

HEALTH CARE REGULATORY MODERNIZATION INITIATIVE

Background Paper: Cardiac Surgery and PCI Services

Issue:

The Department of Health (“Department”) regulates cardiac services through a Certificate of Need (CON) process that evaluates the public need for these services under the general premise that a minimum volume of procedures per facility per year is required to ensure an acceptable level of quality. However, with medical advances reducing the risks associated with certain cardiac procedures, and the migration from facility-specific care delivery models to regionally integrated delivery system models, the Department believes that it is appropriate to consider factors other than facility-specific volume requirements in approving or disapproving a cardiac services CON. While the existing cardiac need methodologies have arguably helped to ensure quality without limiting patient access to cardiac services, New York State health care systems seeking to provide patient care more locally at their affiliated hospital facilities have been precluded from doing so in certain areas of the State when utilization data for an area indicates that new providers would be unable to meet the minimum regulatory volume requirements without existing providers falling below those requirements.

Background:

Coronary heart disease (CHD) is the leading cause of death in New York State, and the most common form of CHD is atherosclerotic coronary artery disease. The State’s Prevention Agenda 2013-2018 targets Cardiovascular Disease as one of the top five priority chronic disease areas.

Changes in lifestyle, such as dietary changes, not smoking and regular exercise, are often recommended to patients with CHD. In other cases, medication prescribed for high blood pressure or other conditions can make a significant difference. For patients with CHD not controlled by lifestyle changes or medication, the two most common procedures are percutaneous coronary intervention (PCI) or coronary angioplasty, a non-surgical procedure used to treat narrowed coronary arteries, and coronary artery bypass graft surgery (CABG), a type of cardiac surgery. ST-segment elevation myocardial infarction or STEMI is the name cardiologists use to describe a myocardial infarction or classic heart attack. In patients with acute or severe blockages, such as STEMI, PCI can be critical to survival as it reduces deaths, myocardial infarctions and angina compared with oral medication. PCI guidelines and best practices are constantly evolving; however, the standard is for door to balloon time of 90 minutes, with a median time nationally of 59 minutes according to a 2016 Report in the Journal of the American College of Cardiologists (Masoudi, Ponirakis, Lemos, Jollis, et al, 2016). The 2013 ACCF/AHA Guidelines for the management of ST-Elevation Myocardial Infarction recommends a regional approach to STEMI care and reperfusion therapy, recognizing the importance of timely pre-hospital care and early identification of STEMI as key to reducing overall total ischemic time and thus improving outcomes. This approach shifts the focus from door-to-balloon time to first-medical-contact-to-device-time and establishes a goal of 90 minutes or less for patients transported directly by EMS to a PCI-capable hospital.

Working cooperatively with hospitals since 1989, the Department collects clinical data for every patient in the state undergoing PCI and cardiac surgery and compiles them in two databases:

the Percutaneous Coronary Interventions Reporting System (PCIRS) and the Cardiac Surgery Reporting System (CSRS). These databases undergo careful auditing and rigorous statistical analyses after which risk-adjusted mortality rates for hospitals and physicians are made available to both providers and the public. Beginning in 2014, the Department also began publishing data on 30 day readmissions rates for these procedures.

There are 36 licensed cardiac surgery centers in NYS. The volume of cardiac surgery in NYS has fluctuated between 2003 and 2016, with a 21% declining trend exhibited from 2003 to 2011 (23,740 cases in 2003 to 18,841 cases in 2011). Cardiac surgery volume has increased since 2011, in part due to the initiation of Transcatheter Aortic Valve Replacement (TAVR) which is included in total cardiac surgery volume. Of note, CABG volume declined steadily until 2012 and has remained relatively stable since that time.

There are 63 licensed PCI-capable cardiac catheterization laboratory centers in NYS (2 more approved, but not yet operational). The volume of PCI cases in NYS has fluctuated between 2003 and 2016 with the peak at 60,148 cases in 2006. PCI volume **decreased 19%** from 2006 to a low of 48,653 cases in 2012, and this downward trend may be associated with many factors including efforts to address the risk factors for heart disease, the advent of medical therapies as well as a focus on appropriateness of care. Between 2012 and 2016 there has been a modest 8% increase in PCI volume with the most recent data showing 52,915 cases performed in 2016.

The Cardiac Advisory Committee (CAC) advises the Commissioner of Health on a wide range of cardiac issues including quality, appropriateness and effectiveness of care, access, resources, prevention and treatment. The CAC assists the Department of Health in the development of cardiac initiatives, policies and guidelines. Membership includes both in-and-out-of-state cardiac surgeons, cardiologists and specialists from other pertinent disciplines as determined by the Commissioner of Health. Membership may include up to 25 members. Discipline, geographic distribution, gender and racial diversity are taken into consideration when making appointments.

Review of the existing statute and regulations

Public Health Law 2802(2) requires the Commissioner prior review and approval of construction projects as defined in regulation including determination of public need, applicant financial capability and feasibility, and current compliance with existing codes, rules and regulations. With respect to CON applications for cardiac surgery and PCI services, the Public Health and Health Planning Council's role is to make a recommendation to the Commissioner (PHHC's decision is not determinative).

Cardiac Surgery Centers. Section 709.14 of Title 10 of the NYCRR provides standards to evaluate public need for cardiac surgery center services and cardiac catheterization laboratory services. Section 709.14(b) defines the planning area for cardiac surgery services as the Health Systems Agency (HSA) region and the use area of the facility is further defined as a 100-mile radius of the applicant facility. Eighty percent of the population in each HSA must reside within 100 miles of a facility providing cardiac services and all facilities are supposed to meet threshold volume values. These threshold volume values require an applicant to document referral cases to ultimately support a projected annual volume of 500 cases and require the applicant to perform 300 annual cases at or within the first two-year mark. Also, all cardiac

surgery centers in the area must be performing a minimum of 500 cardiac surgery cases annually and the addition of a new site cannot jeopardize this minimum volume requirement.

The volume requirements for pediatric cardiac surgery centers are slightly lower. These centers are expected to perform a minimum of 200 pediatric cardiac surgical procedures per year by the end of the second full calendar year of operation or demonstrate the ability to perform a minimum of 50 cases a year on-site and operate as part of a coordinated program based on a fully executed written agreement, approved by the Commissioner, with another pediatric cardiac surgery program in accordance with standards in 405.29(d)(5)(ii). For hospitals seeking approval as part of a coordinated program, the agreement must be submitted with the certificate of need application and must be approved by the Department prior to initiation of the service.

Per 405.29, physicians performing cardiac surgery need to perform a minimum of 50 cardiac surgeries per year. Physicians falling below this level will be reviewed by the credentials committee to determine what actions are necessary.

Pediatric Cardiac Surgery Centers. Pediatric facilities must maintain a 75 case per year volume and Adult Surgery Centers must maintain 100 annual procedures threshold to be deemed viable. 405.29(d)(6) allows for the commissioner to issue a waiver for these minimum volumes if there is an extenuating circumstance or documentation that there would be unmet need in the geographic area if the program closed.

All hospitals approved as Adult and/or Pediatric Cardiac Surgery Centers shall be approved as PCI Capable Cardiac Catheterization Lab Centers and must meet minimum standards in part 405.29.

PCI Centers. PCI distance and volume requirements at hospitals with no cardiac surgery on site align with cardiac surgery guidelines but differ slightly. The planning area for a new PCI center at a hospital with no cardiac surgery on site is a one hour average surface travel time from the applicant facility which can be adjusted for traffic patterns and weather conditions.

The threshold volume requirements for a new applicant state they must perform a minimum of 36 emergency PCI and 200 total PCI procedures within the first year of operation. To approve a new PCI center, all facilities within a one hour surface travel time must maintain a minimum of 300 procedures per year after the addition of a new program. The regulations presume that an existing PCI facility must perform a minimum of 150 cases per year to remain viable from a quality standpoint.

