

## Section I. OPERATIVE

*Section Intent:* The primary intent of this section is to have a clear picture of the patient's clinical status upon entering the operating room with regard to 1) Clinical status; 2) Procedure performed; and 3) Intraop blood products.

Sequence #	Data Field	Field Definition	Data Field Intent / Clarification	Source Document
1210	Surgeon's name	Indicate the Surgeon's name. This field must have controlled data entry where a user selects the Surgeon Name from a user list. This will remove variation in spelling, abbreviations and punctuation within the field. Note: Surgeon name is encrypted in the analysis database. Punctuation, abbreviations and spacing differences can not be corrected at the warehouse.	To correctly and consistently identify the surgeon. A drop down list is generated to avoid errors.	Operative Note Operative Record
1220	Surgeon ID	Indicate the unique identification number assigned to the surgeon by the participant.	To assign a unique identification code to the surgeon at the participants site.	Participant site maintains a list of unique surgeon names and an associated ID number.
1240	Status:  Elective        Urgent	<p>Indicate the status that best describes the clinical status of the patient at the time of surgery.</p> <p>Definition: 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.</p> <p>Urgent: Definition: ALL of the following conditions are met:            a. Not elective status.            b. Not emergent status.            c. Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.            d. Worsening, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin</p>	<p>Status described as emergent salvage, emergent, urgent or elective.</p> <p>The criteria for emergent and elective are not met. Delaying the surgery would put the patient at further risk.</p>	<p>By definition</p> <p>Operative note Same day surgery notes Demographics from admission</p> <p>Critical care notes Operative note</p>

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	Emergent	<p>(NTG) or rest angina may be included.</p> <p>Emergent: Definition: The patient's clinical status includes any of the following:</p> <p>a. Ischemic dysfunction (any of the following):</p> <p>(1) Ongoing ischemia including rest angina despite maximal medical therapy (medical and/or IABP);</p> <p>(2) Acute Evolving Myocardial Infarction within 24 hours before surgery; or</p> <p>(3) Pulmonary edema requiring intubation.</p> <p>b. Mechanical dysfunction (either of the following):</p> <p>(1) shock with circulatory support; or</p> <p>(2) shock without circulatory support.</p>	<p>To capture the patient whose condition is difficult, complicated and/or unmanageable with or without support. The surgery for these patients should not be delayed.</p>	<p>Progress notes Critical care notes Operative note</p>
	Emergent Salvage	<p>Emergent Salvage: Definition: The patient is undergoing CPR en route to the OR prior to anesthesia induction.</p>	<p>To capture the acuity of the patient in a dying state.</p>	<p>Progress notes CPR record Operative note</p>

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1250	Urgent Reason	<p>Delay in the operation is necessitated only by attempts to improve the patient's condition, availability of a spouse or parent for informed consent, availability of blood products, or the availability of results of essential laboratory procedures or tests.</p> <p>Indicate which one of the following applies as the reason why the patient had Urgent Status?</p> <p>(Select one)</p> <p>Acute myocardial infarction (AMI).            Intra-Aortic Balloon Pump (IABP).            Worsening, sudden chest pain.            Congestive Heart Failure (CHF).            Coronary Anatomy.            Unstable angina (USA) with intravenous (IV) nitroglycerin (NTG).            Rest angina.            Valve Dysfunction            Aortic Dissection            Angiographic Accident</p>	Any of the conditions that require that the patient remain in the hospital until surgery can take place but the patient is able to wait for surgery until the next available OR schedule time.	Critical care note Operative note

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1260	Emergent Reason:	<p>Patients requiring emergency operations will have ongoing, refractory (difficult, complicated, and/or unmanageable) unremitting 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.</p> <p>Select one:</p> <p>A. Shock with circulatory support.</p> <p>B. Shock no circulatory support.</p> <p>C. Pulmonary edema requiring intubation.</p> <p>D. Acute evolving myocardial infarction within 24 hours before surgery.</p> <p>E. Ongoing ischemia, including rest Angina, despite maximal medical therapy (medical and/or IABP).</p> <p>F. Valve dysfunction</p> <p>G. Aortic dissection</p> <p>H. Angiographic Accident</p>	<p>A. Hemodynamic picture of shock that is being chemically or mechanically supported.</p> <p>B. Hemodynamic picture of shock not supported.</p> <p>C. Requires intubation and ventilation for pulmonary edema.</p> <p>D. The patient is having an MI and requires immediate surgery.</p> <p>E. The patient continues to show signs of on going ischemia. i.e. EKG changes.</p> <p>F. Acute valve dysfunction i.e. as acute papillary muscle rupture.</p> <p>G. Acute dissection secondary to trauma or dissection secondary to progression of disease.</p> <p>H. Rupture or dissection during cardiac cath.</p>	<p>Critical care notes Operative note</p> <p>Chest X-ray</p> <p>EKG</p> <p>EKG</p> <p>2-D or Transesophageal echocardiogram Operative note</p> <p>2-D or Transesophageal echocardiogram CAT scan, MRI Operative note</p> <p>Cardiac Cath Report Operative Note</p>

