one ('Seizure') represents a higher proportion OOS discharges than NYS discharges. By the measures of average length of stay and mean and median estimated cost there is little difference between NYS and OOS discharges within the top 5 OOS Medical APR-DRGs.

Figures 10a-10d contrasts the OOS top 5 most common Surgical APR-DRGs between NYS and OOS residents by the percentage of discharges within each residence category, average length of stay, mean estimated cost, and median estimated cost. In contrast to Medical APR-DRGs, four of the top five most common Surgical APR-DRGs were more prevalent among OOS discharges compared to NYS discharges. Only 'Cesarean Delivery' was more common among NYS discharges (3.21%) compared to OOS discharges (2.25%). 'Hip Joint Replacement' was the most common OOS Surgical APR-DRG, accounting for 3.78% of all OOS discharges and only 1.33% of NYS discharges. Similar to Medical APR-DRGs, average length of stay was comparable between OOS and NYS discharges across the top 5 Surgical APR-DRGs. However, mean and median estimated cost was higher among OOS discharges for both measures across each APR-DRG. 'Percutaneous Cardiovascular Procedures w/o AMI' showed the largest disparity in mean estimated cost (\$9,362), with a mean estimated cost of \$40,659 for OOS discharges and \$31,297 for NYS discharges. 'Knee Joint Replacement' had the largest difference in median estimated cost (\$6,135), with a median estimated cost of \$24,219 for OOS discharges and \$18,084 for NYS discharges.

Figure 11 shows the OOS top 3 most common overall APR-DRGs within each HSA and illustrates the proportion of each that were the result of a planned admission. Many of the same APR-DRGs were among the most common across individual HSAs. Seven of eight HSAs had either 'Septicemia and Disseminated Infections' (Long Island, Hudson Valley, and Central NY) or a birth/maternity event of 'Normal Newborn or Neonate w/ Other Problem' or 'Vaginal Delivery' (New York City, Western NY, Southern Tier, and Finger Lakes) as the most common APR-DRGs; and these APR-DRGs were common throughout the top 3 across each of these HSAs. The most common APR-DRG in the Capital/Adirondack HSA was 'Percutaneous Cardiovascular Procedures w/o AMI'. The only common APR-DRGs by HSA that had a substantial proportion of planned admissions were 'Hip Joint Replacement' (92.08% of admissions planned) and 'Knee Joint Replacement'

(94.71% of admissions planned) which ranked second and third respectively among New York City OOS discharge APR-DRGs.

Figure 12 shows the OOS top 3 most common overall APR-DRGs within each primary payer and illustrates the proportion of each that were the result of a planned admission. The top 2 APR-DRGs among Medicare were frequently planned admissions for 'Knee Joint Replacement' (94.56% planned) and 'Hip Joint Replacement' (83.27% planned), while the most common APR-DRG among Medicaid, Private, and Self-Pay OOS discharges was 'Normal Newborn or Neonate w/ Other Problem'. The most common APR-DRG in the Other primary payer category also was a frequently planned admission: 'Dorsal and Lumbar Fusion Procedures Except for Curvature of Back' (89.53% planned).

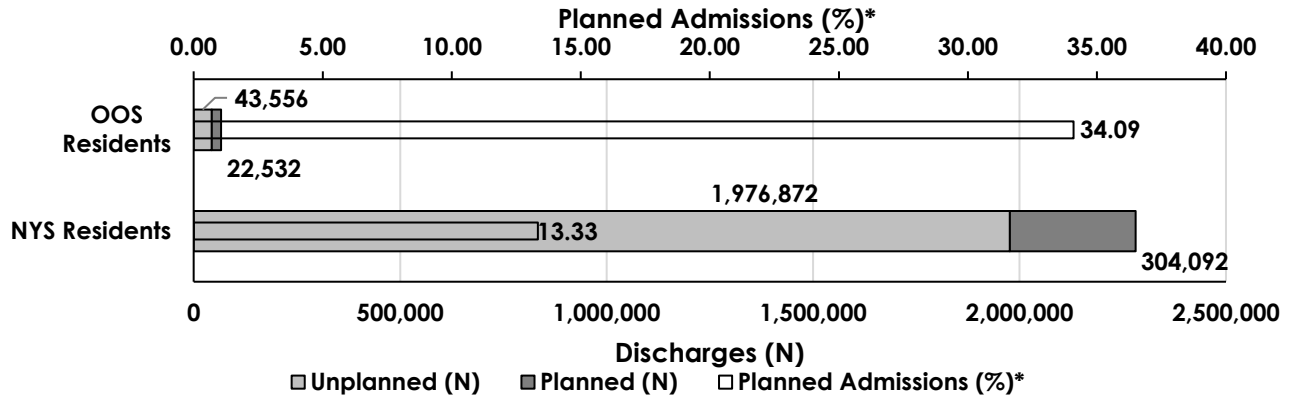
Conclusions

Overall, OOS residents accounted for 2.82% of all inpatient discharges from NYS acute care hospitals in 2016. New Jersey accounted for over 46% of these events, followed by Pennsylvania (13.20%) and Connecticut (9.56%). While only 13.33% of discharges by NYS residents resulted from a planned admission, OOS discharges resulted from a planned admission more than 2.5 times more often (34.09%). OOS patients were more often Male, White and Non-Hispanic compared to NYS patients. OOS discharges also showed a preference for Large Urban (Teaching) hospitals and hospitals in New York City, in general and more-so than NYS residents. While overall OOS residents had a higher percentage of discharges resulting from a planned admission, this trend reversed among Small Rural hospitals and some areas of the state. OOS discharges were also more likely to be either privately insured or self-pay compared to NYS discharges. While there was little difference in cost measures among the OOS top 5 most common Medical APR-DRGs, both mean and median estimated costs were higher for OOS discharges than NYS discharges for all OOS top 5 most common Surgical APR-DRGs.

This brief explores differences in how OOS residents use NYS acute care hospital resources compared to NYS residents. Specifically, it appears that NYS hospitals (particularly in New York City) are sought after to provide services related to planned inpatient admissions.

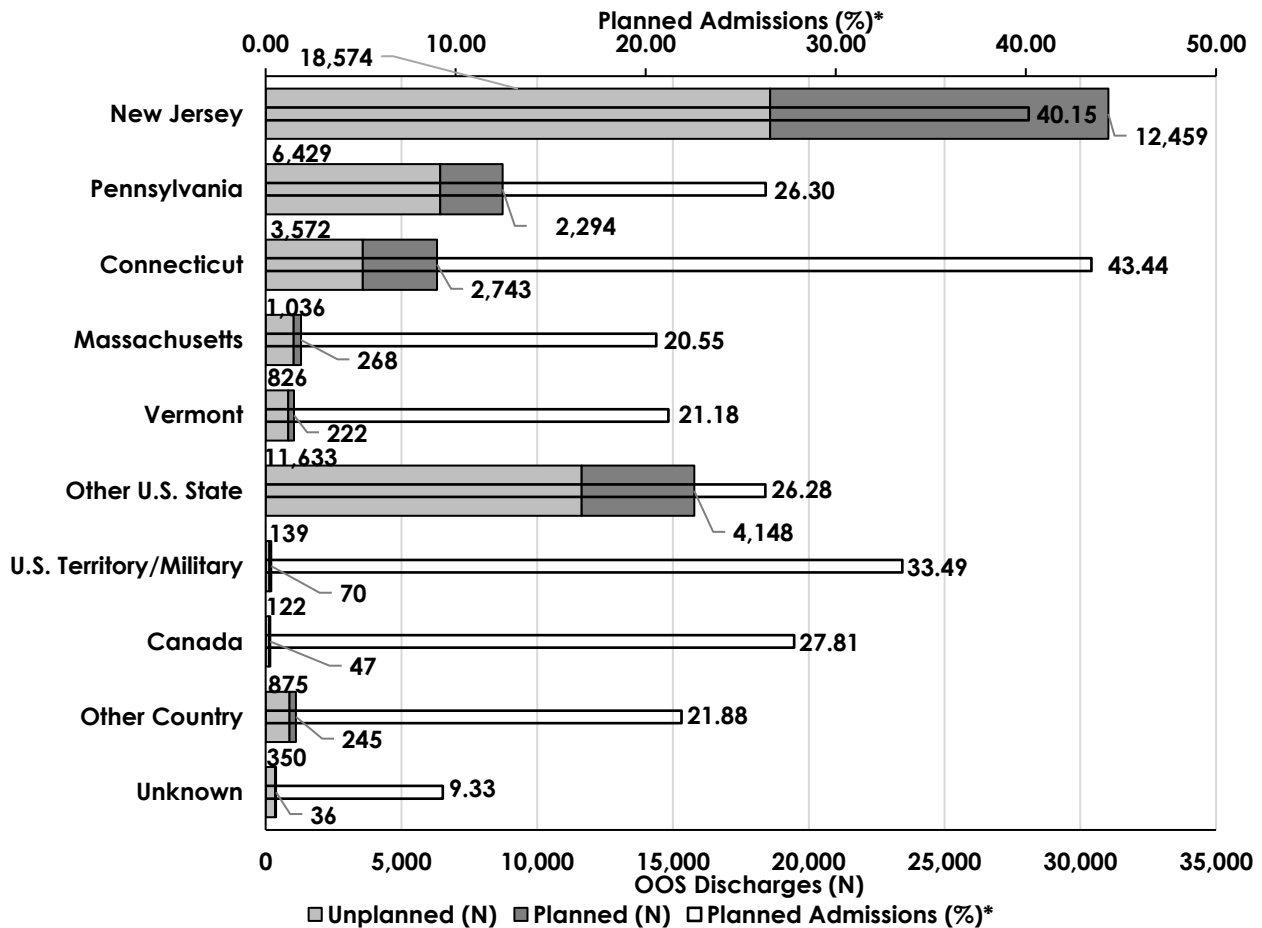
Figures

Figure 1a. Inpatient Discharge Volume and Proportion of Planned Admissions, NYS vs OOS Residents; 2016



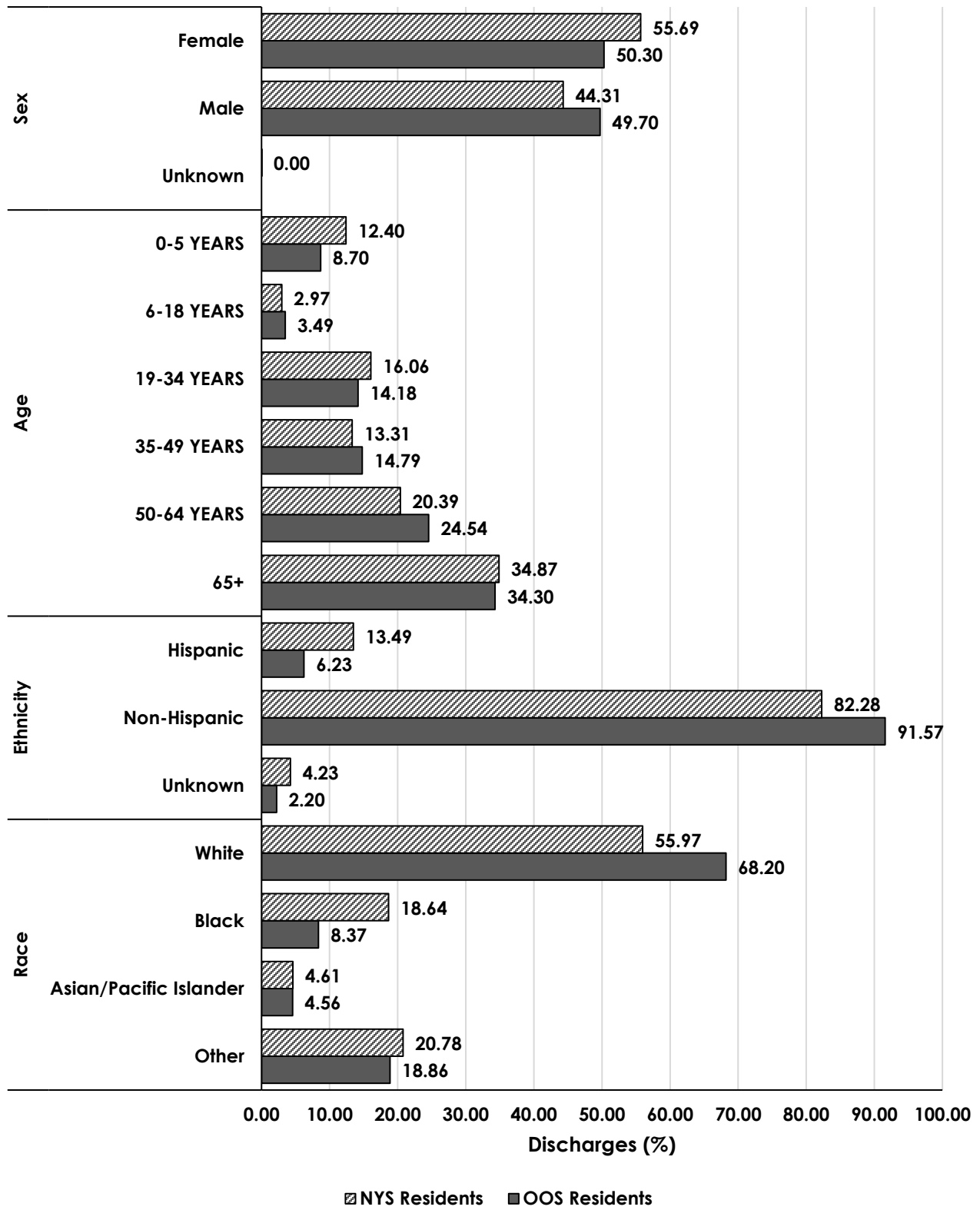
*Represents percentage of discharges resulting from a planned admission within each residence category
 Note: Unplanned admissions include pregnancy, birth, and neonatal admissions.