A PCI capable Cardiac Catheterization Laboratory Center with a volume between 150 and 300 PCI cases a year must procure the services of an independent physician consultant, acceptable to the Department, who shall conduct an annual review of the appropriateness and quality of PCI cases performed at the facility.

A PCI capable Cardiac Catheterization Laboratory Center with an annual volume below 150 PCI cases a year for two consecutive calendar years, or a volume below 36 emergency PCI cases a year for two consecutive calendar years, shall surrender approval to perform percutaneous coronary interventions or have approval to perform the procedure revoked.

PCI Volume-Outcome Research and Guidelines

The American College of Cardiology Foundation (ACCF), American Heart Association (AHA), and Society for Cardiovascular Angiography and Interventions (SCAI) published consensus guidelines in 2013 which were updated in 2014 to ensure quality in PCI facilities.

Institutional / Facility Volume. The guidelines indicate that while there is sufficient evidence to support that an institutional volume below 200 PCI procedures annually appears to be consistently associated with worse outcomes, there is less evidence to support a threshold for an individual operator volume for both emergency and elective PCI.

Operator / Physician volume. The consensus guidelines also recommend that interventional cardiologists perform a minimum of 50 PCI procedures per year (averaged over a two-year period) including no less than 11 emergency PCIs to maintain competency. Further, the guidelines recognize that volume is but one of several factors that should be considered in assessing operator competence, which includes lifetime experience, institutional volume (could be across specific facilities in a health system), other cardiovascular interventions of the operator, and quality assessment of the operator's ongoing performance outcomes.

Facilities without On-site Surgery. Several strategies have been suggested to ensure optimal quality and outcomes at low-volume facilities without onsite surgery, including: a) having both operators and support personnel rotate at a high-volume facility to enhance experience and b) rigorous quality monitoring program with oversight from a high-volume facility or formal evaluation by an external accreditation organization.

PCI Regulations in Other States. The 2014 PCI Update assessed the current use of PCI without on-site surgery from a survey of ACC Governors for each state, data from industry sources and direct contact with physicians in various states. PCI without on-site surgery backup is regulated in State Departments of Health in 34 states but is unregulated in the remaining 16 states. 45 states allow both emergency and elective PCI without on-site surgery. Four states allow only emergency PCI without on-site surgery.

Current Status:

The existing cardiac services regulations have resulted in situations where the Department has commenced a competitive review of CON applications for PCI services targeted at the same population within a planning area, where the regulations support the need for only one PCI program based on the threshold volumes (i.e., one additional PCI program would not endanger existing PCI programs from meeting volume thresholds, but two or more CON applications exist for the same planning region targeting the same population).

This situation occurred most recently in 2016 with competing applications submitted for a new PCI program to serve the eastern end of Long Island targeted population from Peconic Bay Medical Center in Riverhead, NY (an affiliate of Northwell Health System) and Southampton Hospital in Southampton NY (a SUNY Stony Brook University Hospital affiliate). Following consultation with the CAC and based on the limitations imposed by the current need methodology, the Department advanced to the Public Health and Health Planning Council (PHHPC) a recommendation to approve the Peconic Bay Medical Center CON and disapprove Southampton. However, the CAC and the Department determined that both applications were approvable on their own merit. The primary factor which weighed in favor of Peconic was

geographic location, as Riverhead is centrally located between the North and South forks while Southampton is on the South Fork. PHHPC recommended that the Commissioner approve both applications after being provided with information that surface travel time from South Fork communities to Riverhead could be significant due to traffic, particularly during the summer months.

The Commissioner approved both applications, but imposed contingencies related to quality and safety, to mitigate the outcome that projected procedure volumes may fall below the regulatory minimums. A number of these contingencies were designed to ensure that the PCI programs at Peconic and Southampton operated as part of a larger system and not isolated practice sites. The contingencies included: accurate and timely reporting of Cardiac Reporting System data to the Department and submission of other reports or information necessary to facilitate the monitoring of volume and patient outcomes; compliance with ongoing monitoring and oversight by its Cardiac Surgery Affiliate (i.e., Northwell and Stony Brook University Hospital, respectively); maintaining sufficient on-site physician and non-physician clinical staff to ensure "24/7/365" coverage; providing training and rotational opportunities at higher volume practice sites within their respective parent system's hospitals to maintain the competency of its PCI/EP physician, nursing and technical staff; and that the applicant would participate in all quality assurance, peer review and patient safety programs sponsored by the parent system as part of its oversight responsibilities.

In addition, the Department has had situations where the current volume at all PCI programs in a planning region was not at the threshold volume level specified in the regulations and there was an application for a new PCI program in the region which was therefore not initially considered approvable based on a narrow consideration of only these volume thresholds. This occurred in 2016, where the Department ultimately approved an application for PCI services at The Brooklyn Hospital Center (TBHC, with Mount Sinai Hospital as its cardiac surgery affiliate), on the basis that there was a demonstrated access issue to this service among minority and indigent residents in the TBHC targeted service area as evidenced by data submitted in the application showing cardiac health status indicators for this population at levels below that of Kings County and statewide averages

The Department currently has nine CON applications to certify new cardiac services that have been pending from three to over 36 months because they are not approvable under existing regulations due to the volume-related threshold requirements, but are all community hospital affiliates of large regional health care systems with established cardiac services programs. While establishment of these new programs is broadly consistent with Department's goal of fostering the creation of integrated regional systems of care, the conditions which enabled approval of the Peconic, Southampton and TBHC programs (i.e., documentable access issues) are not present.

In the instances of Peconic, Southampton and TBHC, in making the final determination, the Commissioner relied on the limited language in the regulations which says, "...it is intended that the methodology provide sufficient flexibility to consider additional circumstances that reflect on the need for cardiac services." However, this language was intended to address exceptional circumstances, and the Department now finds itself confronted with an increasing number of CON applications for cardiac services that do not meet the regulatory facility-specific volume thresholds intended to promote quality and safety, but where the services are organized in a manner that calls into question the correlation of these thresholds with that goal. The weaker

that correlation, the weaker the justification for the current thresholds, as the public purpose served by them would no longer outweigh anti-competitive concerns.

Possible Solutions to Discuss:

This workgroup will explore the statutory, regulatory and policy provisions governing the CON process for cardiac surgery and PCI services in New York State with the goal to promote access to high quality cardiac programs.

The primary discussion questions for the Cardiac Surgery and PCI Regulatory Modernization Initiative Workgroup are:

1. Given medical advances and regularity with which cardiac surgery and PCI procedures are now performed, are minimum volume thresholds utilized as part of a CON public need methodology still a valid and preferred regulatory tool to effect quality outcomes?
 - o If yes, are the volume thresholds currently in regulation appropriate and to whom or what entity should they be applied (e.g., facility, surgeon/cardiologist, surgical/medical cardiac team, and/or health system)?
 - o If no, what alternative tools and/or processes can the Department utilize to maintain or improve quality?
2. If projected utilization of cardiac surgery and/or PCI services in a planning area can be accommodated by existing providers and additional providers are authorized to provide these services, would this put upward pressure on health insurance costs or would the resulting increased competition temper or reduce costs?
3. If expansion of specialty services is permitted in a planning area where projected utilization can be accommodated by existing providers (i.e., there will be winners and losers), what are measures we could take to help ensure preservation/expansion of essential services for economically disadvantaged or geographically isolated populations?

