

Note, fields in **green** are new in v2.9x, fields in **yellow** are added or changed from the v2.81 definition

PART 1 (PROCID 1 through 4)				
Variable Short Name/Seq #	Isolated CAB (ProcID=1)	Isolated AVR (ProcID=2)	Isolated MVR** (ProcID=3)	AVR + CAB (ProcID=4)
OpCAB/2120	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> <li>•</li> </ul>
OpCAB	OpCAB in(3,5)	OpCab in (NULL, 2,4)	OpCab in (NULL, 2,4)	OpCAB in(3,5)
OpValve/2125	<Not used in this calculation>	• Yes	• Yes	• Yes
OpValve		Opvalve eq 1	Opvalve eq 1	Opvalve eq 1
VSAV/3390	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>
VSAV	VSAV in (NULL, 2,4)	VSAV in (3,5)	VSAV in (NULL, 2,4)	VSAV in (3,5)
VSAVPr/3395	<Not used in this calculation>	• Replacement	<Not used in this calculation>	• Replacement
VSAVPr		VSAVPr eq 1		VSAVPr eq 1
VSMV/3495	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>
VSMV	VSMV in (NULL, 2,4)	VSMV in (NULL, 2,4)	VSMV in (3,5)	VSMV in (NULL, 2,4)
VSMVPr/3500	<Not used in this calculation>	<Not used in this calculation>	• Replacement	<Not used in this calculation>
VSMVPr			VSMVPr eq 2	
OCarCongProc1/6515	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> </ul>

OCarCongProc1	Ocarconproc1 in (NULL,10,1291,1305)	Ocarconproc1 in (NULL,10)	Ocarconproc1 in (NULL,10,20,30)	Ocarconproc1 in (NULL,10,1291,1305)
OCarCongProc2/ 6520	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> </ul>
OCarCongProc2	Ocarconproc2 in (NULL,10,1291,1305)	Ocarconproc2 in (NULL,10)	Ocarconproc2 in (NULL,10,20,30)	Ocarconproc2 in (NULL,10,1291,1305)
OCarCongProc3/ 6525	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> </ul>
OCarCongProc3	Ocarconproc3 in (NULL,10,1291,1305)	Ocarconproc3 in (NULL,10)	Ocarconproc3 in (NULL,10,20,30)	Ocarconproc3 in (NULL,10,1291,1305)
Tricuspid Procedures: VSTV VSTrReplace VSTrValvec 3640, 3650, 3653	<p>Unplanned Surgical Complications ONLY</p> <p>VSTV is one of :</p> <ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<p>Unplanned Surgical Complications ONLY</p> <p>VSTV is one of :</p> <ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<p>All tricuspid repairs are allowed. Tricuspid replacements and valvecotomies are only allowed if the tricuspid procedure was unplanned due to surgical complications. Must satisfy at least one of (1) or (2):</p> <p>1.</p> <p>VSTrReplace:</p> <ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul> <p>AND</p> <p>VSTrValvec:</p> <ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul> <p>2.</p> <p>VSTV</p>	<p>Unplanned Surgical Complications ONLY</p> <p>VSTV is one of :</p> <ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>

			<ul style="list-style-type: none"> <li>• Yes, unplanned due to surgical complication”]</li> </ul>	
Tricuspid Procedures: VSTV VSTrReplace VSTrValvec	VSTV in (NULL, 2,4)	VSTV in (NULL, 2,4)	[VSTrReplace in (NULL, 2) and VSTrValvec in (NULL,2)] OR VSTV eq 4	VSTV in (NULL, 2,4)
VSPV/3685	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>			
VSPV	VSPV in (NULL, 2,4)			
PrevVADExp/ 3825	<ul style="list-style-type: none"> <li>• Yes, not during this procedure</li> <li>• No</li> <li>• Missing</li> </ul>			
PrevVADExp	PrevVADExp in (NULL, 1,3)			
VADImpTmg/ 3845	<ul style="list-style-type: none"> <li>• Pre-Operative (during same hospitalization but not same OR trip as CV surgical procedure)</li> <li>• In conjunction with CV surgical procedure (same trip to the OR)- unplanned</li> <li>• Post-Operative (after surgical procedure during reoperation)</li> <li>• Missing</li> </ul>			
VADImpTmg	VADImpTmg in (NULL, 1, 4, 5)			
VADImpTmg2/ 3900	<ul style="list-style-type: none"> <li>• Pre-Operative (during same hospitalization but not same OR trip as CV surgical procedure)</li> <li>• In conjunction with CV surgical procedure (same trip to the OR)- unplanned</li> <li>• Post-Operative (after surgical procedure during reoperation)</li> <li>• Missing</li> </ul>			
VADImpTmg2	VADImpTmg2 in (NULL, 1, 4, 5)			
VADImpTmg3/ 3955	<ul style="list-style-type: none"> <li>• Pre-Operative (during same hospitalization but not same OR trip as CV surgical procedure)</li> <li>• In conjunction with CV surgical procedure (same trip to the OR)- unplanned</li> <li>• Post-Operative (after surgical procedure during reoperation)</li> <li>• Missing</li> </ul>			
VADImpTmg3	VADImpTmg3 in (NULL, 1, 4, 5)			
VExp/3875	<ul style="list-style-type: none"> <li>• Yes, not during this procedure</li> <li>• No</li> <li>• Missing</li> </ul>			
VExp	VExp in (NULL, 3, 2)			
VExp2/3930	<ul style="list-style-type: none"> <li>• Yes, not during this procedure</li> <li>• No</li> <li>• Missing</li> </ul>			
VExp2	VExp2 in (NULL, 3, 2)			