Figure 1b. Discharge Distribution and Proportion of Planned Admissions by Patient Residence, OOS Residents Only; 2016



*Represents percentage of discharges resulting from a planned admission within each residence category
 Note: Unplanned admissions include pregnancy, birth, and neonatal admissions.

Figure 2. Inpatient Discharge Distribution by Patient Demographics, NYS vs OOS Residents; 2016



Note: Intra-demographic percentages sum to 100% for each residence category (i.e. NYS Resident Ethnicities sum to 100%)

Figure 3. Proportion of Planned Admissions by Patient Demographics, NYS vs OOS Residents; 2016

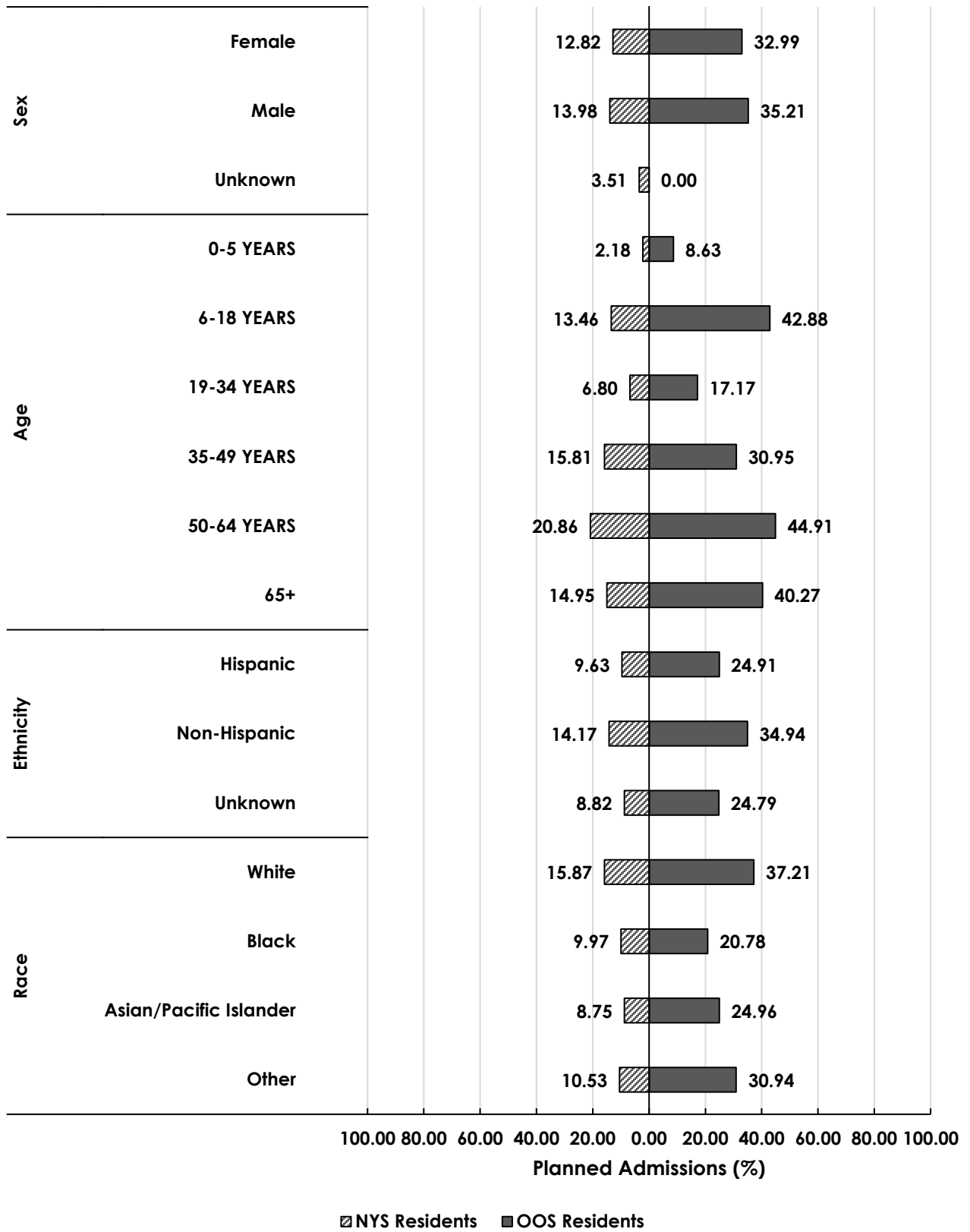
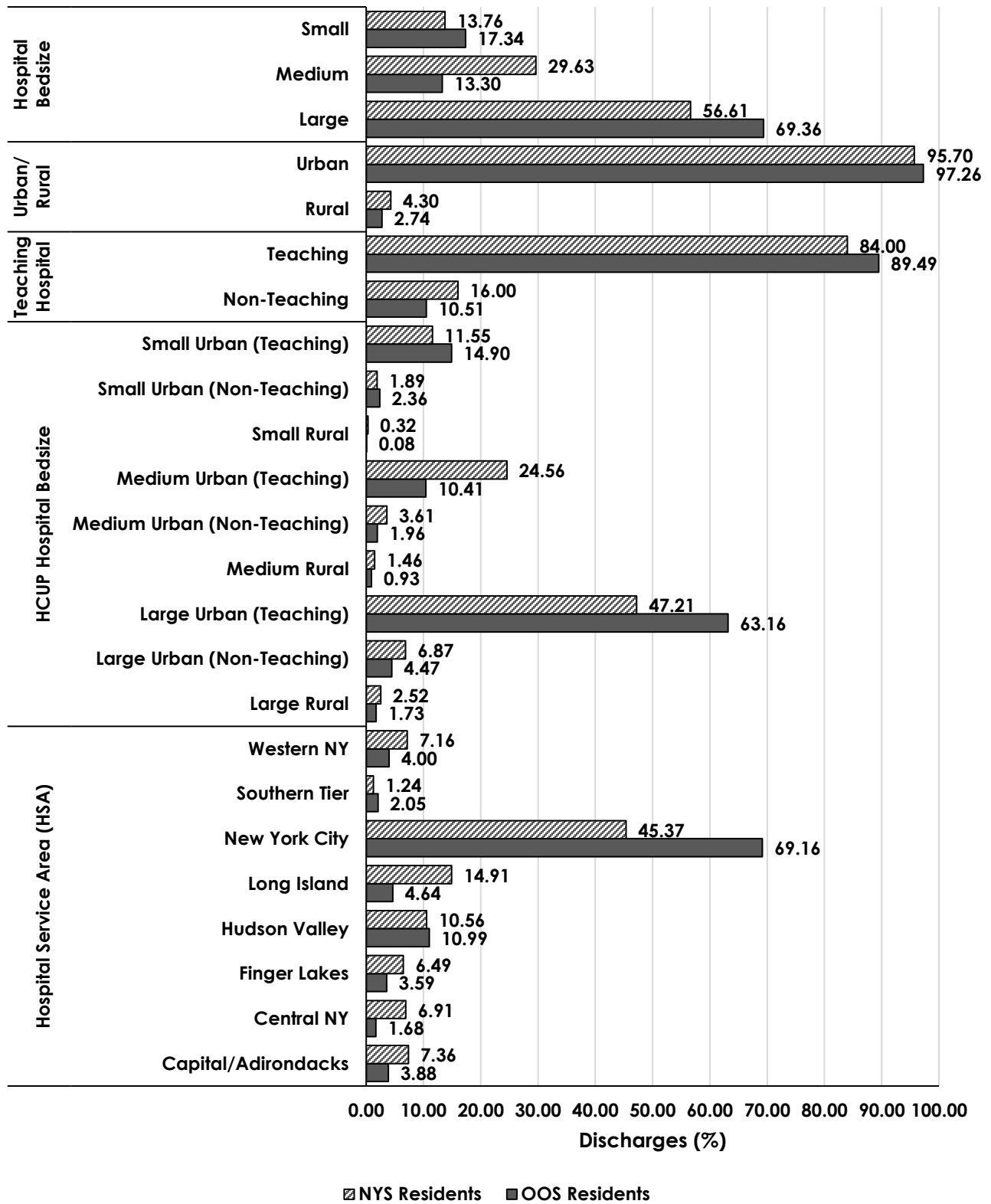


Figure 4. Inpatient Discharge Distribution by Hospital Characteristics, NYS vs OOS Residents; 2016



Note: Intra-characteristic percentages sum to 100% for each residence category (i.e. NYS Resident Bedsizes sum to 100%)

Figure 5. Proportion of Planned Admissions by Hospital Characteristics, NYS vs OOS Residents; 2016

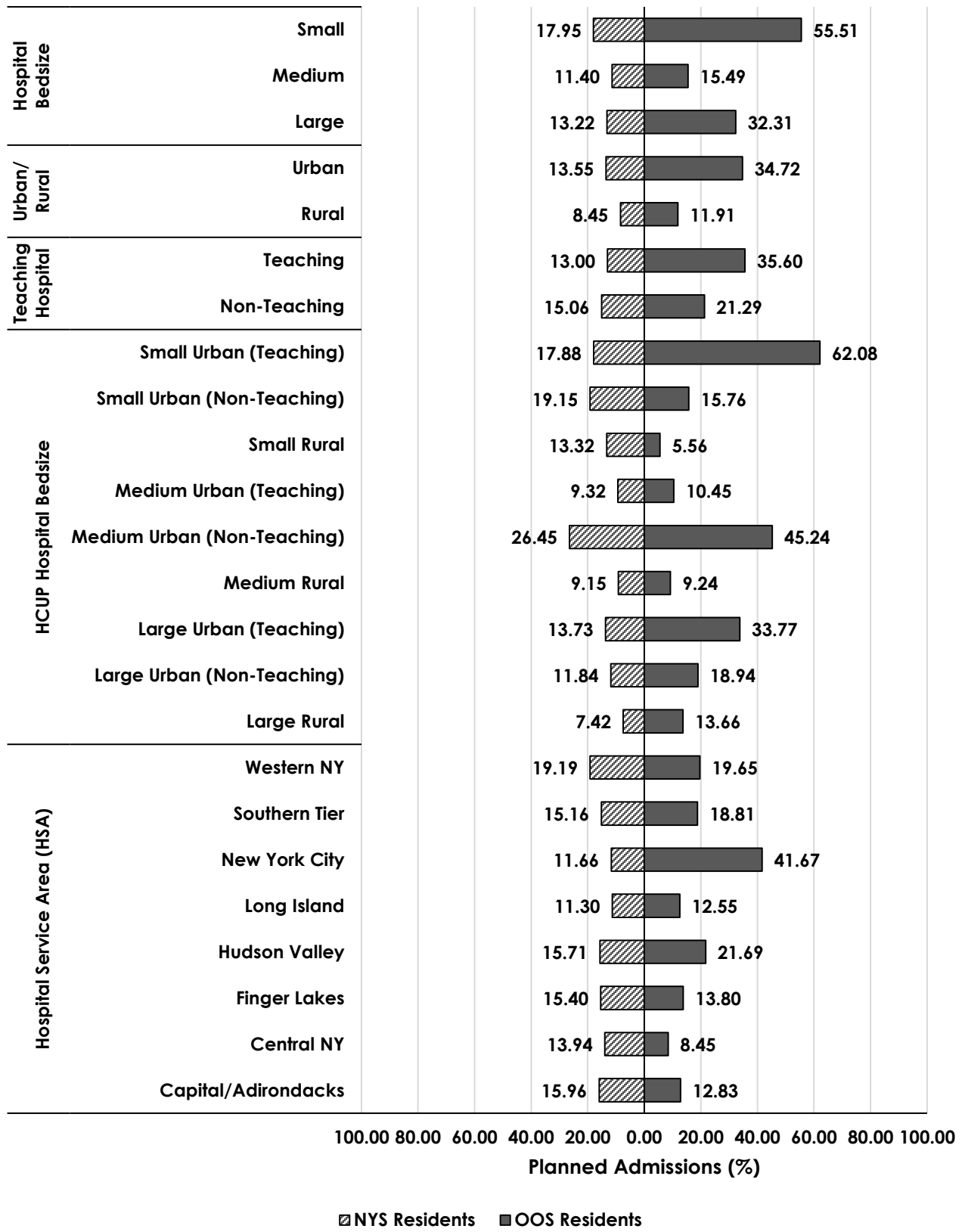


Figure 6. Seasonal Distribution of Admission Volume Within Each Health Service Area; OOS Residents Only; 2016