Additional Sources:

Statutes:

PHL 2802(2) <http://public.leginfo.state.ny.us/lawssrch.cgi?NVLWO>

Regulations:

Section 405.29 Cardiac Services program regulations-
<https://regs.health.ny.gov/content/section-40529-cardiac-services>

Section 709.14 Cardiac Services, Determination of Public Need
<https://regs.health.ny.gov/content/section-70914-cardiac-services>

NYS Cardiovascular Disease Data and Statistics
<https://www.health.ny.gov/statistics/diseases/cardiovascular>

Cardiac Surgery Volumes in NYS, 2003-2016- (Attachment 1)

Cardiac Surgery by Type of Case and Year 2011-2016 (Attachment 2)

PCI Volumes in NYS, 2003-2016 - (Attachment 3)

PCI Volumes by Facility, 2008-2017 (Attachment 4)

Cardiac Surgery by Facility, 2005-2017 (Attachment 5)

Policy Guidance / Standards / National Research and Resources:

Dehmer GJ, Blankenship JC, Cilingiroglu M, Dwyer JG, Feldman DN, Gardner TJ, Grines CL, Singh M. SCAI/ACC/AHA expert consensus document: 2014 update on percutaneous coronary intervention without on-site surgical backup. *J Am Coll Cardiol* 2014; 63:2624–41. <http://www.onlinejacc.org/content/63/23/2624>

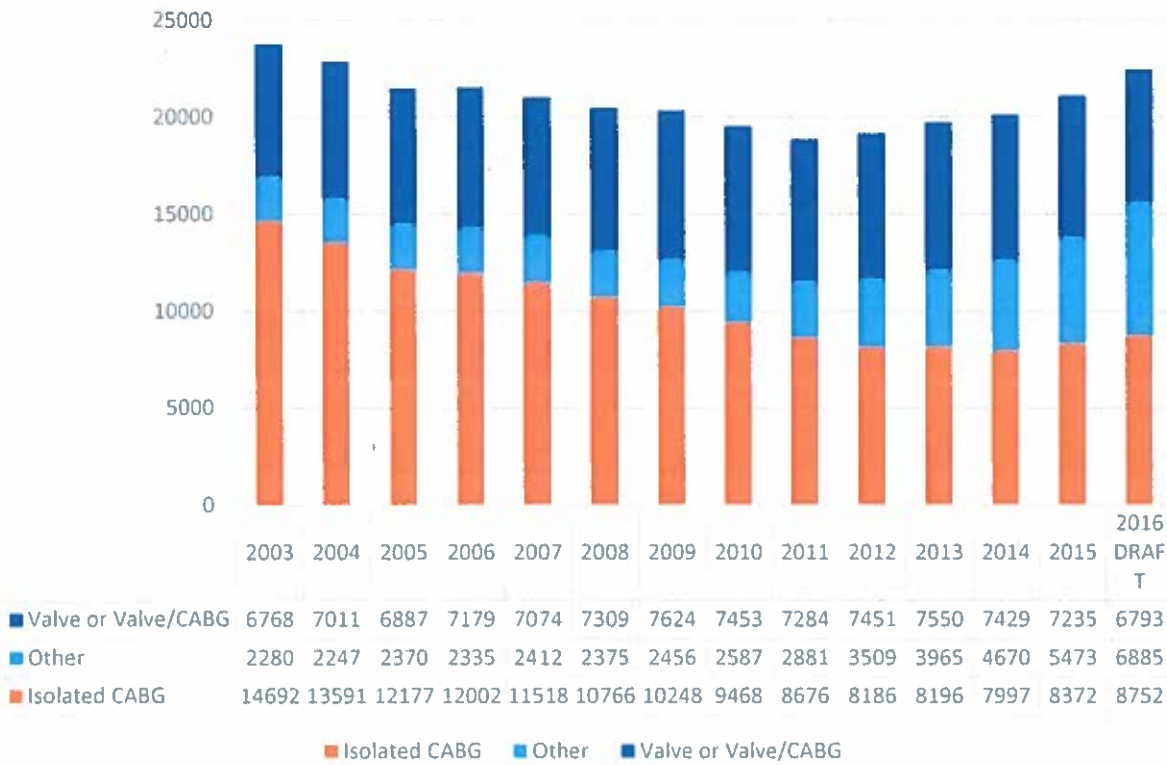
ACCF/AHA/SCAI 2013 Update of the Clinical Competence Statement on Coronary Artery Interventional Procedures <http://circ.ahajournals.org/content/128/4/436>

Trends in U.S. Cardiovascular Care: 2016 Report from 4 ACC National Cardiovascular Data Registries, *JACC*. Masoudi, F.A., Ponirakis, A., de Lemos, J.A., Jollis, J.G., et al. Published online Dec. 23, 2016. DOI: <https://doi.org/10.1016/j.jacc.2016.12.005>

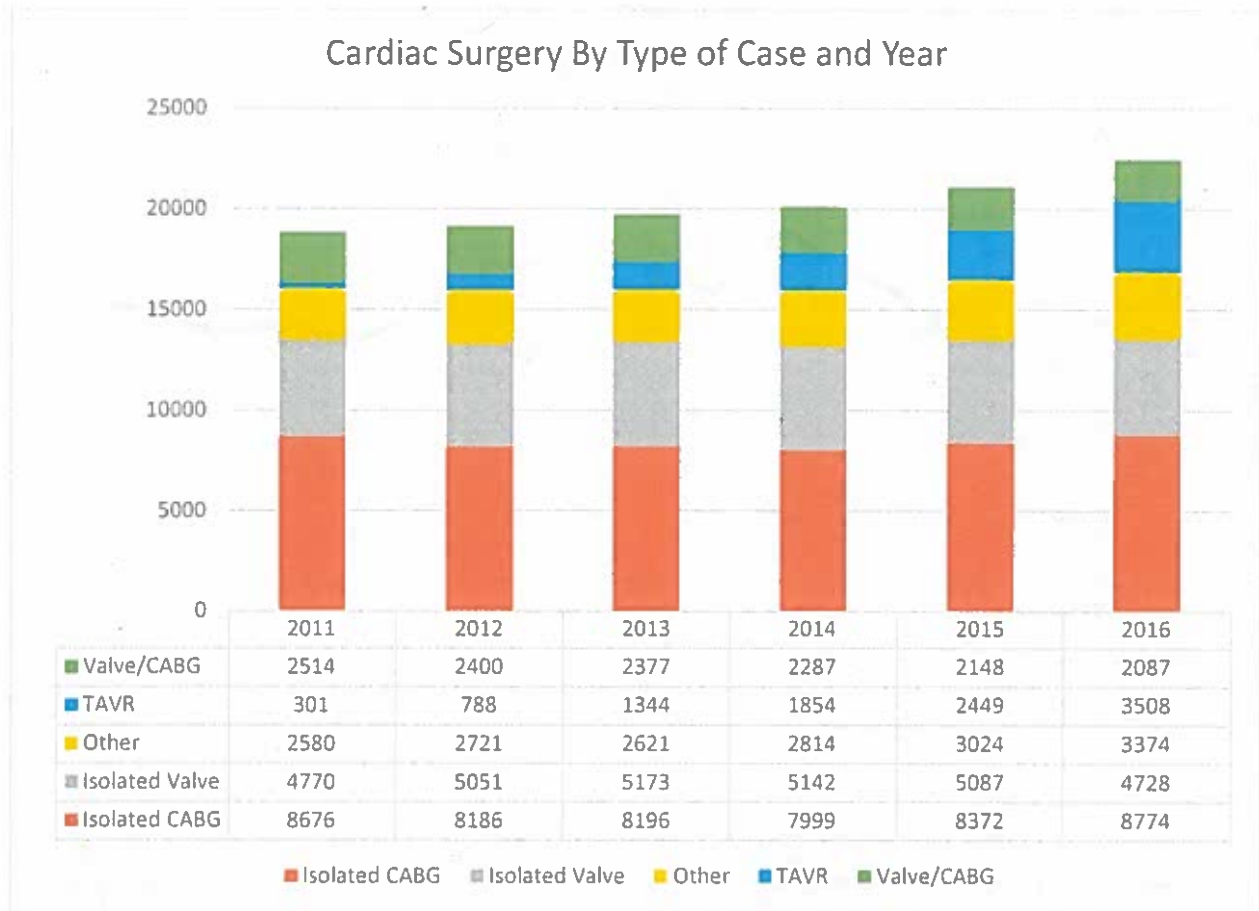
Changes in Percutaneous Coronary Interventions Deemed “Inappropriate” by Appropriate Use Criteria. *Journal of the American College of Cardiology*, Vol. 69, No.10, 2017, 2017 by the American College of Cardiology Foundation. Published by Elsevier:
<https://doi.org/10.1016/j.jacc.2016.12.025>

