

**New Jersey Department of Health  
OPEN HEART SURGERY RISK STRATIFICATION PROJECT  
DATA COLLECTION FORM, VERSION 4.3**

**A. DEMOGRAPHICS**

Patient: Last Name (1): \_\_\_\_\_ First Name (2): \_\_\_\_\_ MI(3): \_\_\_\_\_  
 Date of Birth (mm/dd/yyyy)(4): \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Gender (5): Male = 0 Female = 1 \_\_\_\_\_  
 SS# (6): \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Medical Record # (7): \_\_\_\_\_ Patient Zip Code (8): \_\_\_\_\_  
 Race (9): White=1 Black=2 Asian=3 Native American/Alaska Native=4 Hawaiian/Other Pacific Islander=5 Other=6 Multiracial=7 \_\_\_\_\_  
 Hispanic or Latino (10): No=0 Yes=1 \_\_\_\_\_  
 Referring Cardiologist: Last Name (11): \_\_\_\_\_ First Name (12): \_\_\_\_\_ MI(13): \_\_\_\_\_  
 Referring Physician: Last Name (15): \_\_\_\_\_ First Name (16): \_\_\_\_\_ MI(17): \_\_\_\_\_

**B. HOSPITALIZATION**

Hospital Code (18): \_\_\_\_\_ Medical Facility Transferred From Code (19): \_\_\_\_\_  
 Payor (20): Blue Cross/Blue Shield=1 Commercial=2 HMO=3 Medicaid=4 Medicare=5 Self-Pay=6 Tricare (CHAMPUS)=7  
 Uninsured/Indigent=8 Other=9 \_\_\_\_\_  
 Date of Admission (mm/dd/yyyy)(21): \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Date of Surgery (mm/dd/yyyy)(22): \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 Date of Discharge (mm/dd/yyyy)(23): \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 Discharged Where (24): Not Discharged=0 Home=1 Other Acute Care Hosp=2 Rehab/Sub-Acute/LTAC=3 Nursing Home=4  
 Other=5 Deceased=6 Left AMA=7 Hospice=8 Unknown=9 \_\_\_\_\_

**C. PREOPERATIVE RISK FACTORS**

Weight (25): \_\_\_\_\_ (kg) Height (26): \_\_\_\_\_ (cm)  
 Ever Smoker (27): No=0 Yes=1 \_\_\_\_\_ If Yes, Current Smoker (28): No=0 Yes=1 \_\_\_\_\_  
 Diabetes (29): No=0 Yes=1 \_\_\_\_\_ If Yes, Control Type (30): None=0 Diet=1 Oral=2 Insulin=3 Other/Other Subq=4 \_\_\_\_\_  
 Dyslipidemia (31): No=0 Yes=1 \_\_\_\_\_ If Yes, Control Type (32): None=0 Statin=1 Non-Statins=2 Both=3 \_\_\_\_\_  
 Last Creatinine Level Preop (33): \_\_\_\_\_  
 Renal Failure (34): No=0 Yes=1 \_\_\_\_\_ If Yes, Dialysis (35): No=0 Yes=1 \_\_\_\_\_  
 Hypertension (36): No=0 Yes=1 \_\_\_\_\_  
 Cerebrovascular Accident (37): No=0 Yes=1 \_\_\_\_\_  
 If Yes, When (38): Recent ≤30 Days=1 Remote >30 Days=2 \_\_\_\_\_  
 Cerebrovascular Disease (CVD) (39): No=0 Yes=1 \_\_\_\_\_  
 If Yes, Type of CVD (40): Coma=1 CVA=2 RIND=3 TIA=4 Non-Invasive >79%=5 Prior Carotid Surgery=6  
 Moderate Disease 50-79%=7 \_\_\_\_\_  
 Infectious Endocarditis (41): No=0 Yes=1 \_\_\_\_\_ If Yes, Type (42): Treated=1 Active=2 \_\_\_\_\_  
 Chronic Lung Disease (43): No=0 Mild=1 Moderate=2 Severe=3 Lung Disease Documented, Severity Unknown=4 \_\_\_\_\_  
 Immunosuppressive Therapy (44): No=0 Yes=1 \_\_\_\_\_  
 Peripheral Vascular Disease (45): No=0 Yes=1 \_\_\_\_\_

**D. PREVIOUS CV INTERVENTIONS**

Incidence (46): First CV Surgery=1 First reop=2 Second reop=3 Third reop=4 Four or more reops=5 \_\_\_\_\_  
 Prior PCI (47): No=0 Yes=1 \_\_\_\_\_  
 If Yes, Prior PCI-Interval (48): ≤6 Hours=1 >6 Hours=2 \_\_\_\_\_