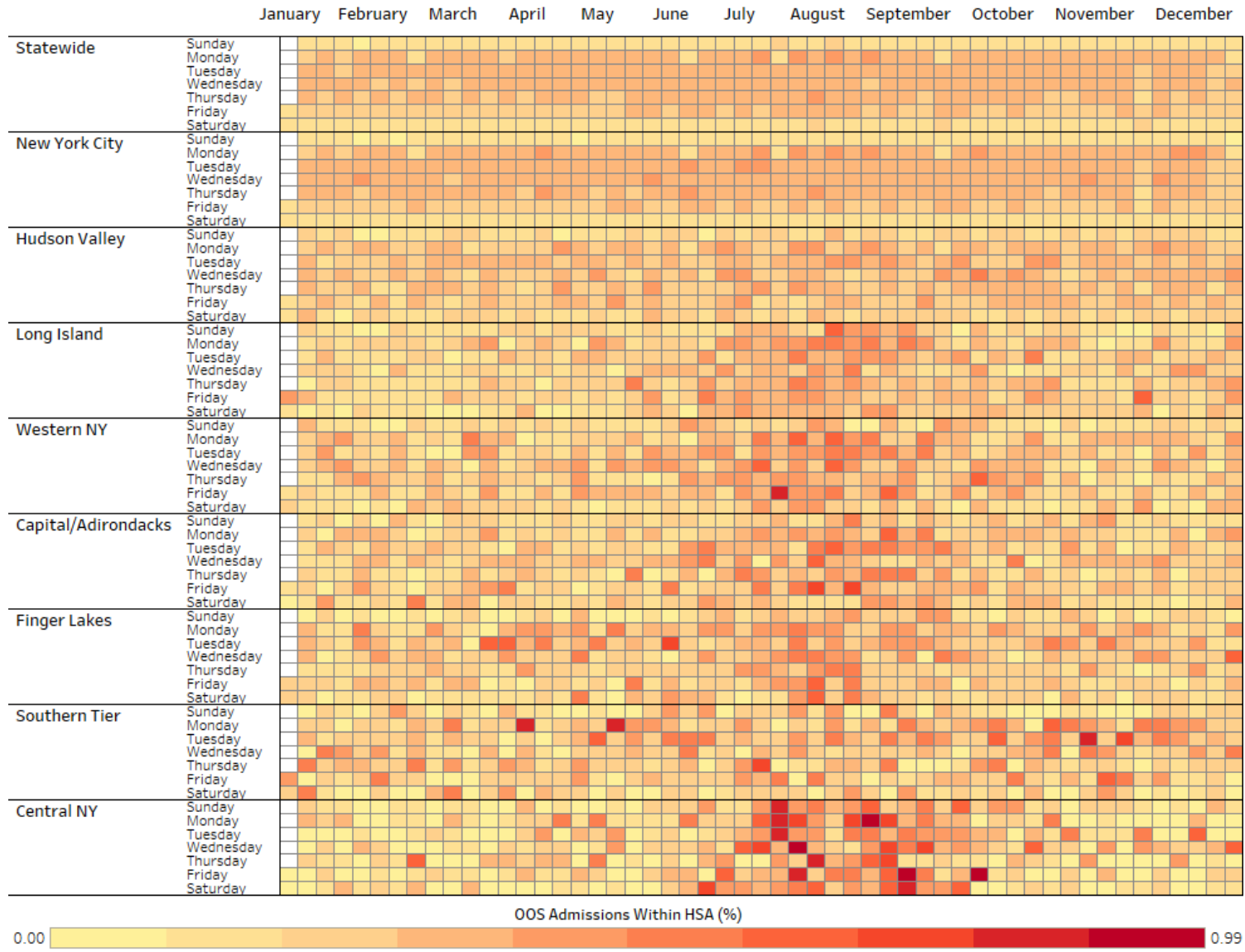
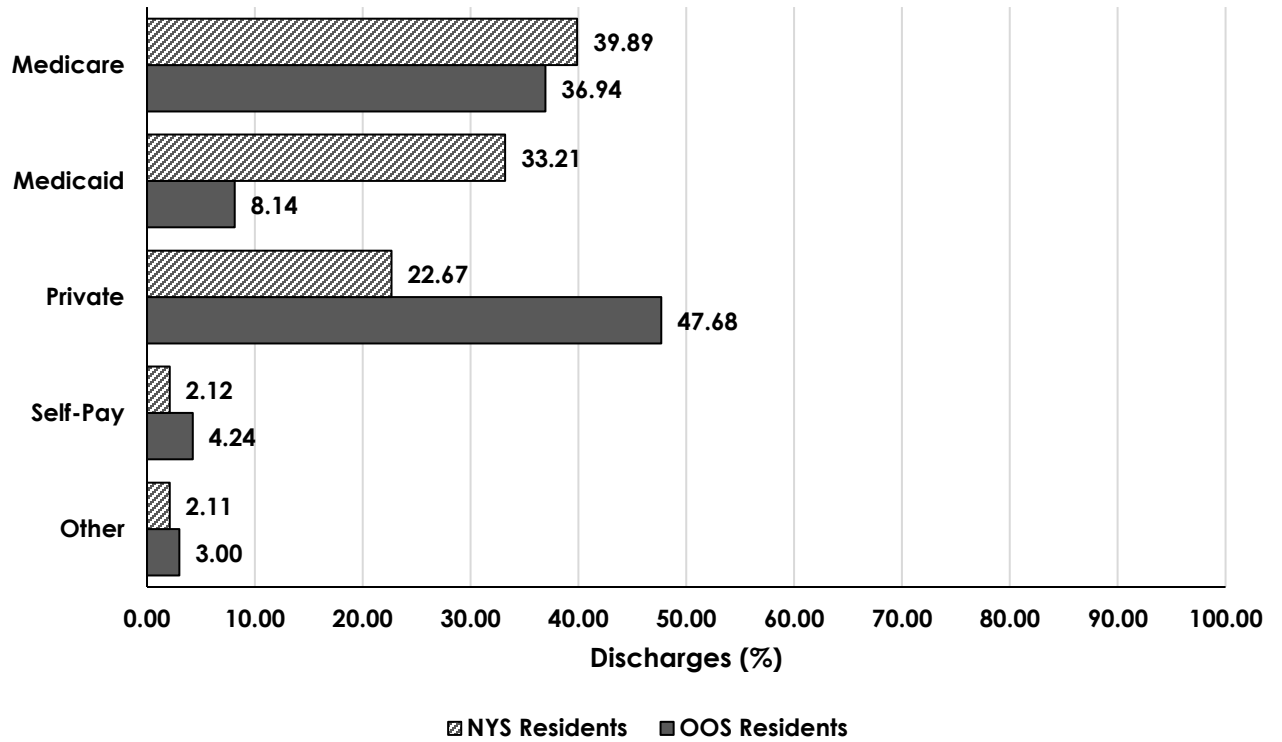


Figure 7. Inpatient Discharge Distribution by Primary Payer, NYS vs OOS Residents; 2016



Note: Intra-payer percentages sum to 100% for each residence category (i.e. NYS Resident primary payers sum to 100%)

Figure 8. Proportion of Planned Admissions by Primary Payer, NYS vs OOS Residents; 2016

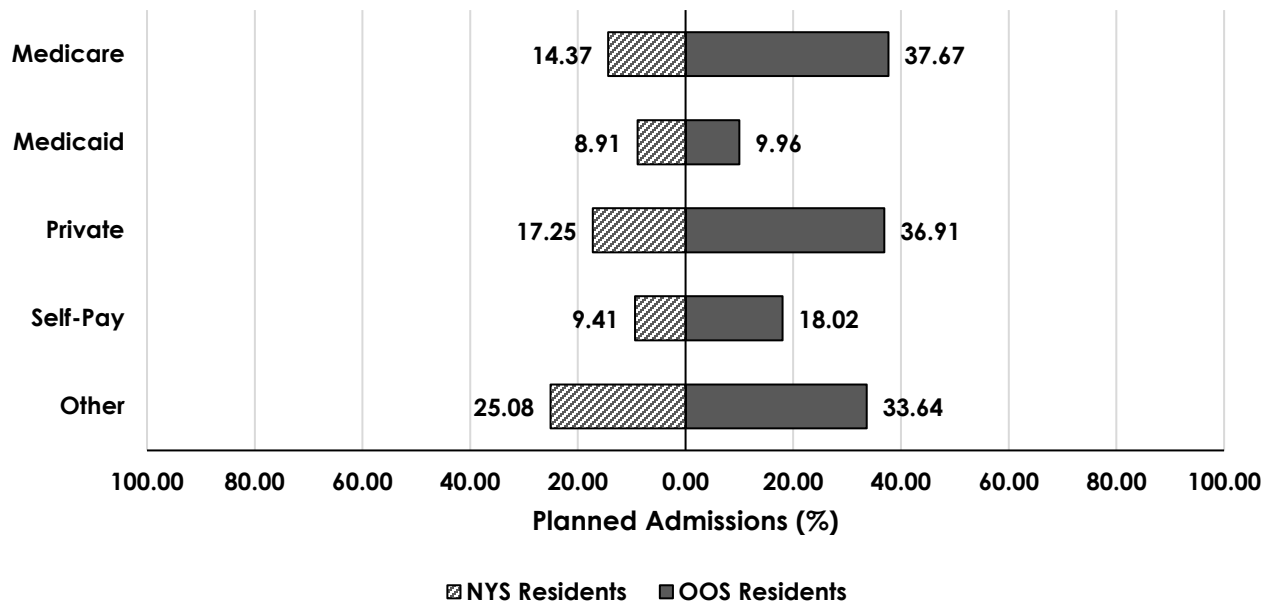
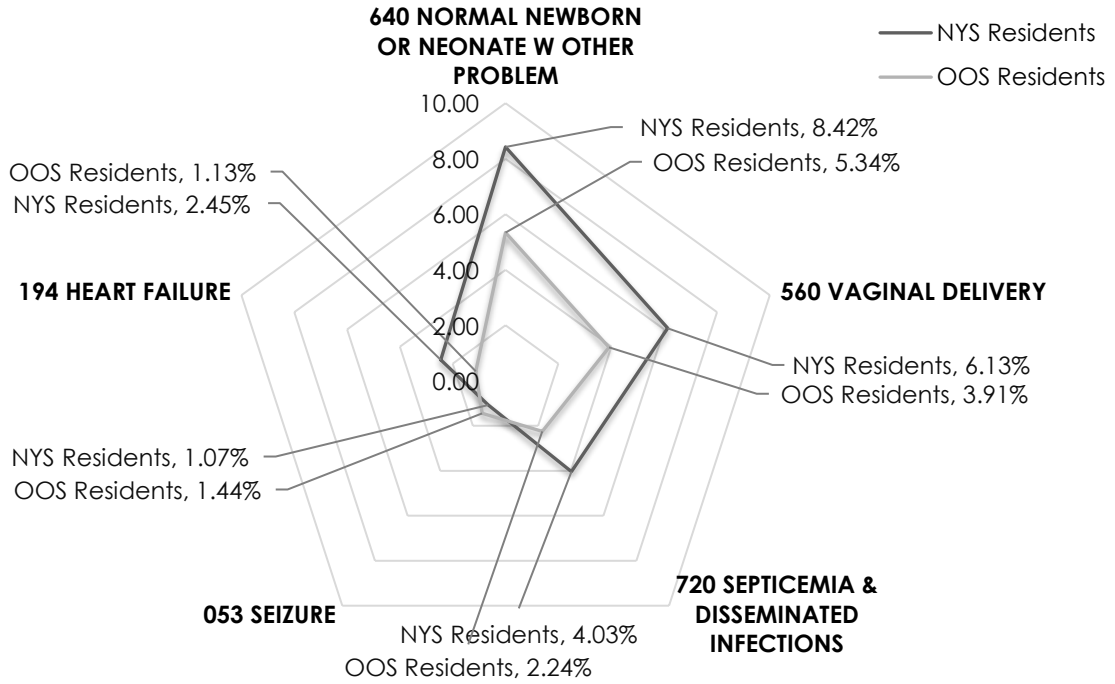