Attachment 1

Cardiac Surgery Volume in NYS, 2003 - 2016
Source: CSRS



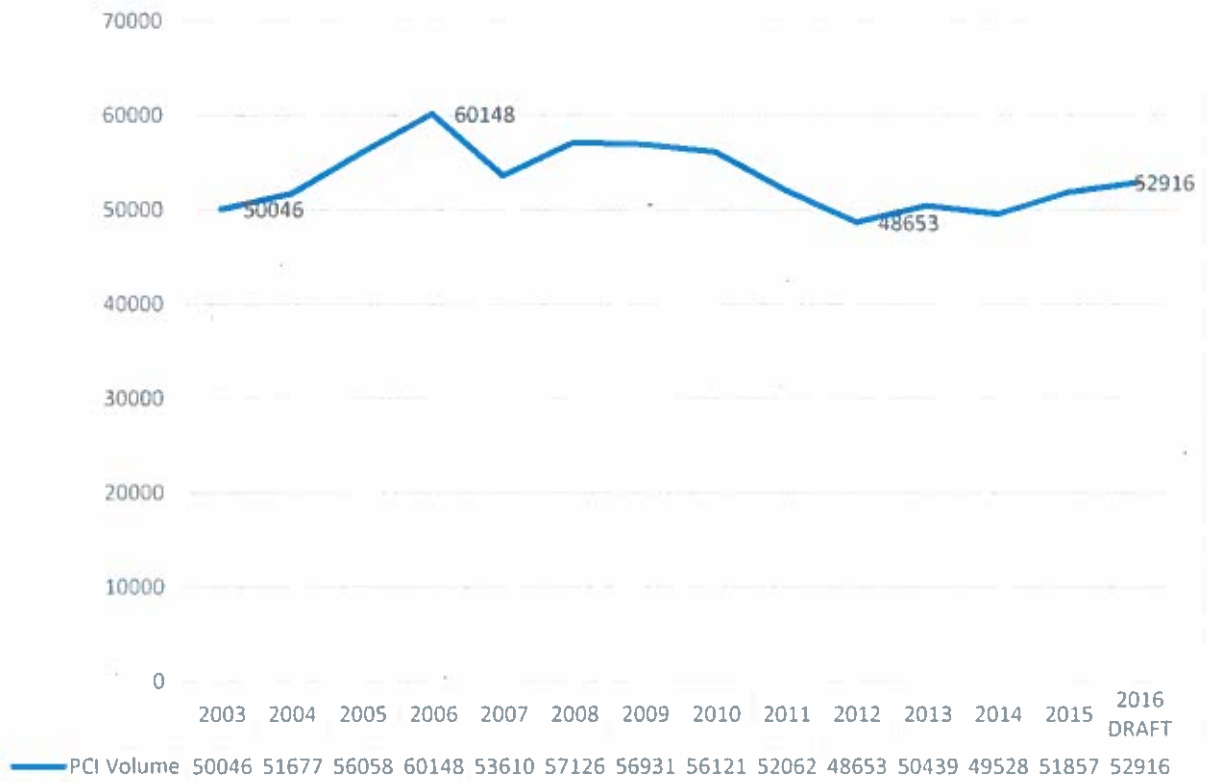
Attachment 2



Attachment 3

PCI Volume in NYS, 2003-2016

Source: PCIRS



Attachement 4

PCI performed in NYG. 2008 - 2017 Discharge Dates. PCIRS. Draft data 2016-2017.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	Jan-May 2017
**NYC - Bronx **										
Bronx-Lebanon-Concourse		47	68	77	57	93	100	150	194	82
Montefiore - Moses	868	876	787	665	732	738	886	1013	1077	425
Montefiore - Weller	807	861	652	563	559	560	544	623	692	332
St. Barnabas Hospital				70	113	141	154	187	194	89
Region Total	1675	1784	1507	1375	1461	1532	1684	1973	2157	928
**NYC - Kings **										
Brookdale Univ Hosp Med Ctr	49	86	347	209	244	221	190	201	266	117
Brooklyn Hosp. Downtown										42
Lutheran Medical Ctr		25	334	329	253	270	222	207	266	106
Maimonides Medical Ctr	1390	1352	1270	1186	1041	1186	1172	1111	1370	648
NYP-Brooklyn Methodist	1375	1337	1526	1546	1266	1449	1294	1291	1182	520
Univ. Brooklyn @ LICH	166	195	204	205	272	112				
Univ. Hosp-Brooklyn	1001	754	579	455	349	350	293	303	347	155
Region Total	3981	3749	4260	3930	3425	3588	3171	3113	3431	1588
**NYC - Manhattan **										
Bellevue Hospital Ctr	536	539	454	496	420	439	457	456	469	197
Lenox Hill Hospital	2880	2998	2784	1741	1568	1552	1580	1897	1720	770
Mount Sinai Beth Israel	1776	1736	1863	1576	1474	1727	1739	1834	1747	678
Mount Sinai Hospital	4016	5079	4794	4710	4722	4493	3821	3692	3537	1446
Mount Sinai St. Lukes	518	523	570	520	515	471	424	548	730	320
NYP-Columbia Presby.	3116	2973	2963	3174	2787	2605	2523	2446	2263	920
NYP-Weill Cornell	1623	1485	1440	1475	1570	1405	1306	1111	1102	147
NYU Hospitals Center	1028	1134	1199	1134	1091	1415	1479	1687	1923	846
SVCMC- St. Vincents	1071	922								
Region Total	17164	17389	16067	14826	14147	14167	13929	13671	13551	5324
**NYC - Queens **										
Elmhurst Hospital Ctr	343	311	419	448	499	462	468	434	399	169
Jamaica Hosp Med Ctr	121	152	198	229	282	333	331	346	344	151
Long Island Jewish MC	2201	2280	2367	2193	1829	1987	1957	1175	796	347
NYP-Queens	970	826	785	731	676	616	592	813	706	332
Region Total	3635	3569	3769	3601	3286	3398	3348	2768	2245	999