**E. PREOPERATIVE CARDIAC STATUS**

Myocardial Infarction (49): No=0 Yes=1 \_\_\_\_\_  
 If Yes, When (50): ≤6 Hours=1 >6 Hours but <24 Hours=2 1-7 Days=3 8-21 Days=4 >21 Days=5 \_\_\_\_\_  
 Congestive Heart Failure (51): No=0 Yes=1 \_\_\_\_\_  
 Angina (52): No=0 Yes=1 \_\_\_\_\_ If Yes, Angina Type (53): Stable=1 Unstable=2 \_\_\_\_\_  
 Cardiogenic Shock (54): No=0 Yes at the time of the proc=1 Yes not at proc but <24 hours=2 \_\_\_\_\_  
 If Yes, Cardiogenic Shock Type (55): Refractory Shock=1 Hemodynamic Instability=2 \_\_\_\_\_  
 Resuscitation (56): No=0 ≤1 Hour=1 >1 Hour but within 24 Hours=2 \_\_\_\_\_  
 Arrhythmia (57): No=0 Recent (≤30 Days)=1 Remote (>30 Days)=2 \_\_\_\_\_  
 If Yes, Arrhythmia Type (58): None=0 Sust VT/VF=1 Heart Block=2 AFib/Flutter=3 Sick Sinus Syndrome=4 \_\_\_\_\_  
 NYHA Classification (59): I = 1 II = 2 III = 3 IV = 4 \_\_\_\_\_

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**F. PREOPERATIVE MEDICATIONS**

Beta Blockers (60): No=0 Yes=1 \_\_\_\_\_ ACE Inhibitors/ARBs (61): No=0 Yes=1 \_\_\_\_\_  
 Contraindicated=2 \_\_\_\_\_  
 Nitrates-IV (62): No=0 Yes=1 \_\_\_\_\_ Anticoagulants (63): No=0 Yes=1 \_\_\_\_\_  
 If Yes, Anticoagulant Medication Name (64): Heparin (Unfractionated)=1 Heparin (Low molecular)=2 Thrombin Inhibitors=3 Other=9 \_\_\_\_\_  
 Coumadin (65): No=0 Yes=1 \_\_\_\_\_ Inotropes (66): No=0 Yes=1 \_\_\_\_\_  
 Steroids (67): No=0 Yes=1 \_\_\_\_\_ Aspirin (68): No=0 Yes=1 \_\_\_\_\_  
 ADP Inhibitor (69): No=0 Yes=1 \_\_\_\_\_ Glyco IIB IIIA (70): No=0 Yes=1 \_\_\_\_\_  
 Other (71): No=0 Yes=1 \_\_\_\_\_

**G. PREOPERATIVE HEMODYNAMICS AND CATH**

Number of Diseased Coronary Vessels (Left Main Counts as Two) (72): None=0 One=1 Two=2 Three=3 Not Documented/Unknown=9 \_\_\_\_\_  
 Left Main Disease (>50% Occlusion) (73): No=0 Yes=1 Not Documented/Unknown=9 \_\_\_\_\_  
 Ejection Fraction Done (74): No=0 Yes=1 \_\_\_\_\_ If Yes, Ejection Fraction % (75): \_\_\_\_\_  
 Ejection Fraction Method (76): LVgram=1 Radionuclide=2 Estimate=3 Echo=4 MRI=5 Other=6 \_\_\_\_\_