Figure 9a. Top 5 Most Common OOS Medical APR-DRGs; NYS vs OOS Residents: Percentage of Discharges*; 2016



*Represents percentage of all discharges within residence category

Figure 9b. Top 5 Most Common OOS Medical APR-DRGs; NYS vs OOS Residents: Average Length of Stay (Days) ; 2016

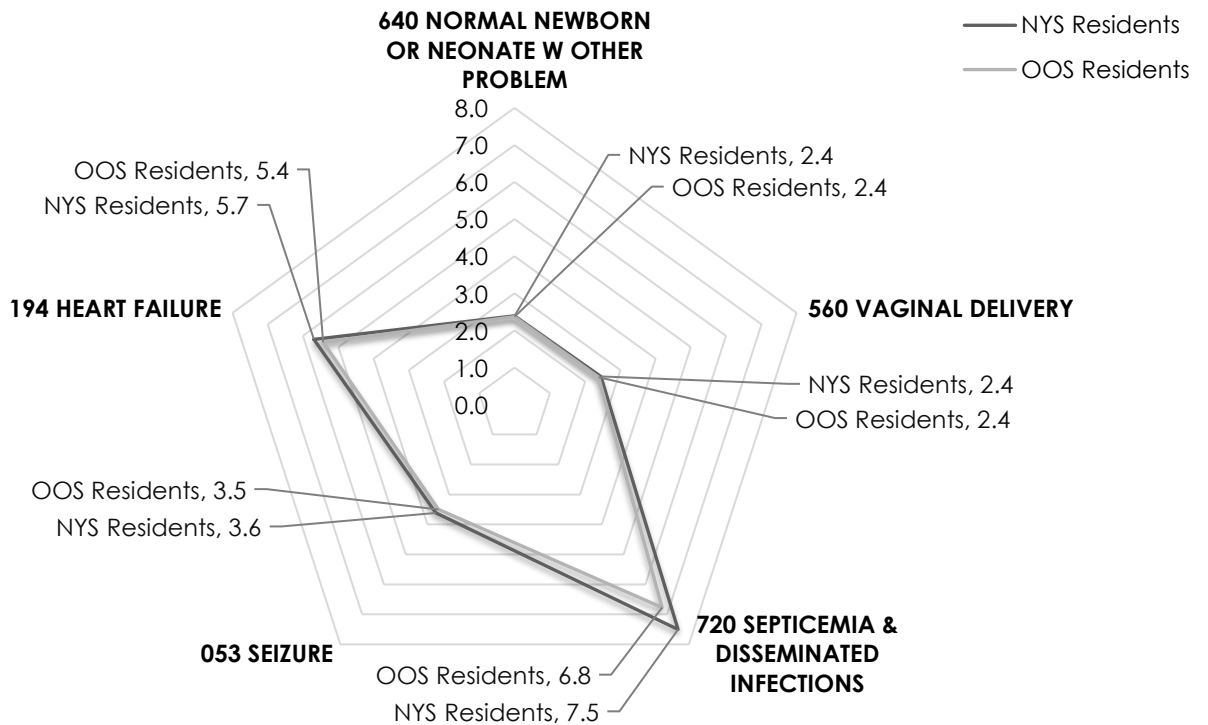
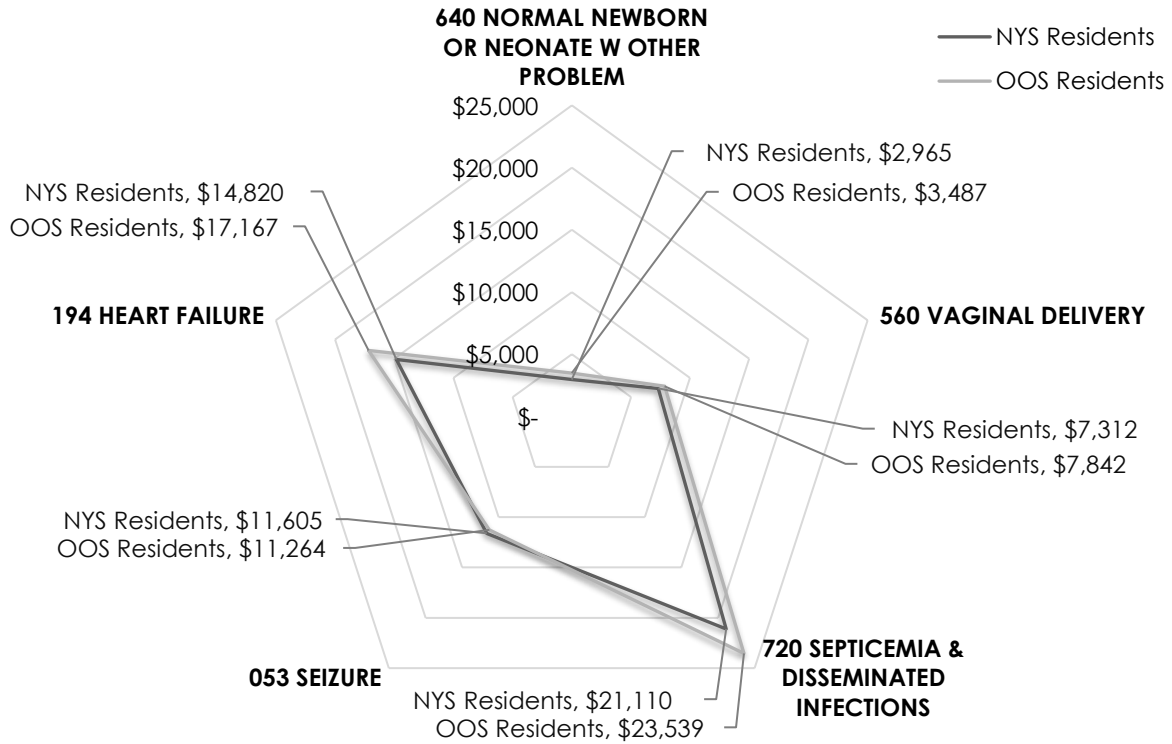
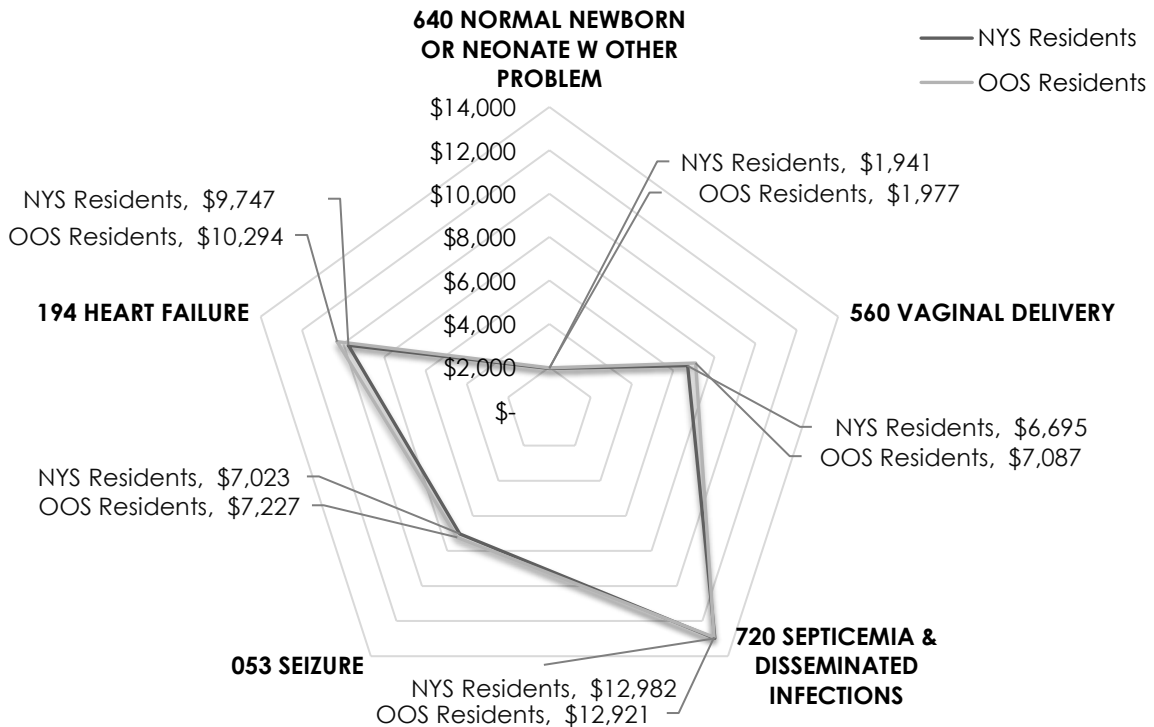


Figure 9c. Top 5 Most Common OOS Medical APR-DRGs; NYS vs OOS Residents: Mean Estimated Cost*; 2016



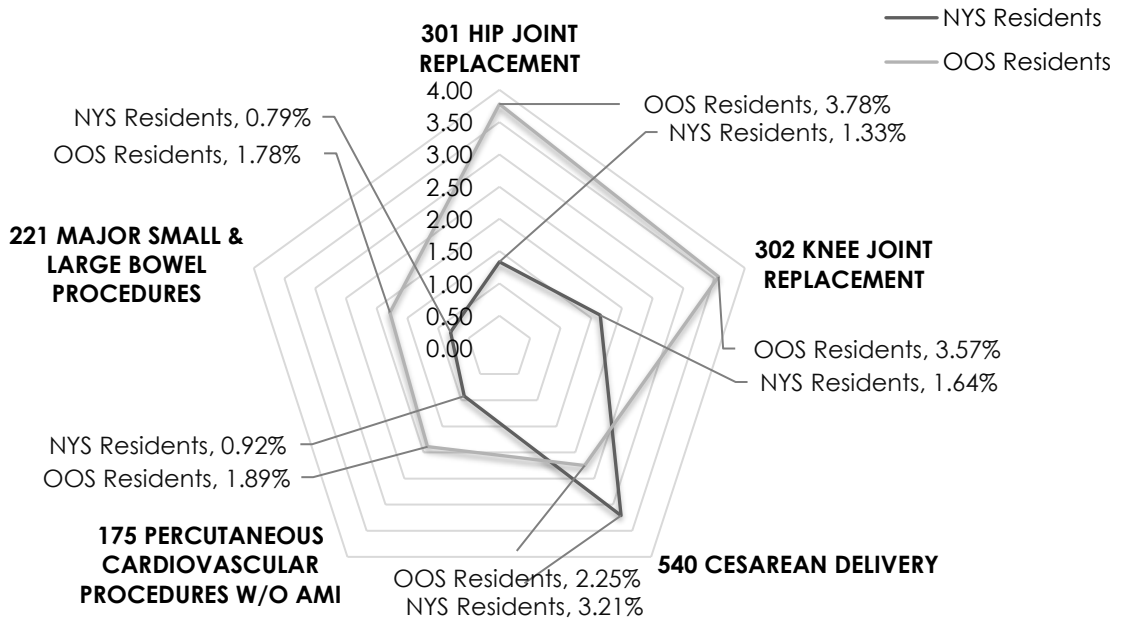
*Cost estimated based upon revenue code charges and ratio of cost to charges for each revenue code as reported by the facility.

Figure 9d. Top 5 Most Common OOS Medical APR-DRGs; NYS vs OOS Residents: Median Estimated Cost*; 2016



*Cost estimated based upon revenue code charges and ratio of cost to charges for each revenue code as reported by the facility.

