Managing Data for Cardiac Outcomes Reporting

Abstractor Training
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OSHPD Office of Statewide Health Planning and Development

Cardiogenic Shock (pp. 27-29)

- Indicate if the patient developed cardiogenic shock. Cardiogenic shock is defined as a sustained (>30 min.) episode of hypoperfusion evidenced by systolic blood pressure <90 mm Hg and/or, if available, cardiac index <2.2 L/min per square meter determined to be secondary to cardiac dysfunction and/or the requirement for parenteral inotropic or vasopressor agents or mechanical support (e.g., IABP, extracorporeal circulations, VADS) to maintain blood pressure and cardiac index above those specified levels.
- Valid Values
  2 = No
  3 = Yes, at the time of procedure
  4 = Yes, not at the time of procedure but within prior 24 hours
- **BOTTOM LINE**: To code "Yes" the definition needs to be met upon entering surgery.

Cardiogenic Shock (cont.)

- **CCORP SPECIFIC CLARIFICATION**: "Shock" = Yes if the patient:
  1) currently has SBP <90 mmHg or
  2) currently has a cardiac index <2.2 or
  3) previously had a SBP < 90 or cardiac index <2.2, but is currently on inotropes/IABP to maintain a higher BP or CI.
- Patients left on inotropes/IABP whose BP has markedly improved so that it is clear BP off therapy would be above criteria should be coded "No."
- Transient episodes of hypotension reversed with IV fluid or atropine do not constitute cardiogenic shock. The hemodynamic compromise (with or without extraordinary supportive therapy) must persist for at least 30 min.

- CCORP requires documentation of all cases coded as "Yes".

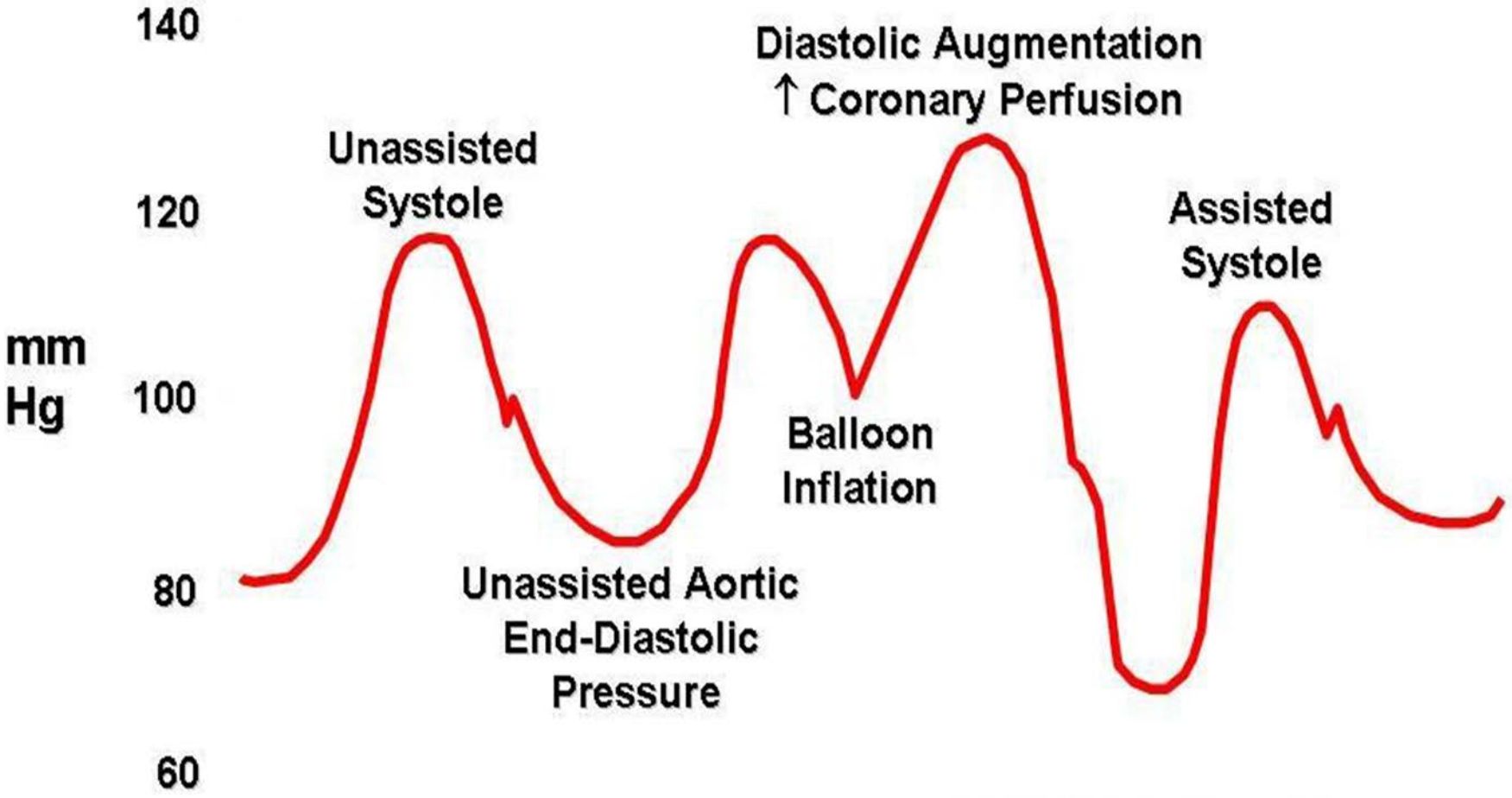
Cardiogenic Shock (cont.)