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1270	Robotic Technology Assisted	Indicate whether the cardiac surgery was assisted by robotic technology.	To capture the use of robotics during a cardiac operation.	Operative record Operative note
1280	CAB Coronary Artery Bypass	Indicate whether coronary artery bypass grafting was done.	To capture patients who under go coronary artery bypass grafting which is construction of one or more bypass grafts to the coronary arteries using conduits such as saphaneous veins, internal mammary arteries, radial arteries or right gastroepiploic arteries.	Operative record Operative note
1290	Valve Surgery	Indicate whether a surgical procedure was done on the Aortic, Mitral, Tricuspid or Pulmonic valves		Operative record Operative note
1300	Ventricular Assist Device	Indicate whether a ventricular assist device (VAD) was used.		Operative record Operative note
1310	Other Cardiac Procedure	Indicate whether an other cardiac procedure was done (other than CABG and/or valve procedures).	To capture procedures other than CABG which may include: LVA, VSD, ASD, Batista, SVR, Congenital Defect Repair, TMR, Cardiac Trauma, Cardiac Transplant, Arrhythmia Correction Surgery, Permanent Pacemaker, AICD, Atrial Fibrillation Correction Surgery, Aortic Aneurysm, Other.	Operative record Operative note
1320	Other Non-Cardiac Procedure	Indicate whether a non-cardiac procedure was done.	To capture procedures other than CABG which may include: Carotid Endarterectomy, Vascular, or Thoracic procedures.	Operative record Operative note
1330	Skin incision start time	Indicate to the nearest minute (using 24 hour clock) the time the skin incision was made.	AORN standards require the operative room record to identify the time that the first incision was made in the skin.	Operative record
1340	Skin incision stop time	Indicate to the minute (using a 24 hour clock) the time the skin incision was closed. If the patient leaves the OR with an open chest, collect the time the dressings are applied to the incisions.	AORN standards require the operative room record to identify the time the incisions are closed and the dressings applied as ending time.	Operative record

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1350	CPB (Cardiopulmonary bypass) Utilization	<p>Indicate the level of CPB or coronary perfusion used during the procedure.</p> <p><b>None</b> = no CPB or coronary perfusion used during the procedure.</p> <p><b>Combination</b> = with or without CPB and/or with or without coronary perfusion at any time during the procedure.</p> <p>At start of procedure: No CPB/No Coronary Perfusion → conversion to → CPB.</p> <p>At start of procedure: No CPB/No Coronary Perfusion → conversion to → Coronary perfusion.</p> <p>At start of procedure: No CPB/No Coronary Perfusion → conversion to → Coronary perfusion → conversion to → CPB.</p> <p><b>Full</b> = CPB or coronary perfusion was used for the entire procedure.</p>	<p>To identify on and off pump cases.</p> <p>Off pump = no cardiopulmonary bypass</p> <p>On pump = cardiopulmonary bypass, the heart- lung machine was used.</p>	Operative record Operative note Perfusion record
1360	CPB Utilization – Combination Plan	<p>Indicate whether the combination procedure was a planned or an unplanned conversion.</p> <p>Planned = the surgeon intended to treat with any of the combination options described in “CPB utilization”. Seq# 1350.</p> <p>Unplanned = the surgeon did not intend to treat with any of the combination options described in “CPB” utilization. Seq# 1350.</p>	To capture if the operation was intended to be an off pump case and for some clinical reason required cardiopulmonary bypass to complete the operation.	Operative record Operative note Surgeon Perfusion Record
1370	CPB Utilization – Unplanned Combination Reason	<p>Indicate the reason that the procedure required the initiation of CPB and/or coronary perfusion:</p> <ul style="list-style-type: none"> <li>• Exposure/visualization</li> <li>• Bleeding</li> <li>• Inadequate size and/or diffuse disease of distal vessel</li> <li>• Hemodynamic instability (hypotension/arrhythmias)</li> <li>• Conduit quality and/or trauma</li> <li>• Other</li> </ul>	To capture the reason the patient that was intended to be off pump and for some clinical reason required cardiopulmonary bypass to complete the operation	Operative record Operative note Surgeon Perfusion Record