Figure 10a. Top 5 Most Common OOS Surgical APR-DRGs; NYS vs OOS Residents: Proportion of Discharges*; 2016



*Represents percentage of all discharges within residence category

Figure 10b. Top 5 Most Common OOS Surgical APR-DRGs; NYS vs OOS Residents: Average Length of Stay (Days) ; 2016

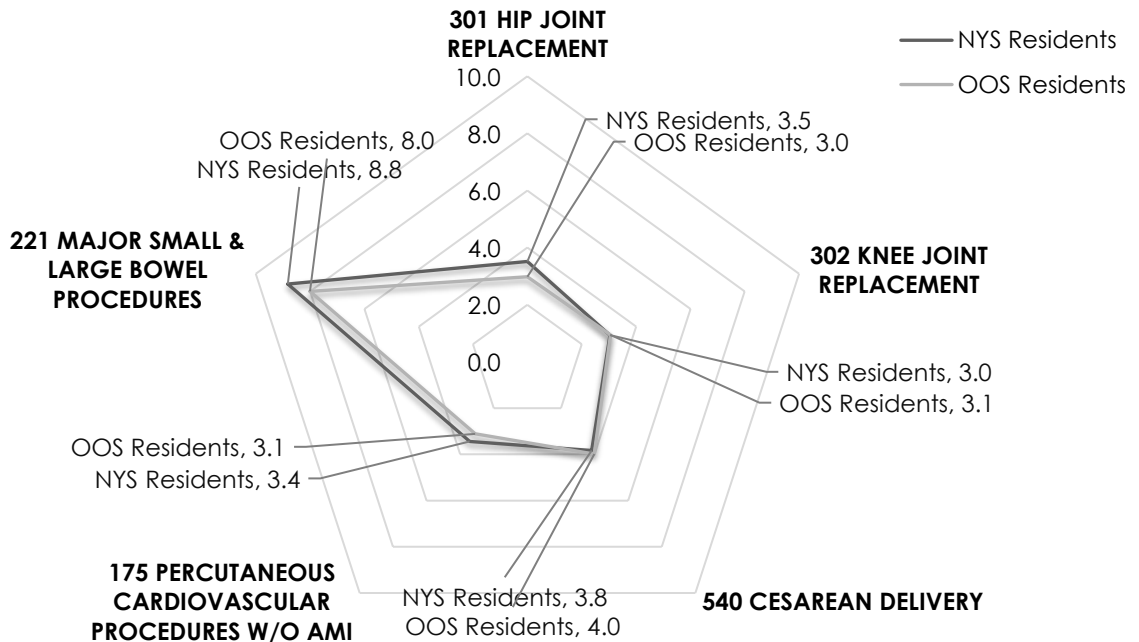
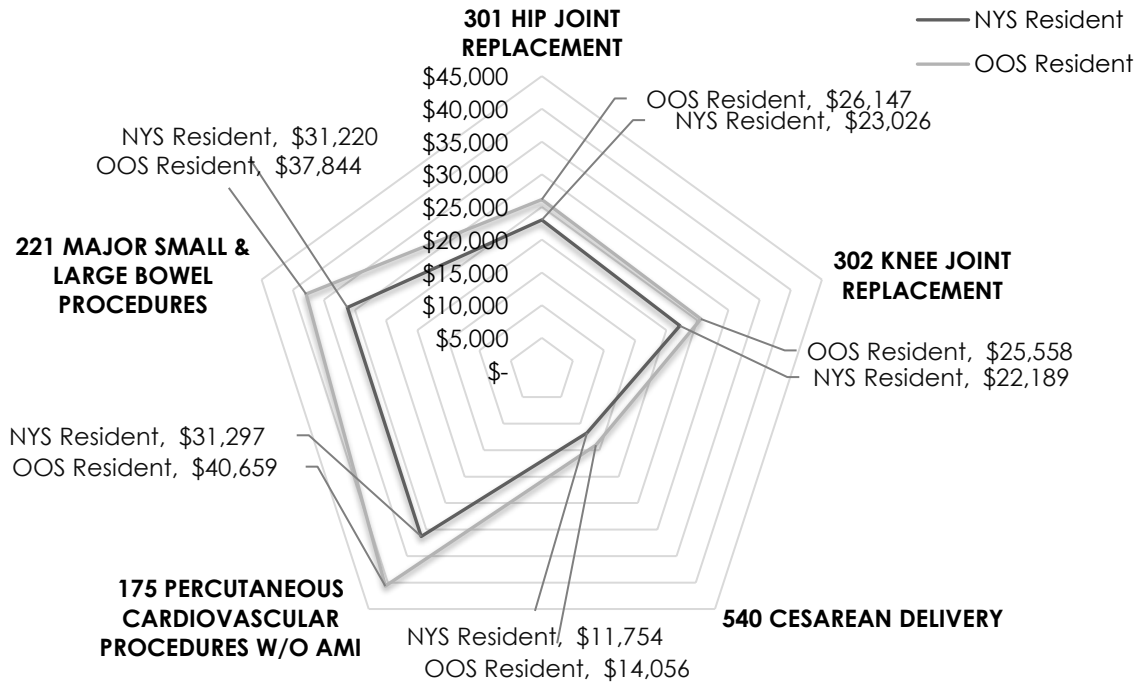
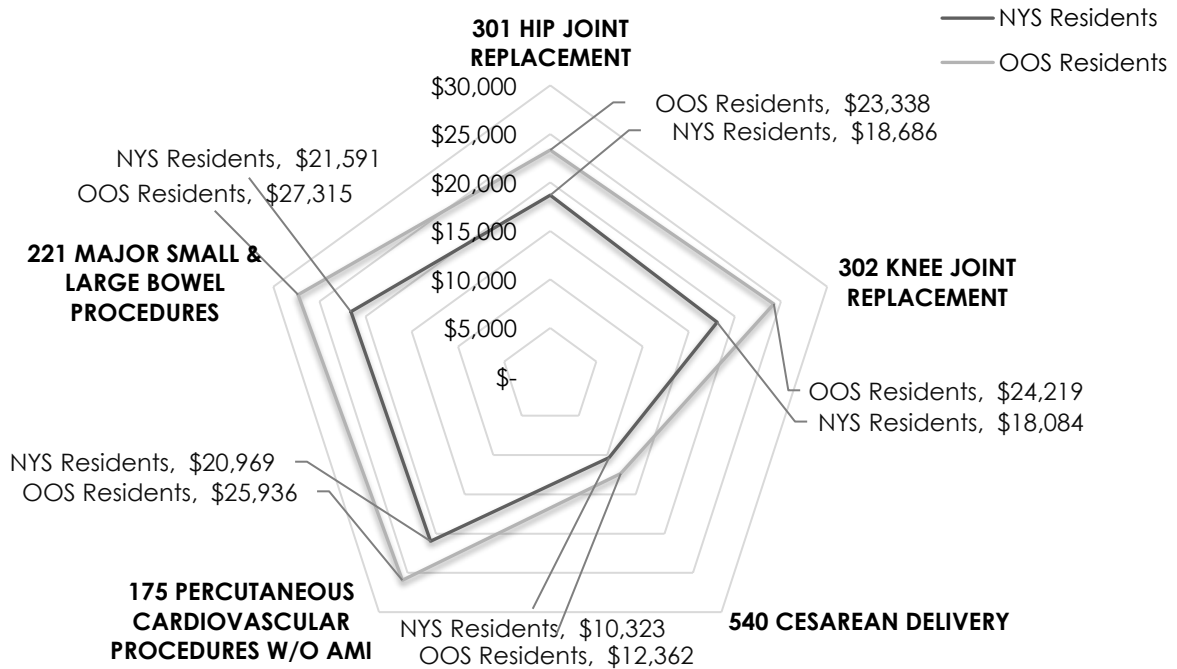


Figure 10c. Top 5 Most Common OOS Surgical APR-DRGs; NYS vs OOS Residents: Mean Estimated Cost*; 2016



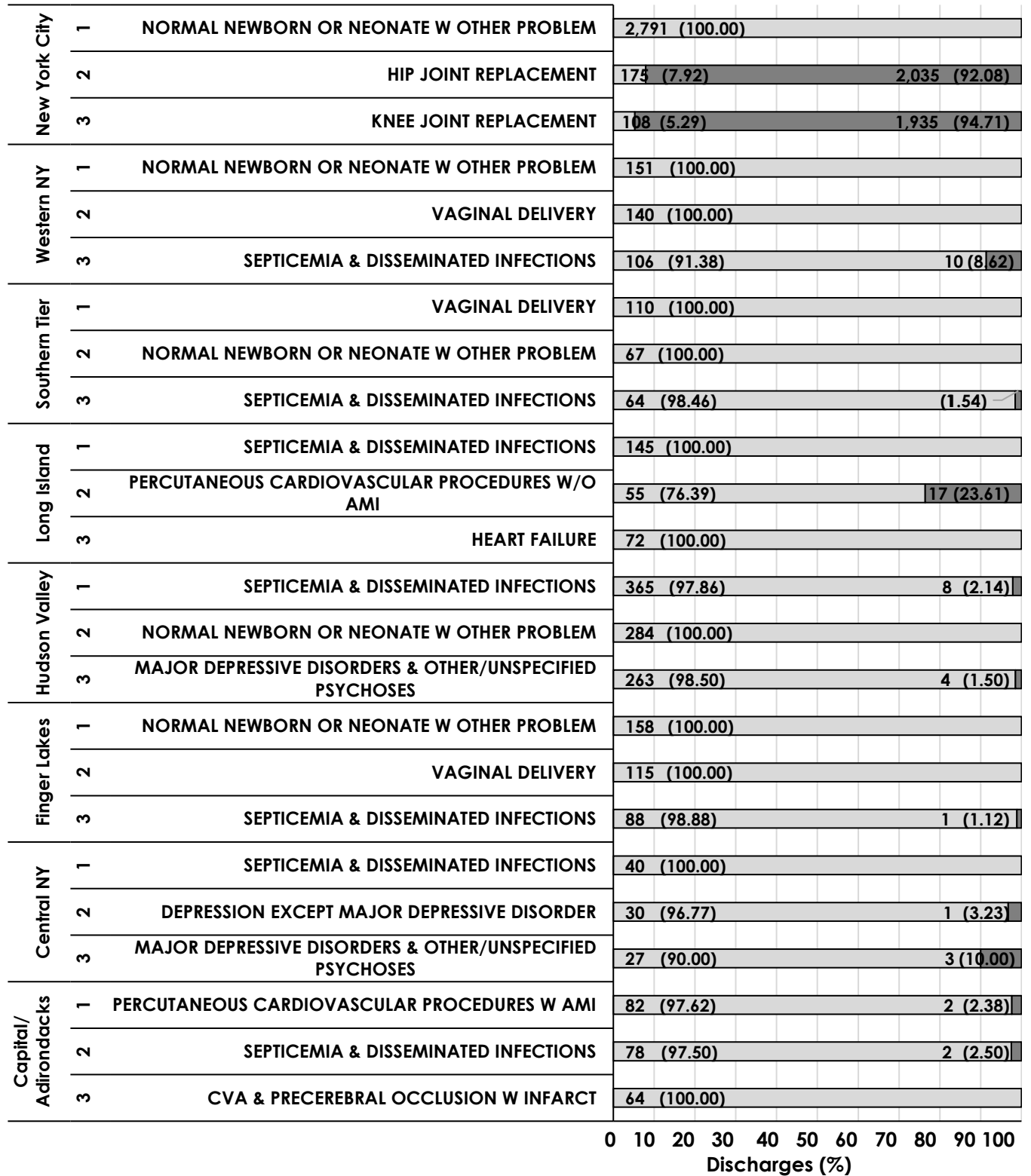
*Cost estimated based upon revenue code charges and ratio of cost to charges for each revenue code as reported by the facility.