NOTE: the “30 mmHg lower than baseline” criteria refers to mean arterial blood pressure; a 30 mmHg drop corresponds to a much larger fall in SBP. Also, since the patient must be in a state “of end organ hypoperfusion,” the 30 mmHg fall in MAP must correspond to a significantly low blood pressure or cardiac index.

In practice, very few patients should meet the MAP criteria and not meet the SBP/CI criteria. A patient whose baseline MAP is abnormally high and then falls 30 mmHg into a normal or mildly low range should not be coded as shock.

The normal range for MAP is 70-110 mmHg. Normal perfusion occurs at MAPs >=60 mmHg, therefore, do NOT code shock unless the MAP is < 60 mmHg.

Cardiogenic Shock (cont.)



Resuscitation (pp. 29-30)

- Indicate whether the patient required cardiopulmonary resuscitation before the start of the operative procedure which includes the institution of anesthetic management. Capture resuscitation timeframe: within 1 hour or 1-24 hours pre-op.
- Valid Values

  2 = No

  3 = Yes, within 1 hour of the start of the procedure

  4 = Yes, >1 hour before, but <24 hours of start of the procedure

- CPR must have been either started, ongoing, or concluded within one hour before the start of the operative procedure. This may include complete circulatory support such as ECMO/other mechanical assist devices (Impella, LVAD) initiated emergently prior to surgery. Do not code “Yes” for resuscitation started after induction of anesthesia, the goal is to capture patients who required CPR prior to entering the O.R.

Cardiac Arrhythmia (p. 30)

- Indicate whether the patient has a history of a cardiac rhythm disturbance before the start of the operative procedure which includes the institution of anesthetic management.

- Valid Values
  1 = Yes
  2 = No

Cardiac Arrhythmia (cont.)

STS Clarification: The arrhythmia must have been treated and/or clinically documented with one or more of the definitional list of therapies. These do not include arrhythmias such as 1st degree heart block, occasional premature ventricular contractions (PVC's) or supraventricular tachycardia (SVT) that did not require treatment.

If the patient had a history of an arrhythmia (i.e. A-fib or V-tach) and is currently on medication to control rate and rhythm, and presents in sinus rhythm, code the patient as having the arrhythmia.

To define "treated for an arrhythmia": a patient is considered to be treated for arrhythmia if they are on a medication specifically to treat an arrhythmia.

Cardiac Arrhythmia – VTach/VFib (p. 30)

- Indicate whether arrhythmia was VTach or VFib.
- Valid Values
  1 = None
  2 = Remote (more than 30 days prior to procedure)
  3 = Recent (within 30 days prior to procedure)
- **CCORP suggests** the rhythm be sustained for 30 seconds or longer, or requires cardioversion. Do not include short runs of VT. If ICD fired for VT / VF within 30 days, code "Yes". Presence of ICD alone is not sufficient.
- **STS Clarifies**: V-tach rhythm must be sustained/persistent or paroxysmal sufficient as to require some type of intervention (pharmacological and/or electrical) to interrupt and cease the arrhythmia.