**H. OPERATIVE PROCEDURE**

Surgery: Last Name (77): \_\_\_\_\_ First Name (78): \_\_\_\_\_ MI(79): \_\_\_\_\_ License #(80): \_\_\_\_\_  
 Status of Procedure (81): Elective=1 Urgent=2 Emergent=3 Emergent Salvage=4 \_\_\_\_\_  
 If Urgent, Reason (82): AMI=1 IABP=2 Worsening CP=3 CHF=4 Anatomy=5 USA=6 Rest Angina=7 \_\_\_\_\_  
 Valve Dysfunction=8 Aortic Dissection=9 Angiographic Accident=10 Cardiac Trauma=11 \_\_\_\_\_  
 Infected Device=12 Syncope=13 PCI/CABG Hybrid=14 PCI Failure w/o Clinical Deterioration=15 \_\_\_\_\_  
 Aortic Aneurysm=16 Device Failure=17 Diagnostic/Interventional Procedure Complication=18 \_\_\_\_\_  
 Endocarditis=19 Failed Transcatheter Valve Therapy=20 Intracardiac Mass or Thrombus=21 \_\_\_\_\_  
 Ongoing Ischemia=22 PCI w/Clinical Deterioration=23 Pulmonary Edema=24 \_\_\_\_\_  
 Shock Circ. Support=26 Shock No Circ. Support=27 Transplant=28 Other=29 \_\_\_\_\_  
 If Emergent, Reason (83): Shock Circ Supp=1 Shock No Circ Supp=2 Pulmonary Edema=3 AEMI=4 Ongoing Ischemia=5 \_\_\_\_\_  
 Valve Dysfunction=6 Aortic Dissection=7 Angiographic Accident=8 Cardiac Trauma=9 \_\_\_\_\_  
 Infected Device=10 Syncope=11 PCI/CABG Hybrid=12 Anatomy=13 Aortic Aneurysm=14 \_\_\_\_\_  
 Congestive Heart Failure=15 Device Failure=16 Diag/Intervention Proc Complication=17 \_\_\_\_\_  
 Endocarditis=18 Failed Transcatheter Valve Therapy=19 IABP=20 \_\_\_\_\_  
 Intracardiac Mass or Thrombus=21 PCI Incomplete w/o Clinical Deterioration=22 \_\_\_\_\_  
 PCI or attempted PCI w/Clinical Deterioration=23 Pulmonary Embolism=24 Rest Angina=25 \_\_\_\_\_  
 Transplant=26 Unstable Angina=27 Worsening Chest Pain=28 Other=29 \_\_\_\_\_  
 Operative Category (84): CAB=1 CAB+Valve=2 CAB+Other=3 CAB+Valve+Other=4 Valve=5 Valve+Other=6 Other=7 \_\_\_\_\_  
 Robotic Technology used (85): No=0 Yes=1 \_\_\_\_\_  
 Minimally Invasive Incision Attempted (86): No=0 Yes=1 \_\_\_\_\_  
 If Yes, Conversion to Standard Incision (87): No=0 Yes=1 \_\_\_\_\_  
 CPB Utilization (88): None=0 Combination=1 Full=2 \_\_\_\_\_ If Combination or Full, Perfusion Time (min) (89): \_\_\_\_\_  
 Aortic Occlusion (90): None=0 Aortic Crossclamp=1 Balloon Occlusion=2 Partial Crossclamp=3 \_\_\_\_\_  
 If Aortic Crossclamp or Balloon Occlusion, Cross Clamp Time (min) (91): \_\_\_\_\_  
 Cardioplegia (92): No=0 Yes=1 \_\_\_\_\_  
 IABP (93): No=0 Yes=1 \_\_\_\_\_  
 If Yes, When Inserted (94): Preoperatively=1 Intraoperatively=2 Postoperatively=3 \_\_\_\_\_  
 Indication (95): Hemodynamic Instability=1 Procedural Support=2 Unstable Angina=3 CPB Wean=4 Prophylactic=5 Other=6 \_\_\_\_\_  
 Blood Products Used During Surgery (96): No=0 Yes=1 \_\_\_\_\_

**I. CORONARY BYPASS**

Number of Distal Anastomoses With Arterial Conduits (97): \_\_\_\_\_  
 Number of Distal Anastomoses With Venous Conduits (98): \_\_\_\_\_  
 Number of IMA Distal Anastomoses (99): \_\_\_\_\_  
 Number of Radial Artery Distal Anastomoses (100): \_\_\_\_\_  
 Number of Gastro-Epiploic Artery (GEPA) Distal Anastomoses (101): \_\_\_\_\_  
 Other Arterial Anastomoses (102): \_\_\_\_\_

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**J. VALVE SURGERY**

Aortic (103):	No=0	Replacement (excluding TAVR)=1	Repair/Reconstruct=2	Root Reconstruction with Valve Conduit=3	Replacement + Aortic Graft Conduit (not a valve conduit)=4	Root Reconstruction with Valve Sparing=5	Resuspension Aortic Valve with Replacement of Ascending Aorta=6	Resuspension Aortic Valve w/o Replacement of Ascending Aorta=7	Resection Sub-Aortic Stenosis=8	Apico-Aortic Conduit=9	Autograft with Pulmonary Valve-Ross Procedure=10	Homograft=11	Transcatheter AV Replacement=12	_____
Mitral (104):	No=0	Annuloplasty Only=1	Replacement (excluding Transcatheter)=2	Reconstruction with Annuloplasty=3	Reconstruction without Annuloplasty=4	Transcatheter Replacement=5	_____	_____	_____	_____	_____	_____	_____	_____
Tricuspid (105):	No=0	Annuloplasty Only=1	Replacement (excluding Transcatheter)=2	Reconstruction with Annuloplasty=3	Reconstruction without Annuloplasty=4	Valvectomy=5	Transcatheter Replacement=6	_____	_____	_____	_____	_____	_____	_____
Pulmonic (106):	No=0	Replacement (excluding Transcatheter)=1	Repair/Reconstruction=2	Valvectomy=3	Transcatheter Replacement=4	_____	_____	_____	_____	_____	_____	_____	_____	_____