PCI performed in NYS. 2008 - 2017 Discharge Dates. PCIRS. Draft data 2016-2017.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	Jan-May 2017 DRAFT
**NYC - Staten Island **										
Richmond Univ Med Cntr	.	.	.	.	.	.	8	127	173	91
Staten Island Univ Hosp	1108	1181	1186	988	997	1004	768	762	810	403
Region Total	1108	1181	1186	988	997	1004	776	889	983	494
Albany Area										
Albany Med. Ctr	1137	1111	1223	1089	733	711	679	708	688	319
Bassett Medical Center	329	353	380	329	371	463	461	573	620	229
Champ.Valley Phys Hosp	394	503	629	740	612	538	564	600	614	266
Ellis Hospital	515	512	533	520	501	496	453	491	517	201
Glens Falls Hospital	324	267	233	239	203	227	192	183	237	96
Samaritan Hospital	.	.	.	.	229	212	194	229	199	84
Saratoga Hospital	.	.	.	.	.	.	.	98	69	45
St. Peters Hospital	861	846	747	799	669	742	837	886	940	375
Region Total	3560	3652	3745	3716	3318	3389	3380	3768	3684	1615
Buffalo Area										
Buffalo General Hosp	1546	1569	1353	1223	1827	1808	1505	1506	1590	569
Erie County Med Ctr	235	174	144	105	153	23	.	.	.	.
Mercy Hospital	631	610	689	718	741	977	1151	1142	1144	533
Willard Fillmore Hosp	1067	913	843	642	40	.	.	.	.	.
Niagara Falls Memorial	.	.	.	.	.	.	.	.	.	18
Olean General Hosp.	.	.	.	.	.	37	172	169	165	68
Region Total	3479	3266	3029	2748	2761	2845	2888	2877	2899	1188
Rochester Area										
Arnot Ogden Med Ctr	359	472	477	511	484	407	395	338	326	133
Rochester General Hosp	2151	1879	1962	1644	1713	1616	1599	1670	1553	558
Strong Memorial Hosp	1302	1194	1037	907	971	979	921	1005	1188	535
Unity Hospital	366	441	371	243	273	325	304	289	371	114
Region Total	4178	3986	3847	3305	3441	3327	3219	3302	3438	1340
Syracuse Area										
Cayuga Med Ctr Ithaca	.	.	19	162	134	146	154	164	161	56
Crouse Hospital	537	404	393	380	296	284	285	307	388	183
Faxton - St. Lukes	22	41	289	287	236	282	281	147	.	.
St. Elizabeth Med Ctr	1291	1416	1109	915	728	676	678	823	1030	387
St. Josephs Hospital	2084	2187	2370	2248	2081	2144	1938	2060	2015	831
UHS-Wilson Med Ctr	830	728	721	786	692	697	689	757	740	278
Univ. Hosp-Upstate	340	322	239	292	265	279	199	205	290	129
Region Total	5104	5098	5140	5070	4432	4508	4224	4463	4624	1864

PCI performed in NYS. 2008 - 2017 Discharge Dates. PCIRS. Draft data 2016-2017.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	Jan-May 2017
New Rochelle Area										
Brookhaven Memorial	888	792	661	645	531	19	303	358	431	215
Good Sam - Suffern	467	716	714	700	629	637	693	629	535	205
Good Sam-West Islip	79	69	119	257	306	665	951	1098	1111	568
Huntington Hospital						517	538	555	594	246
NYP-Lawrence Hosp								145	228	105
NYU Winthrop Hospital	1201	1223	1203	997	1029	1043	975	1084	1150	430
North Shore Univ Hosp	2375	2060	1929	1646	1272	1860	2245	2772	2742	1163
Orange Regional Med Ctr	87	109	534	554	592	518	452	540	565	268
South Nassau Com. Hosp	421	483	480	609	554	672	530	466	528	240
Southside Hospital	645	567	519	572	615	760	683	767	811	290
St. Catherine of Siena	36	48	240	268	250	321	309	322	305	127
St. Francis Hospital	3190	3294	3092	2718	2388	2468	2691	2939	2895	1250
St. Lukes Cornwall Hosp		39	364	348	324	266	275	276	393	145
Univ. Hosp-Stony Brook	1831	1980	1855	1543	1407	1474	1327	1520	1580	625
Vassar Bros. Med Ctr	739	659	679	696	703	653	721	700	878	435
Westchester Med Ctr	1277	1218	1043	694	488	456	418	411	393	187
White Plains Hospital			133	256	291	346	398	451	565	242
Region Total	13242	13257	13571	12503	11385	12681	13509	15033	15704	6741
Statewide Total	57126	56931	56121	52062	48653	50439	49528	51857	52916	22082

All cardiac surgery in New York State
Cardiac Surgery Volume by Region, Hospital, and Type of Case 2005 - 2008.

	2005					2006					2007					2008				
	IC	IV	VC	OT	TOT	IC	IV	VC	OT	TOT	IC	IV	VC	OT	TOT	IC	IV	VC	OT	TOT
	**NYC - Bronx **																			
Montefiore - Moses	206	69	52	45	432	279	94	86	67	526	282	92	87	79	540	205	90	69	83	507
Montefiore - Weller	119	45	43	39	246	104	46	27	30	207	149	54	39	27	269	168	75	37	26	306
Region Total	385	114	95	84	678	413	140	113	97	763	431	146	126	106	809	433	165	106	109	813
**NYC - Kings **																				
Maimonides Medical Ctr	402	82	56	66	606	356	95	74	62	587	354	109	55	72	590	351	94	50	65	560
NY Methodist Hospital	124	22	21	21	188	130	35	13	16	194	124	25	14	18	181	97	34	20	20	171
Univ. Hosp-Brooklyn	74	32	19	17	142	90	34	15	17	156	79	60	18	16	173	77	45	17	22	161
Region Total	600	136	96	104	936	576	164	102	95	937	557	194	87	106	944	525	173	87	107	892
**NYC - Manhattan **																				
Bellevue Hospital Ctr	104	46	15	19	184	100	54	11	25	190	136	62	18	43	259	141	61	15	43	260
Lenox Hill Hospital	462	151	115	68	796	476	171	113	60	820	486	152	98	71	807	456	183	85	66	790
Mount Sinai Beth Israel	301	79	84	68	532	250	79	61	60	450	247	67	54	30	398	243	66	63	22	394
Mount Sinai Hospital	340	276	111	236	972	261	240	133	259	893	229	290	109	251	879	283	372	132	257	1044
Mount Sinai St. Lukes	168	77	63	51	359	154	79	52	34	319	165	48	41	25	279	124	57	30	18	229
NYP-Columbia Presby.	400	410	208	367	1385	376	412	187	412	1387	370	343	194	422	1329	354	381	207	380	1322
NYP-Weill Cornell	411	261	125	208	1005	437	232	112	204	985	358	227	134	234	953	275	251	102	221	849
NYU Hospitalo Center	155	414	85	106	760	91	426	64	77	658	107	405	58	79	649	118	319	61	67	565
NYUMC- St. Vincents	233	50	43	38	364	236	58	36	24	354	143	62	24	20	249	98	40	11	14	163
Region Total	2583	1764	849	1161	6357	2381	1751	769	1155	6056	2241	1656	730	1175	5802	2092	1730	706	1088	5016
**NYC - Queens **																				
Long Island Jewish UC	223	92	92	53	460	220	109	71	31	431	293	118	121	53	585	257	119	102	50	528
NYP-Queens	225	38	25	21	309	151	33	16	16	216	107	23	7	5	142	53	6	9	7	75
Region Total	448	130	117	74	769	371	142	87	47	647	400	141	128	58	727	310	125	111	57	603
**NYC - Staten Island **																				
Staten Island Univ Hosp	480	36	39	19	574	409	54	37	18	518	391	53	34	15	493	332	47	24	22	425
Region Total	480	36	39	19	574	409	54	37	18	518	391	53	34	15	493	332	47	24	22	425
Albany Area																				
Albany Med. Ctr	468	93	72	51	684	422	69	74	47	612	332	63	75	60	530	323	63	66	37	489
Champ.Valley Phys Hosp	86	4	2	1	93	76	8	2	1	87	103	14	17	6	140	105	22	25	12	164
Ellis Hospital	289	52	54	28	423	285	64	60	22	431	267	71	45	16	399	262	70	55	21	408
M I Baccett Hospital	70	12	8	4	94	64	18	12	15	109	68	13	9	4	94	72	20	16	4	112
St. Peters Hosp.	399	137	123	48	707	443	137	124	49	753	403	139	130	39	711	467	152	141	34	794
Region Total	1312	298	259	132	2001	1290	296	272	134	1992	1173	300	276	125	1874	1229	327	303	108	1967
Buffalo Area																				
Buffalo General Hosp	418	62	81	32	593	412	62	82	19	575	355	83	84	38	500	330	83	84	33	530
Erie County Med Ctr	228	52	30	51	361	167	40	26	18	251	159	19	5	18	201	121	7	3	22	153

All cardiac surgery in New York State
 Cardiac Surgery Volume by Region, Hospital, and Type of Case, 2005 - 2008.