Cardiac Arrhythmia – AFlutter (p. 30)

- Indicate whether arrhythmia was atrial flutter.
- Valid Values
  1 = None
  2 = Remote (>30 days)
  3 = Recent (<= 30 days)
- **STS Clarification**: Atrial flutter is an abnormal heart rhythm that occurs in the atria of the heart. When it first occurs, it is usually associated with a fast heart rate or tachycardia (beats over 100 per minute), and falls into the category of supraventricular tachycardias. While this rhythm occurs most often in individuals with cardiovascular disease (e.g. hypertension, coronary artery disease, and cardiomyopathy) and diabetes, it may occur spontaneously in people with otherwise normal hearts. Typically it is not a stable rhythm and degenerates into atrial fibrillation. Rarely does it persist for months to years. If rhythm is described as fib/flutter, code fibrillation.
- The pre-op arrhythmia is present within 30 days of the procedure, whether chronic, new onset, stable or unstable. The patient may be receiving prescribed medication.

Cardiac Arrhythmia – Third Degree Heart Block (p. 31)

- Indicate whether arrhythmia was third degree heart block.

- Valid Values
  1 = None
  2 = Remote (more than 30 days prior to procedure)
  3 = Recent (within 30 days prior to procedure)

- Heart block is applicable only if the patient has or did have 3rd degree heart block (complete heart block) within 30 days of the surgical procedure.

- **STS Clarifies**: If the patient has a permanent pacemaker for complete heart block that was inserted several years ago, do I code recent arrhythmia? A: No

Cardiac Arrhythmia – Atrial Fibrillation (p. 31)

- Indicate whether arrhythmia was atrial fibrillation

- Valid Values:
  1 = None
  2 = Remote (> 30 days)
  3 = Recent (</= 30 days)

- **STS Clarification**: In atrial fibrillation, the electrical signals that coordinate the muscle of the upper chambers (atria) of the heart become rapid and disorganized; resulting in an irregular heartbeat (arrhythmia) often greater than 300 beats per minute. The likelihood of developing these arrhythmias increases with age.

Cardiac Arrhythmia – Atrial Fibrillation-Type (p. 31)

- Indicate whether arrhythmia was atrial fibrillation and if so, which type.

- Valid Values
  - 2 = Paroxysmal
    - Recurrent AF (> 2 episodes). Terminates spontaneously within 7 days.
  - 4 = Persistent
    - Sustained episode > 7 days, or lasting < 7 days, but necessitating pharmacologic or electrical cardioversion.
  - 5 = Longstanding Persistent
    - Continuous episode of > 1 year duration.
  - 6 = Permanent
    - Continuous episode of > 1 year duration.

Warfarin Use (within 5 days) (p. 32)

- Indicate whether the patient received Warfarin (Coumadin) within 5 days preceding surgery.
- Valid Values

  1 = Yes

  2 = No

  3 = Unknown
- The purpose of this data element is to determine whether the reported INR value was influenced by the patient taking Warfarin within 5 days of surgery, which may raise the INR independently and lead to false indications of liver disease. NOTE: patients on chronic Warfarin therapy who have stopped or been switched to an alternative anticoagulant 5-7 days prior to surgery should be coded as “No”. Notes in the admission H&P or Nurse's assessment (e.g., “stopped 1 week ago", "switched to Lovenox", "held x 1 week") may help in making this determination.

Coronary Anatomy/Disease Known (p. 32)

- Indicate whether coronary artery anatomy and/or disease is documented and available prior to surgery.
- Valid Values
  1 = Yes
  2 = No
- Documented prior to surgery: Sometimes the results are known and verbally communicated to the surgeon, but the Cath Lab Report is not documented in the medical record until after surgery has started. This is particularly true for Emergent cases. This can be captured even if dictation was not completed until after the surgery.

Number of Diseased Coronary Vessels (pp. 32-33)