Figure 10d. Top 5 Most Common OOS Surgical APR-DRGs; NYS vs OOS Residents: Median Estimated Cost*; 2016



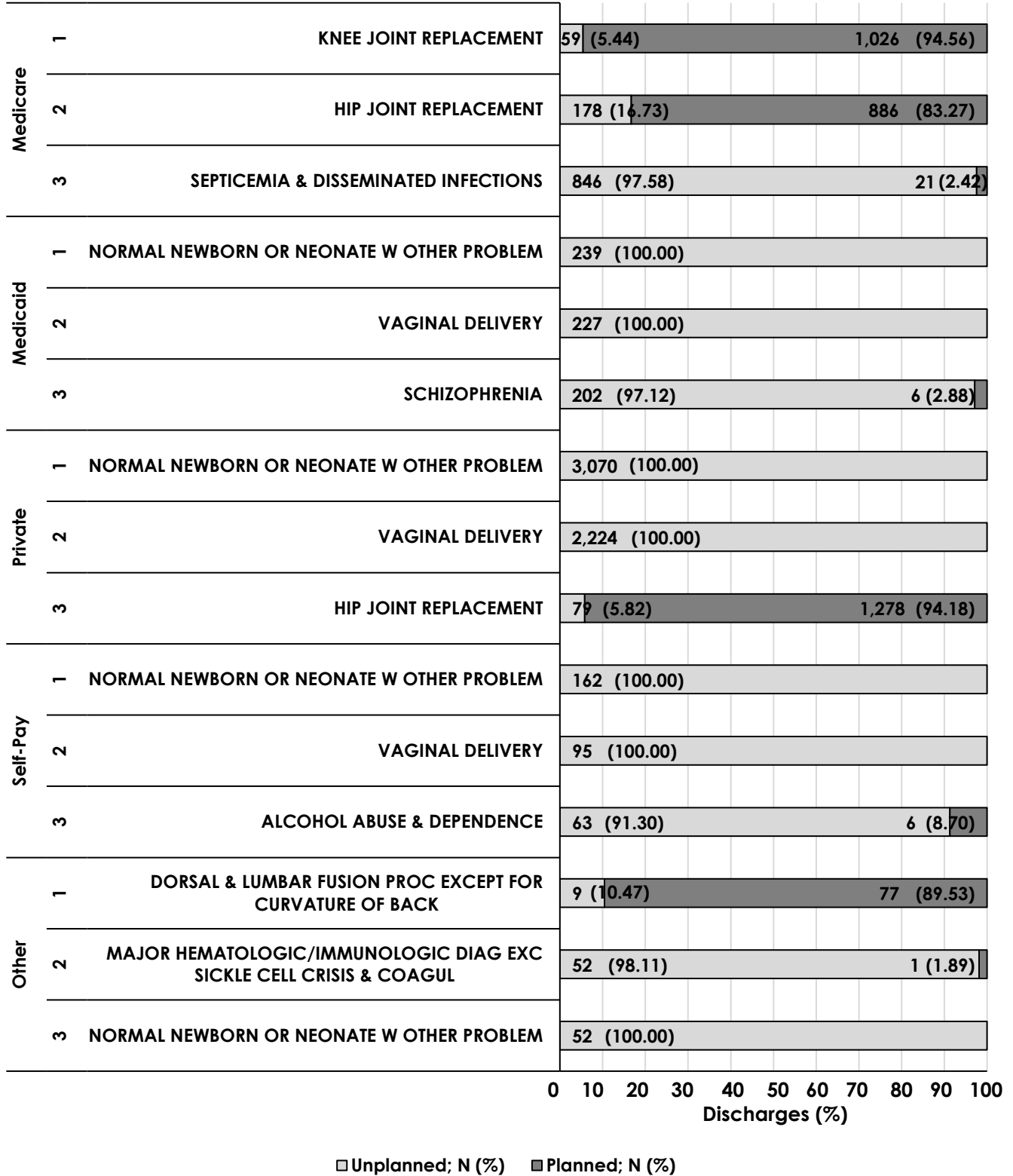
*Cost estimated based upon revenue code charges and ratio of cost to charges for each revenue code as reported by the facility.

Figure 11. Top 3 Most Common APR-DRGs by Health Service Area, Planned vs Unplanned Discharges; OOS Residents Only; 2016



□ Unplanned; N (%) ■ Planned; N (%)

Figure 12. Top 3 Most Common APR-DRGs by Primary Payer, Planned vs Unplanned Discharges; OOS Residents Only; 2016



Appendix – Source Tables for Select Embedded Figures

Figure 1a. Inpatient Discharge Volume and Proportion of Planned Admissions, NYS vs OOS Residents; 2016

Patient Residence	Total Discharges		Planned Admissions			Unplanned Admissions		
	N	%	N	%	% of Total	N	%	% of Total
NYS Residents	2,280,964	97.18	304,092	93.10	13.33	1,976,872	97.84	86.67
OOS Residents	66,088	2.82	22,532	6.90	34.09	43,556	2.16	65.91
Total Discharges	2,347,052	100.00	326,624	100.00	13.92	2,020,428	100.00	86.08

Figure 1b. Discharge Distribution and Proportion of Planned Discharges by Patient Residence, OOS Residents Only; 2016

OOS Patient Residence	Total Discharges		Planned Admissions			Unplanned Admissions		
	N	%	N	%	% of Total	N	%	% of Total
Unknown	386	0.58	36	0.16	9.33	350	0.80	90.67
Other Country	1,120	1.69	245	1.09	21.88	875	2.01	78.13
Canada	169	0.26	47	0.21	27.81	122	0.28	72.19
U.S. Territory/Military	209	0.32	70	0.31	33.49	139	0.32	66.51
Other U.S. State	15,781	23.88	4,148	18.41	26.28	11,633	26.71	73.72
Vermont	1,048	1.59	222	0.99	21.18	826	1.90	78.82
Massachusetts	1,304	1.97	268	1.19	20.55	1,036	2.38	79.45
Connecticut	6,315	9.56	2,743	12.17	43.44	3,572	8.20	56.56
Pennsylvania	8,723	13.20	2,294	10.18	26.30	6,429	14.76	73.70
New Jersey	31,033	46.96	12,459	55.29	40.15	18,574	42.64	59.85
Total	66,088	100.00	22,532	100.00	34.09	43,556	100.00	65.91

Figures 2.3. Inpatient Discharge Distribution by Patient Demographics, NYS vs OOS Residents; 2016

Patient Demographics		All* Residence Discharges	OOS Resident Discharges						NYS Resident Discharges				
			Total Discharges			Planned Admissions			Total Discharges		Planned Admissions		
			N	%	% of All*	N	%	% of Total	N	%	N	%	% of Total
Sex	Female	1,303,473	33,240	50.30	2.55	10,966	48.67	32.99	1,270,233	55.69	162,790	53.53	12.82
	Male	1,043,522	32,848	49.70	3.15	11,566	51.33	35.21	1,010,674	44.31	141,300	46.47	13.98
	Unknown	57	0	0.00	0.00	0	0.00	0.00	57	0.00	2	0.00	3.51
Age	0-5 Years	288,663	5,749	8.70	1.99	496	2.20	8.63	282,914	12.40	6,176	2.03	2.18
	6-18 Years	70,123	2,304	3.49	3.29	988	4.38	42.88	67,819	2.97	9,127	3.00	13.46
	19-34 Years	375,607	9,370	14.18	2.49	1,609	7.14	17.17	366,237	16.06	24,914	8.19	6.80
	35-49 Years	313,427	9,776	14.79	3.12	3,026	13.43	30.95	303,651	13.31	48,004	15.79	15.81
	50-64 Years	481,282	16,220	24.54	3.37	7,284	32.33	44.91	465,062	20.39	96,997	31.90	20.86
	65+ Years	817,950	22,669	34.30	2.77	9,129	40.52	40.27	795,281	34.87	118,874	39.09	14.95
Ethnicity	Hispanic	311,741	4,114	6.23	1.32	1,025	4.55	24.91	307,627	13.49	29,617	9.74	9.63
	Non-Hispanic	1,937,402	60,518	91.57	3.12	21,146	93.85	34.94	1,876,884	82.28	265,970	87.46	14.17
	Unknown	97,909	1,456	2.20	1.49	361	1.60	24.79	96,453	4.23	8,505	2.80	8.82
Race	White	1,321,758	45,075	68.20	3.41	16,773	74.44	37.21	1,276,683	55.97	202,610	66.63	15.87
	Black	430,699	5,534	8.37	1.28	1,150	5.10	20.78	425,165	18.64	42,381	13.94	9.97
	Asian/Pacific Islander	108,163	3,013	4.56	2.79	752	3.34	24.96	105,150	4.61	9,200	3.03	8.75
	Other	486,432	12,466	18.86	2.56	3,857	17.12	30.94	473,966	20.78	49,901	16.41	10.53
Total		2,347,052	66,088	100.00	2.82	22,532	100.00	34.09	2,280,964	100.00	304,092	100.00	13.33

*All Residence Discharges includes both OOS and NYS Resident discharges

Figure 4.5. Inpatient Discharge Distribution by Hospital Characteristics, NYS vs OOS Residents; 2016

Hospital Characteristic		All* Residence Discharges	OOS Resident Discharges						NYS Resident Discharges				
			Total Discharges			Planned Admissions			Total Discharges		Planned Admissions		
			N	%	% of All*	N	%	% of Total	N	%	N	%	% of Total
Hospital Bedsize	Large	1,337,017	45,837	69.36	3.43	14,809	65.72	32.31	1,291,180	56.61	170,712	56.14	13.22
	Medium	684,616	8,789	13.30	1.28	1,361	6.04	15.49	675,827	29.63	77,018	25.33	11.40
	Small	325,419	11,462	17.34	3.52	6,362	28.24	55.51	313,957	13.76	56,362	18.53	17.95
Urban/Rural	Rural	99,952	1,813	2.74	1.81	216	0.96	11.91	98,139	4.30	8,288	2.73	8.45
	Urban	2,247,100	64,275	97.26	2.86	22,316	99.04	34.72	2,182,825	95.70	295,804	97.27	13.55
Teaching Hospital	Non-Teaching	371,983	6,948	10.51	1.87	1,479	6.56	21.29	365,035	16.00	54,965	18.08	15.06
	Teaching	1,975,069	59,140	89.49	2.99	21,053	93.44	35.60	1,915,929	84.00	249,127	81.92	13.00
HCUP Hospital Bedsize	Large Rural	58,704	1,142	1.73	1.95	156	0.69	13.66	57,562	2.52	4,273	1.41	7.42
	Large Urban (Non-Teaching)	159,641	2,957	4.47	1.85	560	2.49	18.94	156,684	6.87	18,558	6.10	11.84
	Large Urban (Teaching)	1,118,672	41,738	63.16	3.73	14,093	62.55	33.77	1,076,934	47.21	147,881	48.63	13.73
	Medium Rural	33,918	617	0.93	1.82	57	0.25	9.24	33,301	1.46	3,046	1.00	9.15
	Medium Urban (Non-Teaching)	83,634	1,293	1.96	1.55	585	2.60	45.24	82,341	3.61	21,778	7.16	26.45
	Medium Urban (Teaching)	567,064	6,879	10.41	1.21	719	3.19	10.45	560,185	24.56	52,194	17.16	9.32
	Small Rural	7,330	54	0.08	0.74	3	0.01	5.56	7,276	0.32	969	0.32	13.32
	Small Urban (Non-Teaching)	44,727	1,561	2.36	3.49	246	1.09	15.76	43,166	1.89	8,266	2.72	19.15
	Small Urban (Teaching)	273,362	9,847	14.90	3.60	6,113	27.13	62.08	263,515	11.55	47,127	15.50	17.88
Hospital Service Area (HSA)	Capital/Adirondacks	170,411	2,565	3.88	1.51	329	1.46	12.83	167,846	7.36	26,784	8.81	15.96
	Central NY	158,702	1,113	1.68	0.70	94	0.42	8.45	157,589	6.91	21,969	7.22	13.94
	Finger Lakes	150,440	2,370	3.59	1.58	327	1.45	13.80	148,070	6.49	22,799	7.50	15.40
	Hudson Valley	248,184	7,266	10.99	2.93	1,576	6.99	21.69	240,918	10.56	37,837	12.44	15.71
	Long Island	343,220	3,068	4.64	0.89	385	1.71	12.55	340,152	14.91	38,423	12.64	11.30
	New York City	1,080,502	45,709	69.16	4.23	19,047	84.53	41.67	1,034,793	45.37	120,659	39.68	11.66
	Southern Tier	29,614	1,356	2.05	4.58	255	1.13	18.81	28,258	1.24	4,283	1.41	15.16
Western NY	165,979	2,641	4.00	1.59	519	2.30	19.65	163,338	7.16	31,338	10.31	19.19	
Total		2,347,052	66,088	100.00	2.82	22,532	100.00	34.09	2,280,964	100.00	304,092	100.00	13.33

*All Residence Discharges includes both OOS and NYS Resident discharges

Figure 7.8. Inpatient Discharge Distribution by Primary Payer, NYS vs OOS Residents; 2016

Primary Payer	All* Residence Discharges	OOS Resident Discharges						NYS Resident Discharges					
		Total Discharges			Planned Admissions			Total Discharges		Planned Admissions			
		N	%	% of All*	N	%	% of Total	N	%	N	%	% of Total	
Medicaid	762,927	5,381	8.14	0.71	536	2.38	9.96	757,546	33.21	67,533	22.21	8.91	
Medicare	934,179	24,412	36.94	2.61	9,195	40.81	37.67	909,767	39.89	130,713	42.98	14.37	
Other	50,218	1,983	3.00	3.95	667	2.96	33.64	48,235	2.11	12,098	3.98	25.08	
Private	548,654	31,510	47.68	5.74	11,629	51.61	36.91	517,144	22.67	89,207	29.34	17.25	
Self-Pay	51,074	2,802	4.24	5.49	505	2.24	18.02	48,272	2.12	4,541	1.49	9.41	
Total	2,347,052	66,088	100.00	2.82	22,532	100.00	34.09	2,280,964	100.00	304,092	100.00	13.33	