VExp3/3985	<ul style="list-style-type: none"> <li>• Yes, not during this procedure <ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul> </li> </ul>			
VExp3	VExp3 in (NULL, 3, 2)			
OCarLVA/4075	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>			
OCarLVA	OCarLVA in (NULL, 2)			
OCarVSD/4130	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>			
OCarVSD	OCarVSD in (NULL, 2)			
AortProc/2125	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>			
AortProc	Aortproc in (NULL, 2,4)			
EndovasProc/5066	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>			
EndovasProc	EndovasProc in (NULL, 2)			
OCarAFibIntraLes/4040	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	<Not used in this calculation>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>
OCarAFibIntraLes	OCarAFibIntraLes in (NULL, 2)	OCarAFibIntraLes in (NULL, 2)		OCarAFibIntraLes in (NULL, 2)
OCarAFibLesLoc/4191	<ul style="list-style-type: none"> <li>• Primarily epicardial</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• Primarily epicardial</li> <li>• Missing</li> </ul>	<Not used in this calculation>	<ul style="list-style-type: none"> <li>• Primarily epicardial</li> <li>• Missing</li> </ul>
OCarAFibLesLoc	OCarAFibLesLoc ne 2	OCarAFibLesLoc ne 2		OCarAFibLesLoc ne 2
OCarASDSec/4035	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	<Not used in this calculation>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>
OCarASDSec	OCarASDSec in (NULL, 2)	OCarASDSec in (NULL, 2)		OCarASDSec in (NULL, 2)
OCarACD/4055	<Not used in this calculation>	<Not used in this calculation>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> <li>• Permanent Pacemaker</li> </ul>	<Not used in this calculation>
OCarACD			OCarACD in (NULL, 1, 2)	
OCarACDLE/4065	<ul style="list-style-type: none"> <li>• Yes, unplanned due to surgical complication</li> <li>• No</li> <li>• Missing</li> </ul>			

OCarACDLE	OCarACDLE in (NULL, 2,4)			
OCarLasr/4110	<Not used in this calculation>	<Not used in this calculation>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	<Not used in this calculation>
OCarLasr			OCarLasr in (NULL, 2)	
OCPulThromDis/4085			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCPulThromDis	OCPulThromDis in (NULL, 1)			
OCarSubaStenRes/4090			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCarSubaStenRes	OCarSubaStenRes in (NULL, 2)			
OCarSVR/4105			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCarSVR	OCarSVR in (NULL, 2)			
OCarCrTx/4120			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCarCrTx	OCarCrTx in (NULL, 2)			
OCarTrma/4125			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCarTrma	OCarTrma in (NULL, 2)			
OCTumor/4115			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCTumor	OCTumor in (NULL, 1)			
OCarOthr/4135			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCarOthr	OCarOthr in (NULL, 2)			
VSTCV/3400			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
VSTCV	VSTCV in (NULL, 2)			
VSTCVMit/3610			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
VSTCVMit	VSTCVMit in (NULL, 2)			
VSTCVTri/3652			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
VSTCVTri	VSTCVTri in (NULL, 2)			
VSTCVPu/3695			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
VSTCVPu	VSTCVPu in (NULL, 2)			

CCancCase/2050	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>
CCancCase	CCancCase in (NULL, 2)
ONCCarEn/6530	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>
ONCCarEn	ONCCarEn in (NULL, 2, 4)
ONCOVasc/6535	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>
ONCOVasc	ONCOVasc in (NULL, 2, 4)
ONCOThor/6540	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>
ONCOThor	ONCOThor in (NULL, 2, 4)
ONCOther/6545	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>
ONCOther	ONCOther in (NULL, 2, 4)