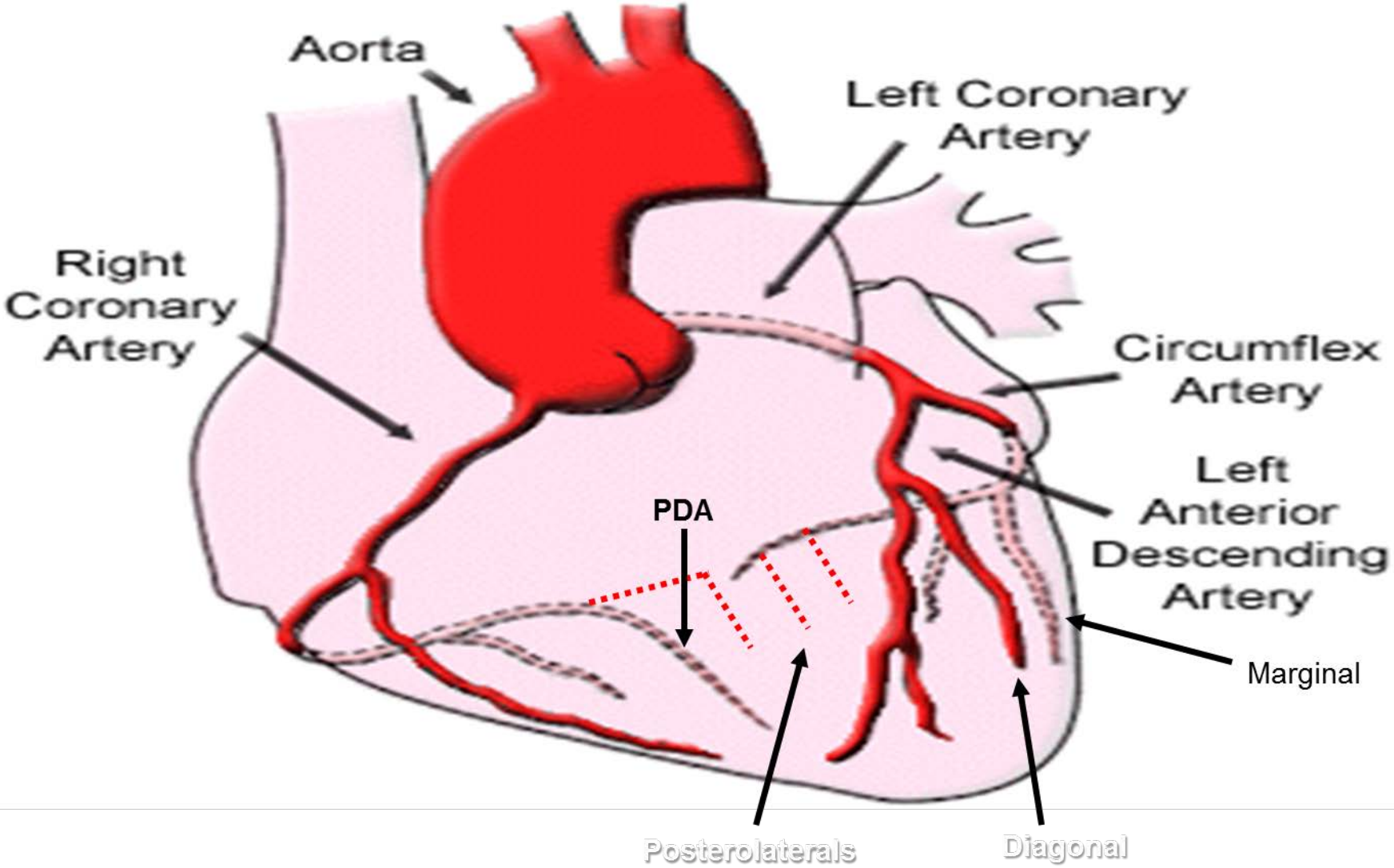
- Indicate the number of diseased major native coronary vessel systems: LAD system, Circumflex system, and/or Right system with >= 50% narrowing of any vessel preoperatively.
- Valid Values
  1 = None
  2 = One
  3 = Two
  4 = Three
- A vessel that has ever been considered diseased should always be considered diseased.
- NOTE: Left main disease (>=50%) is counted as TWO vessels (LAD and Circumflex, which may include a Ramus Intermedius). For example, left main and RCA would count as three total.

Number of Diseased Coronary Vessels (cont.)

- The number of diseased vessels may not necessarily match the number of bypass grafts performed. The number of vessels refers to the number of major coronary arteries which are diseased.
- Consider a major coronary artery as diseased if it or one of its first order branches has a greater than or equal to 50% stenosis. The three major coronary arteries and their first order branches are 1) the left anterior descending (LAD) with its branches the diagonals; 2) the circumflex (Cx) with its branches the obtuse marginals (OM's) or circumflex marginals; and 3) the right coronary artery (RCA) with its branch the posterior descending artery (PDA).

- NOTE: A patient may never have more than three vessel disease. Once a coronary artery is found to be diseased, for the purposes of STS, the vessel is considered diseased for the remainder of the patient's life and all subsequent operations.