*All Residence Discharges includes both OOS and NYS Resident discharges

Figure 9a-d. Top 25 Most Common OOS Medical APR-DRGs; NYS vs OOS Residents; 2016

APR DRG	APR-DRG Description	OOS Resident Discharges						NYS Resident Discharges					
		DRG Rank	N	%	Mean LOS (Days)	Mean Cost*	Median Cost*	DRG Rank	N	%	Mean LOS (Days)	Mean Cost*	Median Cost*
640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	1	3,531	5.34	2.4	\$ 3,487	\$ 1,977	1	192,150	8.42	2.4	\$ 2,965	\$ 1,941
560	VAGINAL DELIVERY	2	2,587	3.91	2.4	\$ 7,842	\$ 7,087	2	139,937	6.13	2.4	\$ 7,312	\$ 6,695
720	SEPTICEMIA & DISSEMINATED INFECTIONS	3	1,483	2.24	6.8	\$ 23,539	\$ 12,921	3	92,012	4.03	7.5	\$ 21,110	\$ 12,982
053	SEIZURE	4	954	1.44	3.5	\$ 11,264	\$ 7,227	14	24,418	1.07	3.6	\$ 11,605	\$ 7,023
194	HEART FAILURE	5	747	1.13	5.4	\$ 17,167	\$ 10,294	4	55,990	2.45	5.7	\$ 14,820	\$ 9,747
753	BIPOLAR DISORDERS	6	693	1.05	11.9	\$ 18,700	\$ 10,836	13	24,751	1.09	11.1	\$ 14,265	\$ 9,310
693	CHEMOTHERAPY	7	683	1.03	6.4	\$ 27,100	\$ 16,794	57	8,141	0.36	5.8	\$ 21,534	\$ 13,266
139	OTHER PNEUMONIA	8	675	1.02	4.4	\$ 14,861	\$ 8,466	5	40,235	1.76	4.6	\$ 12,025	\$ 8,162
751	MAJOR DEPRESSIVE DISORDERS & OTHER/UNSPECIFIED PSYCHOSES	9	665	1.01	12.3	\$ 18,568	\$ 11,065	15	22,892	1.00	10.6	\$ 13,780	\$ 8,686
201	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS	10	632	0.96	2.8	\$ 9,862	\$ 6,256	9	31,838	1.40	3.5	\$ 9,983	\$ 6,654
750	SCHIZOPHRENIA	11	580	0.88	18.0	\$ 24,361	\$ 16,629	7	35,774	1.57	18.4	\$ 22,976	\$ 14,235
045	CVA & PRECEREBRAL OCCLUSION W INFARCT	12	579	0.88	4.8	\$ 17,404	\$ 12,548	12	25,185	1.10	5.5	\$ 17,773	\$ 11,891
058	OTHER DISORDERS OF NERVOUS SYSTEM	13	551	0.83	11.7	\$ 27,769	\$ 19,577	24	16,434	0.72	10.1	\$ 21,394	\$ 14,084
383	CELLULITIS & OTHER BACTERIAL SKIN INFECTIONS	14	544	0.82	3.6	\$ 9,945	\$ 6,879	8	32,710	1.43	4.2	\$ 10,137	\$ 7,006
460	RENAL FAILURE	15	501	0.76	4.7	\$ 14,627	\$ 9,638	11	28,645	1.26	5.6	\$ 14,305	\$ 9,011
254	OTHER DIGESTIVE SYSTEM DIAGNOSES	16	444	0.67	4.7	\$ 15,314	\$ 9,442	20	18,679	0.82	4.1	\$ 11,231	\$ 7,565
775	ALCOHOL ABUSE & DEPENDENCE	17	433	0.66	4.4	\$ 9,845	\$ 6,136	16	21,756	0.95	5.0	\$ 10,260	\$ 5,930
140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	18	429	0.65	4.9	\$ 12,759	\$ 9,052	6	37,629	1.65	4.6	\$ 11,458	\$ 8,239
463	KIDNEY & URINARY TRACT INFECTIONS	19	421	0.64	3.7	\$ 10,494	\$ 7,696	10	29,381	1.29	4.6	\$ 11,018	\$ 7,523
190	ACUTE MYOCARDIAL INFARCTION	20	419	0.63	3.9	\$ 15,066	\$ 8,425	25	16,315	0.72	4.2	\$ 13,441	\$ 8,940
862	OTHER AFTERCARE & CONVALESCENCE	21	417	0.63	11.0	\$ 19,907	\$ 13,686	62	6,513	0.29	12.6	\$ 21,340	\$ 16,686
660	MAJOR HEMATOLOGIC/IMMUNOLOGIC DIAG EXC SICKLE CELL CRISIS & COAGUL	22	376	0.57	6.4	\$ 31,723	\$ 19,248	75	5,518	0.24	6.2	\$ 21,205	\$ 12,020
204	SYNCOPE & COLLAPSE	23	370	0.56	2.5	\$ 8,237	\$ 5,514	21	17,660	0.77	3.1	\$ 9,569	\$ 6,875
249	NON-BACTERIAL GASTROENTERITIS, NAUSEA & VOMITING	24	369	0.56	2.9	\$ 9,732	\$ 6,452	18	20,452	0.90	3.1	\$ 8,063	\$ 5,785
247	INTESTINAL OBSTRUCTION	25	366	0.55	3.7	\$ 11,867	\$ 7,466	34	13,718	0.60	4.3	\$ 9,703	\$ 6,611
	Top 25 Medical APR-DRG Total		19,449	29.43	5.2	\$ 13,465	\$ 7,650		958,733	42.03	5.1	\$ 11,251	\$ 6,795
	Remaining Medical APR-DRG Total		17,084	25.85	5.4	\$ 18,083	\$ 9,536		754,093	33.06	5.5	\$ 14,172	\$ 7,978
	All Medical APR-DRG		36,533	55.28	5.3	\$ 15,625	\$ 8,517		1,712,826	75.09	5.2	\$ 12,537	\$ 7,294

*Cost estimated based upon revenue code charges and ratio of cost to charges for each revenue code as reported by the facility.

Figure 10a-d. Top 25 Most Common OOS Surgical APR-DRGs; NYS vs OOS Residents; 2016

APR DRG	APR-DRG Description	OOS Resident Discharges						NYS Resident Discharges					
		DRG Rank	N	%	Mean LOS (Days)	Mean Cost*	Median Cost*	DRG Rank	N	%	Mean LOS (Days)	Mean Cost*	Median Cost*
301	HIP JOINT REPLACEMENT	1	2,498	3.78	3.0	\$ 26,147	\$ 23,338	3	30,441	1.33	3.5	\$ 23,026	\$ 18,686
302	KNEE JOINT REPLACEMENT	2	2,360	3.57	3.1	\$ 25,558	\$ 24,219	2	37,507	1.64	3.0	\$ 22,189	\$ 18,084
540	CESAREAN DELIVERY	3	1,487	2.25	4.0	\$ 14,056	\$ 12,362	1	73,192	3.21	3.8	\$ 11,754	\$ 10,323
175	PERCUTANEOUS CARDIOVASCULAR PROCEDURES W/O AMI	4	1,250	1.89	3.1	\$ 40,659	\$ 25,936	4	21,015	0.92	3.4	\$ 31,297	\$ 20,969
221	MAJOR SMALL & LARGE BOWEL PROCEDURES	5	1,178	1.78	8.0	\$ 37,844	\$ 27,315	5	18,118	0.79	8.8	\$ 31,220	\$ 21,591
304	DORSAL & LUMBAR FUSION PROC EXCEPT FOR CURVATURE OF BACK	6	975	1.48	4.9	\$ 53,610	\$ 43,911	11	12,580	0.55	4.6	\$ 45,611	\$ 34,221
021	CRANIOTOMY EXCEPT FOR TRAUMA	7	948	1.43	6.2	\$ 47,701	\$ 34,582	19	7,547	0.33	9.0	\$ 50,543	\$ 33,510
321	CERVICAL SPINAL FUSION & OTHER BACK/NECK PROC EXC DISC EXCIS/DECOMP	8	658	1.00	3.1	\$ 30,559	\$ 25,185	18	7,855	0.34	3.4	\$ 27,665	\$ 19,535
315	SHOULDER, UPPER ARM & FOREARM PROCEDURES	9	581	0.88	2.8	\$ 22,867	\$ 20,138	16	8,120	0.36	3.0	\$ 20,811	\$ 17,145
174	PERCUTANEOUS CARDIOVASCULAR PROCEDURES W AMI	10	550	0.83	3.4	\$ 24,591	\$ 20,139	10	13,530	0.59	3.8	\$ 24,369	\$ 19,608
173	OTHER VASCULAR PROCEDURES	11	545	0.82	4.8	\$ 36,650	\$ 27,212	8	14,800	0.65	6.9	\$ 35,123	\$ 25,715
120	MAJOR RESPIRATORY & CHEST PROCEDURES	12	541	0.82	5.1	\$ 35,260	\$ 27,776	26	5,341	0.23	6.6	\$ 31,695	\$ 24,117
163	CARDIAC VALVE PROCEDURES W/O CARDIAC CATHETERIZATION	13	468	0.71	9.1	\$ 77,797	\$ 58,979	34	4,090	0.18	8.8	\$ 59,892	\$ 46,347
313	KNEE & LOWER LEG PROCEDURES EXCEPT FOOT	14	463	0.70	4.5	\$ 26,521	\$ 21,563	15	8,245	0.36	5.7	\$ 26,331	\$ 17,352
260	MAJOR PANCREAS, LIVER & SHUNT PROCEDURES	15	462	0.70	8.1	\$ 51,076	\$ 41,221	56	2,390	0.10	9.2	\$ 43,319	\$ 30,974
443	KIDNEY & URINARY TRACT PROCEDURES FOR NONMALIGNANCY	16	427	0.65	3.7	\$ 20,933	\$ 15,490	23	6,196	0.27	4.9	\$ 20,002	\$ 14,009
167	OTHER CARDIOTHORACIC PROCEDURES	17	392	0.59	7.1	\$ 56,150	\$ 40,787	45	3,383	0.15	9.1	\$ 47,721	\$ 35,350
320	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE PROCEDURES	18	392	0.59	3.6	\$ 21,618	\$ 17,335	35	4,005	0.18	4.6	\$ 18,355	\$ 13,437
310	INTERVERTEBRAL DISC EXCISION & DECOMPRESSION	19	370	0.56	3.4	\$ 20,386	\$ 15,912	30	4,975	0.22	4.2	\$ 18,333	\$ 13,674
480	MAJOR MALE PELVIC PROCEDURES	20	367	0.56	2.0	\$ 16,845	\$ 12,953	58	2,305	0.10	2.0	\$ 16,308	\$ 13,571
303	DORSAL & LUMBAR FUSION PROC FOR CURVATURE OF BACK	21	366	0.55	6.3	\$ 94,611	\$ 81,364	79	1,301	0.06	6.1	\$ 76,927	\$ 63,023
950	EXTENSIVE PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	22	360	0.54	8.2	\$ 42,541	\$ 25,553	20	6,805	0.30	12.5	\$ 46,542	\$ 28,313
403	PROCEDURES FOR OBESITY	23	348	0.53	1.7	\$ 13,735	\$ 12,852	6	17,750	0.78	1.9	\$ 13,495	\$ 11,770
220	MAJOR STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES	24	343	0.52	8.1	\$ 46,252	\$ 32,851	25	5,462	0.24	8.3	\$ 33,362	\$ 18,957
121	OTHER RESPIRATORY & CHEST PROCEDURES	25	336	0.51	4.9	\$ 30,953	\$ 22,877	37	3,904	0.17	8.1	\$ 34,469	\$ 20,071
	Top 25 Surgical APR-DRG Total		18,665	28.24	4.5	\$ 33,850	\$ 24,181		320,857	14.07	4.7	\$ 24,944	\$ 16,585
	Remaining Surgical APR-DRG Total		10,889	16.48	7.6	\$ 46,820	\$ 23,266		247,215	10.84	8.1	\$ 35,579	\$ 17,240
	All Surgical APR-DRG		29,554	44.72	5.6	\$ 38,629	\$ 24,004		568,072	24.90	6.2	\$ 29,572	\$ 16,822

*Cost estimated based upon revenue code charges and ratio of cost to charges for each revenue code as reported by the facility.