PART 2 (PROCID 5 through 8)				
Variable Short Name	MVR + CAB** (ProcID=5)	AVR + MVR** (ProcID=6)	MV Repair** (ProcID=7)	MV Repair + CAB** (ProcID=8)
OpCAB/2120	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>
OpCAB	OpCAB in(3,5)	OpCab in (NULL, 2,4)	OpCab in (NULL, 2,4)	OpCAB in(3,5)
OpValve/2125	• Yes	• Yes	• Yes	• Yes
OpValve	Opvalve eq 1	Opvalve eq 1	Opvalve eq 1	Opvalve eq 1
VSAV/3390	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>
VSAV	VSAV in (NULL, 2,4)	VSAV in (3,5)	VSAV in (NULL, 2,4)	VSAV in (NULL, 2,4)
VSAVPr/3395	<Not used in this calculation>	• Replacement	<Not used in this calculation>	<Not used in this calculation>
VSAVPr		VSAVPr eq 1		
VSMV/3495	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>	<ul style="list-style-type: none"> <li>• Yes, planned</li> <li>• Yes, unplanned due to unsuspected disease or anatomy</li> </ul>
VSMV	VSMV in (3,5)	VSMV in (3,5)	VSMV in (3,5)	VSMV in (3,5)
VSMVPr/3500	• Replacement	• Replacement	• Repair	• Repair
VSMVPr	VSMVPr eq 2	VSMVPr eq 2	VSMVPr eq 1	VSMVPr eq 1
OCarCongProc1/6515	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> <li>• Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>
OCarCongProc1	Ocarconproc1 in (NULL,10,20,30,1291,1305)	Ocarconproc1 in (NULL,10,20,30)	Ocarconproc1 in (NULL,10,20,30)	Ocarconproc1 in (NULL,10,20,30,1291,1305)
OCarCongProc2/6520	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• ASD repair, Primary closure</li> <li>• ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>• Missing</li> <li>• PFO, Primary closure</li> <li>• Anomalous origin of coronary artery from pulmonary artery repair</li> </ul>

PART 2 (PROCID 5 through 8)				
Variable Short Name	MVR + CAB** (ProcID=5)	AVR + MVR** (ProcID=6)	MV Repair** (ProcID=7)	MV Repair + CAB** (ProcID=8)
	<ul style="list-style-type: none"> <li>Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> <li>ASD repair, Primary closure</li> <li>ASD repair, Patch</li> </ul>			<ul style="list-style-type: none"> <li>Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> <li>ASD repair, Primary closure</li> <li>ASD repair, Patch</li> </ul>
OCarCongProc2	Ocarconproc2 in (NULL,10, 20, 30,1291,1305)	Ocarconproc2 in (NULL,10,20,30)	Ocarconproc2 in (NULL,10,20,30)	Ocarconproc2 in (NULL,10, 20, 30,1291,1305)
OCarCongProc3/ 6525	<ul style="list-style-type: none"> <li>Missing</li> <li>PFO, Primary closure</li> <li>Anomalous origin of coronary artery from pulmonary artery repair</li> <li>Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> <li>ASD repair, Primary closure</li> <li>ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>Missing</li> <li>PFO, Primary closure</li> <li>ASD repair, Primary closure</li> <li>ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>Missing</li> <li>PFO, Primary closure</li> <li>ASD repair, Primary closure</li> <li>ASD repair, Patch</li> </ul>	<ul style="list-style-type: none"> <li>Missing</li> <li>PFO, Primary closure</li> <li>Anomalous origin of coronary artery from pulmonary artery repair</li> <li>Anomalous aortic origin of coronary artery from aorta (AAOCA) repair</li> <li>ASD repair, Primary closure</li> <li>ASD repair, Patch</li> </ul>
OCarCongProc3	Ocarconproc3 in (NULL,10, 20, 30,1291,1305)	Ocarconproc3 in (NULL,10,20,30)	Ocarconproc3 in (NULL,10,20,30)	Ocarconproc3 in (NULL,10, 20, 30,1291,1305)
Tricuspid Procedures: VSTV VSTrReplace VSTrValvec/ 3640, 3650, 3653	<p>All tricuspid repairs are allowed. Tricuspid replacements and valvecotomies are only allowed if the tricuspid procedure was unplanned due to surgical complications. Must satisfy at least one of (1) or (2):</p> <p>1. VSTrReplace:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>AND</p> <p>VSTrValvec:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>2. VSTV</p>	<p>All tricuspid repairs are allowed. Tricuspid replacements and valvecotomies are only allowed if the tricuspid procedure was unplanned due to surgical complications. Must satisfy at least one of (1) or (2):</p> <p>1. VSTrReplace:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>AND</p> <p>VSTrValvec:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>2. VSTV</p>	<p>All tricuspid repairs are allowed. Tricuspid replacements and valvecotomies are only allowed if the tricuspid procedure was unplanned due to surgical complications. Must satisfy at least one of (1) or (2):</p> <p>1. VSTrReplace:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>AND</p> <p>VSTrValvec:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>2. VSTV</p>	<p>All tricuspid repairs are allowed. Tricuspid replacements and valvecotomies are only allowed if the tricuspid procedure was unplanned due to surgical complications. Must satisfy at least one of (1) or (2):</p> <p>1. VSTrReplace:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>AND</p> <p>VSTrValvec:</p> <ul style="list-style-type: none"> <li>No</li> <li>Missing</li> </ul> <p>2. VSTV</p>