Number of Diseased Coronary Vessels (cont.)



Percent Native Artery Stenosis (p. 33)

- Indicate whether the percent of stenosis of native coronary stenosis is known.

- Valid Values
  1 = Yes; coronary artery % stenosis is documented in the medical record.
  2 = No; coronary artery % stenosis is not documented in the medical record.

- If multiple sources are available, select surgeon's documented degree of stenosis. This is the degree of stenosis used to develop the operative plan unless there is a documented decrease.
  Range is 0 – 100.

Percent Stenosis Left Main (pp. 33-34)

- Indicate the highest percent stenosis in this vessel at the time of this surgery.

- Valid Values
  - Usual Range: 0 – 100
  - Low/High: 0 – 100

- Intent is to capture % stenosis for vessels with documented stenosis >=50%.

- When ranges are reported, such as 45-50% for stenosis, use the highest percent in range, in this example 50%.

Ejection Fraction Done (pp. 34-35)

- Indicate whether the Ejection Fraction was measured prior to the induction of anesthesia.

- Valid Values
  1 = Yes
  2 = No

- Anesthesia can alter the values to be collected. Do not collect data from intra-operative transeosophageal echography (TEE) after the induction of anesthesia. Collect data from the most recent source before surgery, even it is several months.

Ejection Fraction (%) (p. 35)

- Indicate the percentage of the blood emptied from the left ventricle at the end of the contraction. Use the most recent determination prior to the surgical intervention documented on a diagnostic report.

- STS Clarification: Time Frame – collect the last value closest to incision, not greater than 6 months. Use the most recent determination prior to incision prior to the induction of anesthesia documented on a diagnostic report, regardless of the diagnostic procedure to obtain it.

- Valid Values
  - Usual Range: 5.0 – 90.0
  - Low/High: 1.0 – 99.0

Ejection Fraction (%) (cont.)

- Ejection fraction (EF) is an important predictor of risk. Make every effort to obtain it when available. The official number on a report (documented source) outweighs a surgeon's estimate!

- If a range of EF's are given, enter the mean value (e.g. for "30 to 35%", enter "33" - the system has no space for 32.5).

- Use the last determination of EF prior to surgery. "Estimated" LVEFs based on inspection of an echocardiogram or LV gram is acceptable if documented in the written report for that study. Calculated or quantified LVEF based on planimetry is not required. LVEFs which are guessed at based on clinical presentation (and not based on imaging of the ventricle) are not acceptable.

PA Systolic Pressure Measured (p. 36)

- Indicate whether the PA systolic pressure was measured prior to induction of anesthesia.

- Valid Values
  1 = Yes
  2 = No

- PA systolic pressure, measured pre-op is preferable but values obtained in O.R. (awake or after induction) prior to incision can be reported if no other results are available. If more than one preoperative measurement is available, choose the HIGHEST PA systolic pressure recorded before induction of anesthesia.

PA Systolic Pressure (p. 36)

- Capture the highest PA systolic pressure recorded prior to induction of anesthesia.

- Valid Values
  - Usual Range: 15.0 – 40.0
  - Low/High: 10.0 – 150.0

- If more than one preoperative measurement is available, choose the highest PA systolic pressure recorded before the incision.

- If PA systolic pressure is not available it is acceptable to code the peak RV systolic pressure (RVSP). RVSP and PA systolic pressures will be the same as long as there is no pulmonary valve disease or outflow obstruction.

Insufficiency-Mitral (p. 37)

- Indicate if there is mitral valve regurgitation. Enter level of valve function associated with highest risk (i.e., worst performance).

- Valid Values
  0 = None
  1 = Trivial/Trace
  2 = Mild
  3 = Moderate
  4 = Severe
  5 = Not documented

Mitral Insufficiency (cont.)

- Enter the highest level recorded in the chart, i.e., worst performance level. “Moderately severe” should be coded as “severe”.
- If a range of mitral valve regurgitation is given, enter the higher value (e.g. for “2 (mild) to 3 (moderate)” enter “3” or moderate). Since operative conditions may artifactually alter ejection fraction and mitral regurgitation, readings from preoperative trans-thoracic echocardiograms are generally more accurate than those from trans-esophageal echocardiograms (TEE’s) done during surgery.
- Mitral prolapse and rheumatic fever are the most common cause of mitral valve regurgitation. Capture even if patient is not scheduled for valve repair and/or replacement when available.