Figure 11. Top 3 OOS Volume APR-DRGs by Health Service Area, Planned vs Unplanned; OOS Residents Only; 2016

Health Service Area	APR DRG	APR-DRG Description	OOS Resident Discharges						NYS Rank in HSA
			OOS Rank in HSA	Total	Planned		Unplanned		
				N	N	% of Total	N	% of Total	
Capital/Adirondacks	174	PERCUTANEOUS CARDIOVASCULAR PROCEDURES W AMI	1	84	2	2.38	82	97.62	28
	720	SEPTICEMIA & DISSEMINATED INFECTIONS	2	80	2	2.50	78	97.50	3
	045	CVA & PRECEREBRAL OCCLUSION W INFARCT	3	64	0	0.00	64	100.00	16
	190	ACUTE MYOCARDIAL INFARCTION	4	53	2	3.77	51	96.23	24
	175	PERCUTANEOUS CARDIOVASCULAR PROCEDURES W/O AMI	5	48	17	35.42	31	64.58	41
Central NY	720	SEPTICEMIA & DISSEMINATED INFECTIONS	1	40			40	100.00	3
	754	DEPRESSION EXCEPT MAJOR DEPRESSIVE DISORDER	2	31	1	3.23	30	96.77	20
	751	MAJOR DEPRESSIVE DISORDERS & OTHER/UNSPECIFIED PSYCHOSES	3	30	3	10.00	27	90.00	10
	174	PERCUTANEOUS CARDIOVASCULAR PROCEDURES W AMI	4	26	2	7.69	24	92.31	24
	313	KNEE & LOWER LEG PROCEDURES EXCEPT FOOT	5	25	1	4.00	24	96.00	54
Finger Lakes	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	1	158	0	0.00	158	100.00	1
	560	VAGINAL DELIVERY	2	115	0	0.00	115	100.00	2
	720	SEPTICEMIA & DISSEMINATED INFECTIONS	3	89	1	1.12	88	98.88	3
	302	KNEE JOINT REPLACEMENT	4	76	76	100.00	0	0.00	5
	194	HEART FAILURE	5	70	0	0.00	70	100.00	4
Hudson Valley	720	SEPTICEMIA & DISSEMINATED INFECTIONS	1	373	8	2.14	365	97.86	3
	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	2	284	0	0.00	284	100.00	1
	751	MAJOR DEPRESSIVE DISORDERS & OTHER/UNSPECIFIED PSYCHOSES	3	267	4	1.50	263	98.50	9
	862	OTHER AFTERCARE & CONVALESCENCE	4	261	256	98.08	5	1.92	28
	753	BIPOLAR DISORDERS	5	215	11	5.12	204	94.88	13
Long Island	720	SEPTICEMIA & DISSEMINATED INFECTIONS	1	145	0	0.00	145	100.00	3
	175	PERCUTANEOUS CARDIOVASCULAR PROCEDURES W/O AMI	2	72	17	23.61	55	76.39	7
	194	HEART FAILURE	3	72	0	0.00	72	100.00	5
	201	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS	4	68	1	1.47	67	98.53	8
	139	OTHER PNEUMONIA	5	57	0	0.00	57	100.00	6
Southern Tier	560	VAGINAL DELIVERY	1	110	0	0.00	110	100.00	1
	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	2	67	0	0.00	67	100.00	2
	720	SEPTICEMIA & DISSEMINATED INFECTIONS	3	65	1	1.54	64	98.46	3
	351	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	4	51	43	84.31	8	15.69	5
	190	ACUTE MYOCARDIAL INFARCTION	5	38	0	0.00	38	100.00	13
Western NY	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	1	151	0	0.00	151	100.00	1
	560	VAGINAL DELIVERY	2	140	0	0.00	140	100.00	2
	720	SEPTICEMIA & DISSEMINATED INFECTIONS	3	116	10	8.62	106	91.38	3
	194	HEART FAILURE	4	70	6	8.57	64	91.43	5
	190	ACUTE MYOCARDIAL INFARCTION	5	63	22	34.92	41	65.08	16
New York City	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	1	2,791	0	0.00	2,791	100.00	1
	301	HIP JOINT REPLACEMENT	2	2,210	2,035	92.08	175	7.92	19
	302	KNEE JOINT REPLACEMENT	3	2,043	1,935	94.71	108	5.29	13
	560	VAGINAL DELIVERY	4	1,959	0	0.00	1,959	100.00	2
	540	CESAREAN DELIVERY	5	1,191	0	0.00	1,191	100.00	3

Figure 12. Top 3 OOS Volume APR-DRGs by Primary Payer, Planned vs Unplanned; OOS Residents Only; 2016

Primary Payer	APR DRG	APR-DRG Description	OOS Resident Discharges						NYS Rank in HAS
			OOS Rank in HAS	Total	Planned		Unplanned		
				N	N	% of Total	N	% of Total	
Medicare	302	KNEE JOINT REPLACEMENT	1	1,085	1,026	94.56	59	5.44	5
	301	HIP JOINT REPLACEMENT	2	1,064	886	83.27	178	16.73	9
	720	SEPTICEMIA & DISSEMINATED INFECTIONS	3	867	21	2.42	846	97.58	1
	175	PERCUTANEOUS CARDIOVASCULAR PROCEDURES W/O AMI	4	819	423	51.65	396	48.35	12
	194	HEART FAILURE	5	565	18	3.19	547	96.81	2
Medicaid	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	1	239	0	0.00	239	100.00	1
	560	VAGINAL DELIVERY	2	227	0	0.00	227	100.00	2
	750	SCHIZOPHRENIA	3	208	6	2.88	202	97.12	4
	753	BIPOLAR DISORDERS	4	190	8	4.21	182	95.79	6
	773	OPIOID ABUSE & DEPENDENCE	5	181	26	14.36	155	85.64	10
Private	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	1	3,070	0	0.00	3,070	100.00	1
	560	VAGINAL DELIVERY	2	2,224	0	0.00	2,224	100.00	2
	301	HIP JOINT REPLACEMENT	3	1,357	1,278	94.18	79	5.82	6
	540	CESAREAN DELIVERY	4	1,302	0	0.00	1,302	100.00	3
	302	KNEE JOINT REPLACEMENT	5	1,196	1,140	95.32	56	4.68	4
Self-Pay	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	1	162	0	0.00	162	100.00	1
	560	VAGINAL DELIVERY	2	95	0	0.00	95	100.00	2
	775	ALCOHOL ABUSE & DEPENDENCE	3	69	6	8.70	63	91.30	4
	751	MAJOR DEPRESSIVE DISORDERS & OTHER/UNSPECIFIED PSYCHOSES	4	67	1	1.49	66	98.51	7
	753	BIPOLAR DISORDERS	5	67	2	2.99	65	97.01	9
Other	304	DORSAL & LUMBAR FUSION PROC EXCEPT FOR CURVATURE OF BACK	1	86	77	89.53	9	10.47	4
	660	MAJOR HEMATOLOGIC/IMMUNOLOGIC DIAG EXC SICKLE CELL CRISIS & COAGUL	2	53	1	1.89	52	98.11	69
	640	NEONATE BIRTHWT >2499G, NORMAL NEWBORN OR NEONATE W OTHER PROBLEM	3	52	0	0.00	52	100.00	1
	302	KNEE JOINT REPLACEMENT	4	49	48	97.96	1	2.04	3
	321	CERVICAL SPINAL FUSION & OTHER BACK/NECK PROC EXC DISC EXCIS/DECOMP	5	45	39	86.67	6	13.33	8

Definitions

Primary Payer

A composite was derived from three Source of Payment Typology data elements reported on a SPARCS discharge record. Source of Payment Typology is a hierarchical code list based on the Public Health Data Standards Consortium Source of Payment Typology Version 3.0, Code that provides a range of codes from broad categories to related sub-categories that are more specific. It is used to identify the payer expected to pay all or a portion of the patient's bill. Typologies were hierarchically assigned to payer categories as follows:

- **Medicare** – Medicare
- **Medicaid** – Medicaid
- **Private** – Private health insurance; Blue Cross/Blue Shield Organization
- **Other** – Other government (Federal/State/Local-excluding Dept. of Corrections); Dept. of Corrections; Managed care, unspecified; workers compensation; Miscellaneous/other; unknown
- **Self -Pay** – Self Pay with no payment from an organization/agency/program/private payer listed

Health Service Area (HSA)

This is a geographical subdivision of the State of New York within which the health care facility is located, and is assigned by SPARCS based upon the county of the facility. Currently there are eight regions.

- **Capital/Adirondack** – Albany, Clinton, Columbia, Delaware, Essex, Franklin, Fulton, Greene, Montgomery, Hamilton, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington
- **Central NY**- Cayuga, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence, Tomkins
- **Finger Lakes**- Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates
- **Hudson Valley**- Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester
- **Long Island**- Nassau, Suffolk
- **New York City**- Bronx, Kings, New York, Queens, Richmond
- **Southern Tier** – Broome, Chenango, Tioga
- **Western**- Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming

All Patient Refined Diagnostic Related Groups (APR-DRGs)

APR-DRGs were assigned to SPARCS data using grouping software created and distributed by 3M™ Corporation (3M™ Health Information Systems). Base APR-DRGs constitute a hospital inpatient services classification system that groups patients according to diagnosis, type of treatment (procedures), and other relevant criteria (ex., age, sex, discharge status). It represents the patient's condition at the time of discharge and includes the impact of conditions that developed during the hospital stay; diagnoses and procedures are eliminated from consideration in the APR-DRG assignment. There are three major component classes of APR-DRGs: surgical, medical and ungroupable. An inpatient discharge is considered surgical if a patient had a procedure performed which would require the use of the operating room, while remaining discharges are considered medical unless there are certain errors on the record such as an invalid primary diagnosis.

Healthcare Cost and Utilization Project (HCUP) Bedsize Classification

Bedsize categories are based on hospital beds, and are specific to the hospital's location and teaching status. "Urban" or "Rural" classification of facilities was based on facilities' regional population and the CDC's 2013 NCHS Urban-Rural Classification Scheme for Counties. Bedsize assesses the number of short-term acute beds in a hospital. Hospital information was obtained from the AHA Annual Survey of Hospitals.

Beginning in 1998, the hospital's bedsize categories are defined using region of the U.S., the urban-rural designation of the hospital, in addition to the teaching status. Rural hospitals were not split according to teaching status, because

rural teaching hospitals were rare. A hospital is considered to be a teaching hospital if it has an AMA-approved residency program, is a member of the Council of Teaching Hospitals (COH) or has a ratio of full-time equivalent interns and residents to beds of .25 or higher. The classification of a hospital location as urban or rural has changed over time. Prior to 2004 data, the urban/rural designation was based on Metropolitan Statistical Areas (MSA). Beginning with the 2004 data, this designation was determined by the Core Based Statistical Area (CBSA). This change in 2004 contributed to a slight decline in the number of hospitals that were classified as rural and a corresponding increase in the number of hospitals that were classified as urban.

The following bedsize classifications for the Northeast Region of the United States were used in this analysis:

Location and Teaching Status	Hospital Bedsize		
	Small	Medium	Large
Rural	1-49	50-99	100+
Urban, nonteaching	1-124	125-199	200+
Urban, teaching	1-249	250-424	425+

SPARCS

The Statewide Planning and Research Cooperative System (SPARCS) is a comprehensive data reporting system established in 1979 as a result of cooperation between the health care industry and government. Initially created to collect information on discharges from hospitals, SPARCS currently collects patient level detail on patient characteristics, diagnoses and treatments, services, and charges for every Article 28 (acute care) hospital discharge, ambulatory surgery, emergency room visits, and visits to hospital-based outpatient clinics in New York State. More information on SPARCS may be found at the following direct link: <http://www.health.ny.gov/statistics/sparcs/>.

Unit of analysis

The unit of analysis is the inpatient discharges, not a person or patient. This means that if a person has multiple inpatient discharges during the analysis period, each incident will be counted as a separate event. Therefore, a person can have more than one event in the data sets.

References

1. NYSDOH OQPS SB#16 "Inpatient Planned Admissions to Acute Care Hospitals in New York State, 2015". <https://www.health.ny.gov/statistics/sparcs/sb/docs/sb16.pdf>

Contact Information

We welcome questions, comments and feedback on this Statistical Brief.

Please contact us at:

Division of Information and Statistics
 Office of Quality and Patient Safety
 New York State Department of Health
 Corning Tower, Room 1911
 Albany, New York 12237

Phone: (518) 474-3189

Fax: (518) 486-3518

Email: BHI@health.ny.gov