PART 2 (PROCID 5 through 8)				
Variable Short Name	MVR + CAB** (ProcID=5)	AVR + MVR** (ProcID=6)	MV Repair** (ProcID=7)	MV Repair + CAB** (ProcID=8)
	• Yes, unplanned due to surgical complication”]	• Yes, unplanned due to surgical complication”]	• Yes, unplanned due to surgical complication”]	• Yes, unplanned due to surgical complication”]
Tricuspid Procedures VSTV VSTrReplace VSTrValvec	[VSTrReplace in (NULL, 2) and VSTrValvec in (NULL,2)] OR VSTV eq 4	[VSTrReplace in (NULL, 2) and VSTrValvec in (NULL,2)] OR VSTV eq 4	[VSTrReplace in (NULL, 2) and VSTrValvec in (NULL,2)] OR VSTV eq 4	[VSTrReplace in (NULL, 2) and VSTrValvec in (NULL,2)] OR VSTV eq 4
VSPV/3685	<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>			
VSPV	VSPV in (NULL, 2,4)			
PrevVADExp/ 3825	<ul style="list-style-type: none"> <li>• Yes, not during this procedure</li> <li>• No</li> <li>• Missing</li> </ul>			
PrevVADExp	PrevVADExp in (NULL, 1,3)			
VADImpTmg/ 3845	<ul style="list-style-type: none"> <li>• Pre-Operative (during same hospitalization but not same OR trip as CV surgical procedure)</li> <li>• In conjunction with CV surgical procedure (same trip to the OR)- unplanned</li> <li>• Post-Operative (after surgical procedure during reoperation)</li> <li>• Missing</li> </ul>			
VADImpTmg	VADImpTmg in (NULL, 1, 4, 5)			
VADImpTmg2/ 3900	<ul style="list-style-type: none"> <li>• Pre-Operative (during same hospitalization but not same OR trip as CV surgical procedure)</li> <li>• In conjunction with CV surgical procedure (same trip to the OR)- unplanned</li> <li>• Post-Operative (after surgical procedure during reoperation)</li> <li>• Missing</li> </ul>			
VADImpTmg2	VADImpTmg2 in (NULL, 1, 4, 5)			
VADImpTmg3/ 3955	<ul style="list-style-type: none"> <li>• Pre-Operative (during same hospitalization but not same OR trip as CV surgical procedure)</li> <li>• In conjunction with CV surgical procedure (same trip to the OR)- unplanned</li> <li>• Post-Operative (after surgical procedure during reoperation)</li> <li>• Missing</li> </ul>			
VADImpTmg3	VADImpTmg3 in (NULL, 1, 4, 5)			
VExp/3875	<ul style="list-style-type: none"> <li>• Yes, not during this procedure</li> <li>• No</li> <li>• Missing</li> </ul>			
VExp	VExp in (NULL, 3, 2)			
VExp2/3930	<ul style="list-style-type: none"> <li>• Yes, not during this procedure</li> </ul>			