	2005				2006				2007				2008							
	IC	IV	VC	TOT	IC	IV	VC	TOT	IC	IV	VC	TOT	IC	IV	VC	TOT				
Mercy Hospital	219	10	16	22	267	233	15	11	12	271	290	38	35	31	394	334	41	49	35	459
Millard Fillmore Hosp	307	35	32	22	396	339	57	35	24	455	336	46	45	21	448	259	46	41	22	368
Region Total	1172	159	159	127	1617	1151	174	154	73	1552	1140	186	169	108	1603	1044	177	177	112	1510
Rochester Area																				
Arnot Ogden Med Ctr	89	15	9	8	121	106	18	14	5	143	125	12	9	8	154	142	18	9	9	178
Rochester General Hosp	514	158	109	67	848	506	172	155	54	887	482	158	123	59	822	494	194	140	63	891
Strong Memorial Hosp	371	122	79	125	697	344	134	57	115	650	336	144	63	151	694	318	137	70	149	674
Region Total	974	295	197	200	1666	956	324	226	174	1680	943	314	195	218	1070	954	349	219	221	1743
Syracuse Area																				
St. Elizabeth Med Ctr	266	62	84	24	436	281	62	97	31	471	239	57	60	37	393	212	60	66	21	359
St. Josephs Hospital	493	103	127	56	779	658	163	172	89	1082	575	181	126	82	964	532	184	148	105	969
UHS-Wilson Med Ctr	242	36	48	14	340	234	42	44	14	334	217	49	50	11	327	175	36	30	5	246
Univ. Hosp-Upstate	238	93	47	60	438	259	63	41	86	399	187	59	28	30	304	156	44	24	24	248
Region Total	1239	294	306	154	1993	1432	330	354	170	2286	1218	346	264	160	1988	1075	324	268	155	1822
New Rochelle Area																				
Good Sam - Suffern	.	.	.	.	.	.	.	.	.	.	181	20	33	4	238	207	33	33	5	278
Good Sam-West Islip	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
North Shore Univ Hosp	683	270	172	89	1214	656	268	181	109	1214	597	267	183	98	1145	471	279	161	127	1038
Southside Hospital	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
St. Francis Hospital	1007	289	256	80	1632	994	341	274	67	1676	894	380	219	48	1541	867	364	281	53	1565
Univ. Hosp-Stony Brook	336	74	63	40	513	314	82	71	39	506	310	85	76	52	523	292	114	86	36	528
Vassar Bros. Med Ctr	198	48	61	18	325	241	66	78	40	425	238	69	85	25	417	229	101	74	35	433
Westchester Med Ctr	411	82	62	60	615	544	83	96	87	810	493	90	67	88	738	426	101	70	97	694
Winthrop-Univ. Hosp	349	68	99	28	544	274	66	84	30	454	311	67	88	26	492	286	88	106	43	523
Region Total	2984	831	713	315	4843	3023	906	784	372	5085	3024	978	751	341	5094	2772	1080	811	396	5059
Statewide Total	12177	4057	2830	2370	21434	12002	4281	2898	2335	21516	11518	4314	2760	2412	21004	10766	4497	2812	2375	20450

9/28/2017

NOTES:
 IC = Isolated CABG IV = Isolated Valve VC = Valve and CABG at the same time
 OT = Other Cardiac Surgery TOT = Total Cases

Other Cardiac Surgery includes any surgery on the heart or great vessels that is not isolated CABG, Isolated Valve or combined Valve/CABG. This includes but is not limited to: Congenital, Transplant, Aneurysm Repairs, Ventricular Assist Device, etc.

All cardiac surgery in New York State
Cardiac Surgery Volume by Region, Hospital, and Type of Case 2009 - 2012.

	2009				2010				2011				2012							
	IC	IV	VC	OT	TOT	IC	IV	VC	OT	TOT	IC	IV	VC	OT	TOT	IC	IV	VC	OT	TOT
	**NYC - Bronx **																			
Montefiore - Moses	226	82	70	83	461	213	89	61	111	474	177	76	46	113	412	203	108	43	127	481
Montefiore - Weller	160	87	40	32	319	180	76	50	46	352	207	65	40	44	356	152	66	30	32	280
Region Total	386	169	110	115	780	393	165	111	157	826	384	141	86	157	768	355	174	73	159	761
**NYC - Kings **																				
Maimonides Medical Ctr	284	101	43	49	477	263	103	39	64	469	263	103	52	42	460	269	117	48	72	506
NY Methodist Hospital	112	39	14	11	176	101	46	27	9	183	85	41	17	17	160	90	55	14	12	171
Univ. Hosp-Brooklyn	64	30	13	22	129	47	20	17	6	90	74	23	11	14	122	55	15	13	9	92
Region Total	460	170	70	82	782	411	169	83	79	742	422	167	80	73	742	414	187	75	93	769
**NYC - Manhattan **																				
Bellevue Hospital Ctr	127	75	18	45	265	125	87	19	67	298	98	66	13	68	245	84	63	12	46	205
Lenox Hill Hospital	366	131	87	121	705	337	103	70	111	621	274	106	46	89	515	254	155	32	110	551
Mount Sinai Beth Israel	204	49	41	22	316	198	63	48	26	335	167	52	32	47	298	141	50	32	25	248
Mount Sinai Hospital	311	391	126	238	1066	324	388	239	1089	314	462	119	287	1182	329	469	136	364	1298	
Mount Sinai St. Lukes	144	51	32	29	256	103	55	35	25	218	116	57	40	20	233	113	63	31	31	238
NYP-Columbia Presby.	315	419	219	421	1374	310	414	179	490	1393	380	472	197	668	1717	418	627	211	815	2071
NYP-Weill Cornell	240	303	119	233	895	184	318	119	229	850	179	335	105	291	910	170	322	112	352	956
NYU Hospital Center	155	349	76	90	670	136	344	65	95	640	128	382	68	101	679	127	321	59	85	592
SVCMC- St. Vincents	57	29	9	22	117	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Region Total	1919	1797	727	1221	5664	1717	1772	673	1282	5444	1656	1932	620	1571	5779	1636	2070	625	1828	6159
**NYC - Queens **																				
Long Island Jewish MC	243	125	97	43	508	109	139	67	55	430	143	118	70	40	371	191	112	66	74	443
NYP-Queens	89	19	7	10	125	118	22	10	16	166	99	27	9	9	144	102	34	13	8	157
Region Total	332	144	104	53	633	287	161	77	71	596	242	145	79	49	515	293	146	79	82	600
**NYC - Staten Island **																				
Staten Island Univ Hosp	345	66	43	26	480	313	69	54	28	464	290	67	38	27	422	189	66	28	13	296
Region Total	345	66	43	26	480	313	69	54	28	464	290	67	38	27	422	189	66	28	13	296
Albany Area																				
Albany Med. Ctr	296	72	67	36	471	281	99	78	48	506	249	129	87	59	518	235	119	88	100	542
Champ.Valley Phys Hosp	99	11	18	6	134	101	15	8	10	134	87	12	11	8	118	74	22	10	4	110
Ellis Hospital	200	55	46	15	316	193	52	48	10	303	168	59	37	16	280	176	64	48	16	304
M I Bassett Hospital	77	14	18	3	112	73	30	22	8	133	62	12	11	12	97	91	23	18	4	136
St. Peters Hosp.	385	149	140	36	710	323	103	118	31	635	296	105	96	32	529	315	120	136	60	631
Region Total	1057	301	289	96	1743	971	359	274	107	1711	862	317	242	121	1542	891	348	300	184	1723
Buffalo Area																				
Buffalo General Hosp	381	82	82	25	570	367	95	74	14	550	286	91	62	30	469	396	129	100	69	694
Erie County Med Ctr	132	9	8	10	159	92	14	8	12	126	83	8	7	15	113	69	6	5	15	95

All cardiac surgery in New York State
Cardiac Surgery Volume by Region, Hospital, and Type of Case 2009 - 2012.