**K. OTHER PROCEDURES**

Left Vent Aneurysm Repair (107):	No=0	Yes=1	_____	Vent. Septal Defect Repair (108):	No=0	Yes=1	_____		
Atrial Septal Defect Repair (109):	No=0	Yes=1	_____	Surgical Ventricular Restoration (110):	No=0	Yes=1	_____		
Congenital Defect Repair (111):	No=0	Yes=1	_____	TMR (112):	No=0	Yes=1	_____		
Cardiac Trauma Repair (113):	No=0	Yes=1	_____	Cardiac Transplant (114):	No=0	Yes=1	_____		
Pacemaker (115):	No=0	Yes=1	_____	AICD (116):	No=0	Yes=1	_____		
Atrial Fib Correction (117):	None=0	MAZE=1	Other=2	Combination=3	Left Atrial Appendage Ligation/Removal=4	_____	_____		
Aortic Aneurysm Repair (118):	No=0	Yes=1	_____	Other Cardiac (119):	No=0	Yes=1	_____		
Carotid Endarterectomy (120):	No=0	Yes=1	_____	Other Vascular (121):	No=0	Yes=1	_____		
Other Thoracic (122):	No=0	Yes=1	_____	VAD (123):	None=0	LVAD=1	RVAD=2	BiVAD=3	_____
Other non-Cardiac (124)	No=0	Yes=1	_____						_____

**L. IN HOSPITAL COMPLICATIONS**

<u>OPERATIVE:</u>				<u>INFECTION:</u>			
Reop-Bleeding/Tamponade (125):	No=0	Yes=1	_____	Sternal-Deep (131):	No=0	Yes=1	_____
Reop-Valvular Dysfunction (126):	No=0	Yes=1	_____	Thoracotomy (132):	No=0	Yes=1	_____
Reop-Graft Occlusion(127):	No=0	Yes=1	_____	Leg (133):	No=0	Yes=1	_____
Reop-Other Cardiac Problem (128):	No=0	Yes=1	_____	Septicemia (134):	No=0	Yes=1	_____
Reop-Other Non-Cardiac Problem (129):	No=0	Yes=1	_____	UTI (135):	No=0	Yes=1	_____
Perioperative MI (130):	No=0	Yes=1	_____				
<u>NEUROLOGIC:</u>				<u>PULMONARY:</u>			
Postoperative Stroke For >24 Hrs (136):	No=0	Yes=1	_____	Prolonged Ventilation (139):	No=0	Yes=1	_____
Transient Neurologic Deficit (137):	No=0	Yes=1	_____	Pulmonary Embolism (140):	No=0	Yes=1	_____
Coma/Encephalopathy (138):	No=0	Yes=1	_____	Pneumonia (141):	No=0	Yes=1	_____
<u>RENAL:</u>							
Renal Failure (142):	No=0	Yes=1	_____				
If Yes, Dialysis (143):	No=0	Yes=1	_____				
<u>VASCULAR:</u>							
Iliac/Femoral Dissection (144):	No=0	Yes=1	_____				
Acute Limb Ischemia (145):	No=0	Yes=1	_____				
<u>OTHER:</u>							
Heart Block (146):	No=0	Pacemaker=1	ICD=2	Cardiac Arrest (147):	No=0	Yes=1	_____
		Pacemaker/ICD=3	Other=4	Tamponade (149):	No=0	Yes=1	_____
Anticoagulant (148):	No=0	Yes=1	_____	Multi System Failure (151):	No=0	Yes=1	_____
GI Complication (150):	No=0	Yes=1	_____	Aortic Dissection (153):	No=0	Yes=1	_____
A-Fib/Flutter (152):	No=0	Yes=1	_____				
Other (154):	No=0	Yes=1	_____				
If Yes, Specify (155):	_____						

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**M. MORTALITY**

Discharge Status (156): Alive=1 Dead=2 \_\_\_\_\_ Status at 30 Days after Surgery (160): Alive=1 Dead=2 Unknown=3 \_\_\_\_\_

If Dead, Date of Death (mm/dd/yyyy) (157): \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Location of Death (158): OR During Initial Surgery=1 Hospital=2 Home=3 Other Care Facility=4  
OR During Reoperation=5 Unknown=6 Extended Care Facility=7 Hospice=8  
Acute Rehab=9 Other=10 \_\_\_\_\_

Primary Cause of Death (Select Only One) (159):  
Cardiac=1 Neurologic=2 Renal=3 Vascular=4  
Infection=5 Pulmonary=6 Valvular=7 Other=8 Unknown=9 \_\_\_\_\_