Incidence (pp. 37-38)

- Indicate if this is the patient's:
  - First cardiovascular surgery
  - First re-op cardiovascular surgery
  - Second re-op cardiovascular surgery
  - Third re-op cardiovascular surgery
  - Fourth or more re-op cardiovascular surgery
- Valid Values

  1 = First Cardiovascular surgery

  2 = First re-op cardiovascular surgery

  3 = Second re-op cardiovascular surgery

  4 = Third re-op cardiovascular surgery

  5 = Fourth or more re-op cardiovascular surgery

- NOTE: First operative means the patient has never had any procedure on the heart and/or great vessels.

Incidence (cont.)

- CV surgeries INCLUDE: CABG, valve replacement/repair, intracardiac repair (ASD, VSD), ventricular aneurysmectomy, or surgery on the aortic arch. Use of CPB not required.
- CV surgeries DO NOT INCLUDE: PCI's and non-cardiac vascular surgeries such as abdominal aortic aneurism repair or fem-pop bypass, percutaneous aortic stent graft, percutaneous valve or pacemaker/ICD implantation.
- The intent of this field is to capture the incidence of the procedure that the patient is about to go through during the current hospitalization, as compared to those procedures prior to this hospitalization.

Status (pp. 38-40)

- Indicate the clinical status of the patient prior to entering the operating room.

1 = Elective: The patient's cardiac function has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome.

2 = Urgent: Procedure required during same hospitalization in order to minimize chance of further clinical deterioration. Examples include but are not limited to: Worsening, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (NTG) or rest angina.

Status (cont.)

- Indicate the clinical status of the patient prior to entering the operating room.

3 = Emergent: Patients requiring emergency operations will have ongoing, refractory (difficult, complicated, and/or unmanageable) unrelenting cardiac compromise, with or without hemodynamic instability, and not responsive to any form of therapy except cardiac surgery. An emergency operation is one in which there should be no delay in providing operative intervention.

4 = Emergent Salvage: The patient is undergoing CPR en route to the O.R. or prior to anesthesia induction or has ongoing ECMO to maintain life. CCORP requires documentation of all cases coded as Yes

Status (cont.)

- Status refers to the patient's condition immediately before surgery; it should not reflect instability which occurs after the induction of anesthesia or the operative risk but rather how expediently surgery must be performed. Thus some elective patients may be at higher risk than urgent patients; for example, an elderly patient with an ejection fraction of 20% and COPD operated on electively compared to a young patient with a normal ejection fraction that has ongoing unstable angina.

- **RULE OF THUMB: Elective – waits at home. Urgent – waits in hospital. Emergent – cannot wait or is not safe to wait. Emergent Salvage – no pulse.**

Urgent/Emergent Reason (pp. 40-41)

- Choose one reason from the list below that best describes why this operation was considered urgent or emergent. Choose the one that best describes this patient's clinical state.

1 = AMI
2 = Anatomy
3 = Aortic Aneurysm
4 = Aortic Dissection
5 = CHF
6 = Device Failure
7 = Diagnostic/Interventional Procedure Complication
8 = Endocarditis
10 = IABP
11 = Infected Device
12 = Intra-cardiac mass or thrombus
13 = Ongoing Ischemia
14 = PCI Incomplete w/o clinical deterioration
15 = PCI or attempted PCI w/clinical deterioration
16 = Pulmonary Edema
17 = Pulmonary Embolus
18 = Rest Angina
19 = Shock Circulatory Support
20 = Shock No Circulatory Support
21 = Syncope
22 = Transplant
23 = Trauma
24 = USA
25 = Valve Dysfunction
26 = Worsening CP
27 = Other
28 = Failed Transcatheter Valve Therapy- Acute Annular Disruption
29 = Failed Transcatheter Valve Therapy- Acute Device Malposition
30 = Failed Transcatheter Valve Therapy – Subacute Device Dysfunction

CPB Utilization (pp. 41-42)

- Indicate the level of CPB or coronary perfusion used during the procedure.
- Valid Values

  1 = None: No CPB or coronary perfusion used during the procedure.

  2 = Combination: With/ without CPB and/or with/or without coronary perfusion at any time during the procedure (capture conversions from off-pump to on-pump only):
  - (a) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> CPB
  - (b) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> Coronary perfusion or
  - (c) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> Coronary perfusion -> conversion to -> CPB

  3 = Full: PB or coronary perfusion was used for the entire procedure.