	2009				2010				2011				2012								
	IC	IV	VC	TOT	IC	IV	VC	TOT	IC	IV	VC	TOT	IC	IV	VC	TOT					
	Mercy Hospital	313	62	54	26	455	355	83	56	43	537	364	92	71	39	566	302	94	54	59	509
Millard Fillmore Hosp	271	41	34	29	375	242	68	49	28	387	208	42	27	12	289	44	8	7	3	62	
Region Total	1097	194	178	90	1559	1056	260	187	97	1600	941	293	167	96	1437	811	237	166	146	1360	
Rochester Area																					
Arnot Ogdon Med Ctr	133	30	16	10	189	88	24	13	8	133	80	25	17	12	134	80	15	12	9	116	
Rochester General Hosp	450	218	122	41	831	371	200	107	56	734	307	184	143	78	712	346	237	106	73	762	
Strong Memorial Hosp	398	138	67	145	748	316	137	80	172	705	256	136	69	165	626	283	150	58	171	662	
Region Total	981	386	205	196	1768	775	361	200	236	1572	643	345	229	255	1472	709	402	176	253	1540	
Syracuse Area																					
St. Elizabeth Med Ctr	271	63	79	35	448	228	76	58	31	393	208	52	60	21	341	196	65	43	22	326	
St. Josephs Hospital	507	215	182	107	1011	512	183	157	84	936	400	180	127	74	781	396	221	144	99	860	
UHS-Wilson Med Ctr	203	36	38	17	294	205	50	34	14	303	157	39	42	8	246	152	41	43	9	245	
Univ. Hosp-Upstate	149	66	22	15	252	134	45	27	27	233	169	78	17	25	289	135	62	22	34	253	
Region Total	1130	380	321	174	2005	1079	354	276	156	1865	934	349	246	128	1657	879	389	252	164	1684	
New Rochelle Area																					
Good Sam - Suffern	179	36	24	7	246	139	30	24	6	199	124	35	22	8	189	122	29	12	5	168	
Good Sam-West Islip
North Shore Univ Hosp	469	317	202	121	1109	467	270	171	82	990	337	229	126	68	760	289	178	113	80	660	
Southside Hospital	.	.	.	.	.	.	.	.	.	.	124	65	49	39	277	124	78	44	42	288
St. Francis Hospital	814	421	257	72	1564	871	384	256	79	1600	736	395	239	92	1462	645	397	191	129	1362	
Univ. Hosp-Stony Brook	218	110	74	38	440	263	100	77	44	484	239	69	60	34	402	202	82	53	65	402	
Vassar Bros. Med Ctr	222	80	94	33	429	200	107	61	26	394	208	77	83	29	397	196	90	73	33	392	
Westchester Med Ctr	366	99	70	101	636	292	103	62	100	557	256	70	63	91	480	206	80	43	120	449	
Winthrop-Univ. Hosp	273	95	91	31	490	234	114	79	37	464	278	134	85	43	540	225	98	97	113	533	
Region Total	2541	1158	812	403	4914	2466	1108	740	374	4688	2302	1074	727	404	4507	2009	1032	626	587	4254	
Statewide Total	10248	4765	2859	2456	20328	9408	4778	2675	2587	19508	8676	4770	2514	2881	18841	8186	5051	2400	3509	19146	

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All cardiac surgery in New York State
Cardiac Surgery Volume by Region, Hospital, and Type of Case 2013-2015.

	2013				2014				2015				2016							
	IC		VC		IC		VC		IC		VC		IC		VC					
	IC	VC	OT	TOT	IC	VC	OT	TOT	IC	VC	OT	TOT	IC	VC	OT	TOT				
**NYC - Bronx **																				
Monterfiore - Moses	190	108	53	122	473	207	103	40	152	502	180	114	37	182	513	185	84	38	178	485
Monterfiore - Weiler	181	73	53	31	338	203	66	36	37	342	190	64	43	59	356	195	67	37	99	398
Region Total	371	181	106	153	811	410	169	76	189	844	370	178	80	241	869	380	151	75	277	883
**NYC - Kings **																				
Waimonides Medical Ctr	267	130	50	104	551	223	97	44	161	525	248	106	33	181	568	217	136	51	186	590
NYP-Brooklyn Methodist	97	35	18	20	170	102	56	9	47	214	112	47	19	43	221	144	51	20	52	267
Univ. Hosp-Brooklyn	46	33	9	9	97	30	24	10	3	67	42	8	6	6	62	54	13	6	4	77
Region Total	410	198	77	133	818	355	177	63	211	806	402	161	58	230	851	415	200	77	242	934
**NYC - Manhattan **																				
Bellevue Hospital Ctr	98	61	6	47	212	109	98	6	38	251	108	67	15	49	239	151	81	14	58	304
Lenox Hill Hospital	248	112	27	125	512	242	104	21	116	483	264	134	35	153	586	301	113	30	229	673
Mount Sinai Beth Israel	171	52	24	15	262	173	40	27	13	253	216	45	34	25	320	176	27	27	53	283
Mount Sinai Hospital	376	533	134	364	1407	341	615	154	524	1634	389	629	121	543	1682	353	638	123	628	1742
Mount Sinai St. Lukes	117	57	26	21	221	104	52	31	22	209	144	78	39	20	281	135	34	38	28	235
NYP-Columbia Presby.	425	555	181	713	1874	389	504	203	799	1895	398	491	173	890	1952	463	390	165	979	1997
NYP-Weill Cornell	180	318	102	403	1003	193	301	97	379	970	194	300	83	392	969	193	288	94	477	1052
NYU Hospitals Center	143	414	64	133	754	175	392	54	202	823	181	397	47	298	923	249	406	50	415	1126
SVCMC- St. Vincents	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Region Total	1758	2102	564	1821	6245	1726	2106	593	2093	6518	1894	2141	547	2370	6952	2021	1977	547	2867	7412
**NYC - Queens **																				
Long Island Jewish MC	192	110	61	132	495	203	107	62	85	457	86	50	18	32	186	.	3	.	0	9
NYP-Queens	84	26	12	9	131	64	21	11	9	105	117	21	6	10	154	160	95	12	16	223
Region Total	276	136	73	141	626	267	128	73	94	562	203	71	24	42	340	160	98	12	22	232
**NYC - Staten Island **																				
Staten Island Univ Hosp	243	50	22	18	333	196	29	13	20	258	184	39	19	20	262	162	25	21	25	233
Region Total	243	50	22	18	333	196	29	13	20	258	184	39	19	20	262	162	25	21	25	233
Albany Area																				
Albany Med. Ctr	209	141	66	146	562	256	166	70	192	684	256	145	79	224	704	227	93	52	258	630
Bassett Medical Center	73	15	25	5	118	107	24	24	10	165	79	31	22	15	147	83	22	15	15	135
Champ.Valley Phys Hosp	66	12	6	3	87	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ellis Hospital	180	53	43	14	290	206	48	42	19	315	180	57	40	13	290	207	48	22	15	292
St. Peters Hospital	301	133	121	56	611	346	171	150	68	755	338	184	106	108	736	379	161	164	144	848
Region Total	829	354	261	224	1668	915	409	286	309	1919	853	417	247	360	1877	896	324	253	432	1905
Buffalo Area																				
Buffalo General Hosp	456	149	111	120	836	444	157	108	142	851	478	153	96	200	927	421	141	88	293	943
Erie County Med Ctr	16	2	1	6	25	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

All cardiac surgery in New York State
Cardiac Surgery Volume by Region, Hospital, and Type of Case 2013-2015.