PART 2 (PROCID 5 through 8)				
Variable Short Name	MVR + CAB** (ProcID=5)	AVR + MVR** (ProcID=6)	MV Repair** (ProcID=7)	MV Repair + CAB** (ProcID=8)
			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
VExp2			VExp2 in (NULL, 3, 2)	
VExp3/3985			<ul style="list-style-type: none"> <li>• Yes, not during this procedure</li> <li>• No</li> <li>• Missing</li> </ul>	
VExp3			VExp3 in (NULL, 3, 2)	
OCarLVA/4075			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCarLVA			OCarLVA in (NULL, 2)	
OCarVSD/4130			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
OCarVSD			OCarVSD in (NULL, 2)	
AortProc/2128			<ul style="list-style-type: none"> <li>• No</li> <li>• Yes, unplanned due to surgical complication</li> <li>• Missing</li> </ul>	
AortProc			Aortproc in (NULL, 2,4)	
EndovasProc/5066			<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> </ul>	
EndovasProc			EndovasProc in (NULL, 2)	
OCarAFibIntraLes 4040	<Not used in this calculation>	<Not used in this calculation>	<Not used in this calculation>	<Not used in this calculation>
OCarAFibIntraLes				
OCarAFibLesLoc 4191	<Not used in this calculation>	<Not used in this calculation>	<Not used in this calculation>	<Not used in this calculation>
OCarAFibLesLoc				
OCarASDSec 4035	<Not used in this calculation>	<Not used in this calculation>	<Not used in this calculation>	<Not used in this calculation>
OCarASDSec				
OCarACD 4055	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> <li>• Permanent Pacemaker</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> <li>• Permanent Pacemaker</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> <li>• Permanent Pacemaker</li> </ul>	<ul style="list-style-type: none"> <li>• No</li> <li>• Missing</li> <li>• Permanent Pacemaker</li> </ul>
OCarACD	OCarACD in (NULL, 1, 2)	OCarACD in (NULL, 1, 2)	OCarACD in (NULL, 1, 2)	OCarACD in (NULL, 1, 2)
OCarACDLE/4065			<ul style="list-style-type: none"> <li>• Yes, unplanned due to surgical complication</li> <li>• No</li> </ul>	

PART 2 (PROCID 5 through 8)				
Variable Short Name	MVR + CAB** (ProcID=5)	AVR + MVR** (ProcID=6)	MV Repair** (ProcID=7)	MV Repair + CAB** (ProcID=8)
				• Missing
OCarACDLE				OCarACDLE in (NULL, 2,4)
OCarLasr/4110	• No • Missing	• No • Missing	• No • Missing	• No • Missing
OCarLasr	OCarLasr in (NULL, 2)	OCarLasr in (NULL, 2)	OCarLasr in (NULL, 2)	OCarLasr in (NULL, 2)
OCPulThromDis/4085				• No • Missing
OCPulThromDis				OCPulThromDis in (NULL, 1)
OCarSubaStenRes/4090				• No • Missing
OCarSubaStenRes				OCarSubaStenRes in (NULL, 2)
OCarSVR/4105				• No • Missing
OCarSVR				• OCarSVR in (NULL, 2)
OCarCrTx/4120				• No • Missing
OCarCrTx				• OCarCrTx in (NULL, 2)
OCarTrma/4125				• No • Missing
OCarTrma				• OCarTrma in (NULL, 2)
OCTumor/4115				• No • Missing
OCTumor				• OCTumor in (NULL, 1)
OCarOthr/4135				• No • Missing
OCarOthr				• OCarOthr in (NULL, 2)
VSTCV/3400				• No • Missing
VSTCV				• VSTCV in (NULL, 2)
VSTCVMit/3610				• No • Missing
VSTCVMit				• VSTCVMit in (NULL, 2)
VSTCVTri/3652				• No • Missing

PART 2 (PROCID 5 through 8)				
Variable Short Name	MVR + CAB** (ProcID=5)	AVR + MVR** (ProcID=6)	MV Repair** (ProcID=7)	MV Repair + CAB** (ProcID=8)
VSTCVTri				• VSTCVTri in (NULL, 2)
VSTCVPu/3695				• No • Missing
VSTCVPu				• VSTCVPu in (NULL, 2)
CCancCase/2050				• No • Missing
CCancCase				• CCancCase in (NULL, 2)
ONCCarEn/6530				• No • Yes, unplanned due to surgical complication • Missing
ONCCarEn				• ONCCarEn in (NULL, 2, 4)
ONCOVasc/6535				• No • Yes, unplanned due to surgical complication • Missing
ONCOVasc				• ONCOVasc in (NULL, 2, 4)
ONCOTHor/6540				• No • Yes, unplanned due to surgical complication • Missing
ONCOTHor				• ONCOTHor in (NULL, 2, 4)
ONCOther/6545				• No • Yes, unplanned due to surgical complication • Missing
ONCOther				• ONCOther in (NULL, 2, 4)

**\*\*For Version 2.9 - Please note that the ProcID algorithms for all Mitral Valve Procedures now also include intracardiac lesions and tricuspid repairs. Since it is common practice to do a full Maze procedure and/or an occasional tricuspid repair STS Leadership wanted to keep these cases in the MV Risk Algorithms.**

The following fields are no longer collected:

AortProcTEVAR – replaced by EndovascProc

OpTricus – replaced by VSTrRepair, VSTrReplace, and VSTrValvec