CPB Utilization (cont.)

- Clarification: Coronary perfusion methods are used as an alternative to complete heart and lung bypass. They are often referred to perfusion-assisted devices where just the coronary artery that is being grafted is perfused (distal) to the anastomosis site (a method of supplying distal perfusion to isolated coronary arteries while new grafts are constructed). While not as invasive as cardiopulmonary bypass it is still a method of supporting the myocardium during a period of relative ischemia. These devices allow for continued myocardial perfusion to the area of myocardium that is being revascularized, therefore reducing any ischemic time to that region.

- If the patient started as an off pump case (OPCAB) and then moved to a LHA (Left Heart Assist), this would be considered the same as CPB; code as a “Combination”. If LHA is used for an entire case code “Full”.

CPB Utilization – Combination Plan (p. 42)

- Indicate whether the combination procedure from off-pump to on-pump was a planned or an unplanned conversion.

- Valid Values

  1 = Planned: The surgeon intended to treat with any of the combination options described in "CPB utilization".

  2 = Unplanned : The surgeon did not intend to treat with any of the combination options described in "CPB utilization".

Internal Mammary Artery (IMA) Used (pp. 42-43)

- Indicate whether an Internal Mammary Artery conduit was used.

- Valid Values
  1 = Yes
  2 = No

Reason for No IMA (pp.43-44)

- Indicate PRIMARY reason Internal Mammary Artery was not used as documented in medical record.

- Valid Values
  2 = Subclavian Stenosis
  3 = Previous cardiac or thoracic surgery
  4 = Previous mediastinal radiation
  5 = Emergent or salvage procedure
  6 = No (bypassable) LAD disease
  7 = Other

Valve (p. 44)

- Indicate whether a surgical procedure was done on the Aortic, Mitral, Tricuspid or Pulmonic valves.

- Valid Values
  1 = Yes
  2 = No

- The intent is to capture valve replacements and/or repairs

Aortic Valve (p. 44)

- Indicate whether an aortic valve procedure was performed.

- Valid Values
  2 = No
  3 = Yes, planned
  4 = Yes, unplanned due to surgical complication
  5 = Yes, unplanned to unsuspected disease or anatomy
- Include all AV procedures (aortic valve replacement, re-suspension or repair- see next slide) done during this surgery.

Aortic Valve Procedure (p. 44)

- Indicate procedure performed on aortic valve and/or ascending aorta.

- Valid Values
  1 = Replacement
  2 = Repair / Reconstruction

Mitral Valve (p. 45)

- Indicate whether a mitral valve procedure was performed.

- Valid Values

  2 = No

  3 = Yes, planned

  4 = Yes, unplanned due to surgical complication

  5 = Yes, unplanned due to unsuspected disease or anatomy

Mitral Valve Procedure (p. 45)

- Indicate the type of procedure that was performed on the mitral valve

- Valid Values
  1 = Repair
  2 = Replacement

Tricuspid Valve (p. 45)

- Indicate whether a surgical procedure was done or not done on the Tricuspid Valve.

- Valid Values
  2 = No
  3 = Yes, planned
  4 = Yes, unplanned due to surgical complication
  5 = Yes, unplanned due to unsuspected disease or anatomy

Pulmonic Valve (p. 45)

- Indicate whether a pulmonic valve procedure was performed.

- Valid Values

  2 = No

  3 = Yes, planned

  4 = Yes, unplanned due to surgical complication

  5 = Yes, unplanned due to unsuspected disease or anatomy

Reoperation for Bleed (pp. 45-46)

- Indicate whether the patient was re-explored for mediastinal bleeding with or without tamponade either in the ICU or returned to the operating room.
- Valid Values

  1 = Yes

  2 = No

Reoperation for Bleed (cont.)

- Requires reopening the chest for bleeding.
- Do not capture reopening of the chest or situations of excessive bleeding that occur prior to the patient leaving the operating room at the time of the primary procedure. Do not include medically (non-operatively) treated excessive post-operative bleeding/tamponade events. *The patient must return to the operating room suite for surgical intervention*.

- Include patients that return to an O.R. suite or equivalent.

- O.R. environment (i.e., ICU setting) as identified by your institution, that require surgical re-intervention to investigate/correct bleeding/tamponade. Include only those bleeding/tamponade interventions that pertain to the mediastinum or thoracic cavity.