	2013				2014				2015				2016								
	IC	IV	VC	TOT	IC	IV	VC	TOT	IC	IV	VC	TOT	IC	IV	VC	TOT					
Mercy Hospital	329	114	53	40	536	335	118	57	51	561	393	125	78	51	647	344	67	45	63	519	
Millard Fillmore Hosp
Region Total	801	205	165	166	1397	779	275	165	193	1412	871	278	174	251	1574	765	208	133	356	1462	
Rochester Area																					
Arnot Ogden Med Ctr	74	15	10	3	102	73	11	7	1	92	83	16	10	3	112	53	10	5	3	71	
Rochester General Hosp	314	230	132	69	745	312	258	122	74	766	366	184	162	88	800	462	197	151	166	976	
Strong Memorial Hosp	221	163	73	201	658	236	149	52	198	635	207	152	46	228	633	229	233	48	293	803	
Region Total	609	408	215	273	1505	621	418	181	273	1493	656	352	218	319	1545	744	440	204	462	1850	
Syracuse Area																					
St. Elizabeth Med Ctr	207	58	41	13	319	178	56	39	20	293	165	48	39	17	269	229	49	36	52	366	
St. Josephs Hospital	382	267	180	169	998	413	303	152	196	1064	374	320	160	259	1113	455	262	134	247	1098	
UHS-Wilson Med Ctr	144	51	37	11	243	148	47	28	15	238	140	43	23	48	254	114	36	19	72	241	
Univ. Hosp-Upstate	66	20	13	18	117	26	15	3	18	62	26	14	3	6	49	41	20	1	9	71	
Region Total	799	396	271	211	1677	765	421	222	249	1657	705	425	225	330	1685	839	367	190	380	1776	
New Rochelle Area																					
Good Sam - Suffern	104	17	17	5	143	99	28	24	1	152	105	27	17	2	151	101	13	8	3	125	
Good Sam-West Islip	.	.	.	.	.	166	35	32	10	243	202	49	41	17	309	214	58	41	22	335
NYU Winthrop Hospital	226	126	77	187	616	191	108	54	258	611	203	93	56	274	626	221	71	41	326	659	
North Shore Univ Hosp	287	184	87	134	692	252	167	85	176	680	459	248	114	232	1053	508	305	182	438	1493	
Southside Hospital	169	70	48	73	360	160	86	34	54	334	174	79	47	80	380	195	107	58	124	484	
St. Francis Hospital	659	399	199	167	1424	481	298	166	226	1171	470	265	126	315	1176	547	251	124	437	1359	
Univ. Hosp-Stony Brook	252	130	93	107	582	273	117	111	113	614	294	136	74	132	636	176	40	21	91	328	
Vassar Bros. Med Ctr	169	80	57	26	332	156	108	63	43	370	179	79	53	35	346	166	106	54	79	405	
Westchester Med Ctr	294	77	45	126	482	185	63	46	158	452	148	49	28	223	448	204	47	46	299	596	
Region Total	2100	1083	623	825	4631	1963	1010	615	1039	4627	2234	1025	556	1310	5125	2392	998	575	1819	5784	
Statewide Total	8196	5173	2977	3905	19711	7997	5142	2287	4670	20096	8372	5087	2148	5473	21080	8774	4728	2087	6882	22471	

NOTES: 2015 - 2016 data are draft and not fully validated.

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All cardiac surgery in New York State
 Cardiac Surgery Volume by Region, Hospital, and Type of Case 2017 01-02 (discharges through May)

	2017				TOT
	IC	IV	VC	OT	
**NYC - Bronx **					
Montefiore - Moseo	83	37	34	58	212
Montefiore - Weiler	82	28	15	32	157
Region Total	165	65	49	90	369
**NYC - Kings **					
Maimonides Medical Ctr	93	33	22	73	221
NYP-Brooklyn Methodist	72	23	10	25	130
Univ. Hosp-Brooklyn	30	4	2	4	40
Region Total	195	60	34	102	391
**NYC - Manhattan **					
Bellevue Hospital Ctr	81	31	9	13	134
Lenox Hill Hospital	148	43	17	80	288
Mount Sinai Beth Israel	.	.	.	.	.
Mount Sinai Hospital	150	244	43	264	701
Mount Sinai St. Lukes	106	21	14	30	171
NYP-Columbia Presby.	167	153	43	403	766
NYP-Weill Cornell	91	116	30	219	456
NYU Hospitals Center	90	180	20	218	508
SVCMC- St. Vincents	.	.	.	.	.
Region Total	833	786	176	1227	3024
**NYC - Queens **					
Long Island Jewish MC	.	1	.	.	1
NYP-Queens	77	19	2	10	108
Region Total	77	20	2	10	109
**NYC - Staten Island **					
Staten Island Univ Hosp	90	12	5	32	139
Region Total	90	12	5	32	139
Albany Area					
Albany Med. Ctr	104	43	23	136	306
Bassett Medical Center	32	13	8	2	55
Champ-Valley Phys Hosp	.	.	.	.	.
Ellic Hospital	79	26	17	7	129
St. Peters Hospital	165	61	52	56	334
Region Total	380	143	100	201	824
Buffalo Area					
Buffalo General Hosp	177	66	41	115	399
Erle County Med Ctr	.	.	.	.	.

All cardiac surgery in New York State
 Cardiac Surgery Volume by Region, Hospital, and Type of Case 201702 (discharges through May).

	2017				TOT
	IC	IV	VC	OT	
Mercy Hospital	136	13	19	29	197
Millard Fillmore Hosp	.	.	.	.	.
Region Total	313	79	60	144	596
Rochester Area					
Arnot Ogden Med Ctr	18	4	1	.	23
Rochester General Hosp	176	74	51	103	404
Strong Memorial Hosp	95	83	21	135	334
Region Total	289	161	73	238	761
Syracuse Area					
St. Elizabeth Med Ctr	67	12	15	22	116
St. Josephs Hospital	191	121	66	118	496
UHS-Wilson Med Ctr	46	23	12	30	111
Univ. Hosp-Upstate	23	1	2	3	29
Region Total	327	157	95	173	752
New Rochelle Area					
Good Sam - Suffern	42	7	1	4	54
Good Sam-West Iclip	95	23	18	8	144
NYU Winthrop Hospital	101	31	12	150	294
North Shore Univ Hosp	219	109	66	189	583
Southside Hospital	78	33	19	69	199
St. Francis Hospital	244	85	51	201	581
Univ. Hosp-Stony Brook	82	31	21	78	212
Vassar Bros. Med Ctr	66	34	17	36	153
Westchester Med Ctr	75	21	16	117	229
Region Total	1002	374	221	852	2449
Statewide Total	3671	1859	815	3069	9414

NOTES: 2017 data are draft and not fully validated.

IC = Isolated CABG IV = Isolated Valve VC = Valve and CABG at the same time
 OT = Other Cardiac Surgery TOT = Total Cases

Other Cardiac Surgery includes any surgery on the heart or great vessels that is not isolated CABG, Isolated Valve or combined Valve/CABG. This includes but is not limited to: Congenital, Transplant, Aneurysm Repairs, Ventricular Assist Device, etc.