Reintervention – Myocardial Ischemia (p. 46)

- Indicate whether the patient required postoperative reintervention for Myocardial Ischemia

- Valid Values
  1 = Yes
  2 = No

Reintervention – Myocardial Ischemia- Vessel (p. 46)

- Indicate the type of vessels that required postoperative reintervention for Myocardial Ischemia

- Valid Values
  - 1 = Native Coronary
  - 2 = Graft
  - 3 = Both

Deep Sternal Infection/Mediastinitis (p. 47)

- Indicate whether a Deep Sternal Wound Infection or Mediastinitis occurred within 30 days following the surgery.

- Valid Values

  2 = No

  3 = Yes, within 30 days of procedure

  4 = Yes, > 30 days after procedure, but during hospitalization for surgery

Neuro – Stroke Permanent (pp. 47-48)

- Indicate whether the patient has a postoperative stroke (i.e., any confirmed neurological deficit of abrupt onset caused by a disturbance in blood supply to the brain) that did not resolve within 24 hours.

- Valid Values

  2 = No

  3 = Yes, hemorrhagic

  4 = Yes, ischemic

  5 = Yes, undetermined type

Neuro – Stroke Permanent (cont.)

- There are two forms of stroke: ischemic - blockage of a blood vessel supplying the brain, and hemorrhagic - bleeding into or around the brain.

- Central events are caused by embolic or hemorrhagic events. Neurological deficits such as confusion, delirium and/or encephalopatic (anoxic or metabolic) events are not to be coded in this field.

- Example # 1: A patient had a Coronary Artery Bypass (CAB) and Carotid Artery Endarterectomy (CEA) done by a cardiac surgeon and a vascular surgeon. The patient had a stroke, and it was documented in the notes that it was from the CEA. The stroke is coded as a post operative complication of the CAB.

- Example # 2: The patient was being sedated, but stopped withdrawing to painful stimuli on one side. A neuro consult suggested a CVA on the left side and ordered a CT Scan. The patient expired later on the same day as the consult before the test could be performed to determine if a CVA has occurred.

Pulm – Ventilation Prolonged (p. 48)

- Indicate whether the patient had prolonged post-operative pulmonary ventilation > 24 hours. The hours of postoperative ventilation time include OR exit until extubation, plus any additional hours following reintubation. Include (but not limited to) causes such as ARDS, pulmonary edema, and/or any patient requiring mechanical ventilation >24 hours postoperatively.

- Valid Values
  1 = Yes
  2 = No

Pulm – Ventilation Prolonged (cont.)

- Postoperative period begins when patient leaves the O.R.
- A total of 24 hours, include initial and additional hours of mechanical ventilation.
- Do not include the hours ventilated if a patient returns to the operating room suite and requires re-intubation as part of general anesthesia.
- TIME is calculated from the point of leaving the O.R. and NOT when patient was initially intubated.

Renal – Renal Failure (p. 48)

- Indicate whether the patient had acute renal failure or worsening renal function resulting in **ONE OR BOTH** of the following:
  A. Increase of serum creatinine level 3.0 x greater than baseline, or serum creatinine level >4 mg/dL, acute rise must be at least 0.5 mg/dL.
  B. A new requirement for dialysis postoperatively.

- Valid Values
  1 = Yes
  2 = No

Renal – Dialysis Requirement (p. 49)

- Indicate whether the patient had a new requirement for dialysis postoperatively, which may include hemodialysis, peritoneal dialysis.

- Valid Values
  1 = Yes
  2 = No

Renal – Dialysis Requirement (cont.)

- May include either hemo or peritoneal dialysis. This includes a one-time need for dialysis as well as implementation of longer term therapy. If the patient was on preoperative peritoneal dialysis and moved to hemodialysis postoperatively, this does not constitute a worsening of the condition and should not be coded as an event.

- Continuous Veno-Venous Hemofiltration) (CVVH, CVVH-D) and Continuous Renal Replacement Therapy (CRRT) should be coded here as “Yes.” (Code Ultra filtration as “No”, it is captured in a separate field.)

Other – Atrial Fib (p. 49)

- Indicate whether the patient experienced atrial fibrillation/flutter (AF) requiring treatment. Excludes patients who were in afib at the start of surgery.

- Valid Values
  1 = Yes
  2 = No

Facility Identification Number (CCORP-Specific Variable) (p. 50)

- The six-digit facility identification number assigned to a hospital by the Office of Statewide Health Planning and Development (OSHPD), as defined in Section 97170.

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