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1380	Perfusion Time (min)	Indicate the perfusion time in minutes. Perfusion time is defined as an accumulated total of CPB and/or coronary perfusion assist minutes.	The total period of cardiopulmonary bypass.	Operative record Operative note Perfusion Record
1390	Cannulation Method	Indicate the method of cannulation used for cardiopulmonary bypass (select one): <ul style="list-style-type: none"> <li>• Aorta and Femoral/Jugular vein</li> <li>• Femoral Artery and Femoral/Jugular vein</li> <li>• Aorta and Atrial/Caval</li> <li>• Femoral Artery and Atrial/Caval</li> <li>• Other</li> </ul>	Differentiate the approach used to insert cannula (flexible tubing into the bloodstream) to convey blood to or from the cardiopulmonary bypass circuit. Can be placed in the aorta, atrium, vena cava, peripheral arteries or peripheral veins.	Operative record Operative note Perfusion record
1400	Aortic Occlusion	Indicate the type of aortic occlusion used. Indicate the highest level of occlusion. None Aortic cross clamp Balloon occlusion Partial cross clamp	Identify the method used to prevent blood from circulating through the heart and to allow the delivery of cardioplegia into the aortic root to arrest the heart. Externally, the aortic cross clamp is used. Internally, balloon occlusion is used.	Operative record Operative note
1410	Cross Clamp Time (minutes)	Indicate the total number of minutes the aorta is completely crossed-clamped during by-pass. Minutes should not be recorded if partial cross clamp is the highest level of occlusion.	The total period of aortic occlusion (may be interrupted). The total of either external cross clamp or internal balloon occlusion.	Perfusion record Operative note
1420	Cardioplegia	Indicate whether cardioplegia was used. Yes No	Cardioplegia is a solution that is used to cause the heart to arrest; it may be delivered antegrade, retrograde, both or none.	Perfusion record Operative note
1430	IABP	Indicate whether the patient was placed on intra-aortic balloon pump (IABP).  Yes No	IABP is a device inserted into the descending thoracic aorta distal to the left subclavian and proximal to the renal arteries used to increase coronary blood flow and decrease work of the left ventricle. Balloon catheter inflates and deflates rapidly in conjunction with cardiac cycle. Inflation of the balloon partially obstructs the aorta, diverting more blood into coronary arteries. Deflation of the balloon allows more blood to be ejected by the left ventricle.	Perfusion record Operative record

Sequence #	Data Field	Field Definition	Data Field Intent / Clarification	Source Document
1440	IABP when inserted	<p>Indicate the time of the earliest IABP insertion. Choose one of the following:</p> <p>Preoperatively</p> <p>Intraoperatively</p> <p>Postoperatively</p>	<p>Identify when the IABP was inserted as it relates to the cardiac operation.</p> <p>Preoperatively refers to the IABP placement in the cath lab or in the ICU prior to patient entering the operating room.</p> <p>Intraoperatively refers to insertion of the IABP during the cardiac operation.</p> <p>Postoperatively refers to insertion of the IABP after the patient has left the operating room.</p>	<p>Operative record</p> <p>Operative note</p> <p>Critical care notes</p> <p>Cardiac Cath record / report</p>
1450	IABP indication	<p>Indicate the PRIMARY reason for inserting the IABP? Choose one of the following:</p> <ul style="list-style-type: none"> <li>• Hemodynamic instability</li> <li>• PTCA support</li> <li>• Unstable angina</li> <li>• Cardiopulmonary bypass (CPB) weaning failure</li> <li>• Prophylactic</li> </ul>	<p>Reason for inserting an IABP as it relates to the cardiac operation.</p> <ul style="list-style-type: none"> <li>• Hemodynamic instability (hypotension/shock)</li> <li>• Support for Balloon Angioplasty</li> <li>• Unstable angina</li> <li>• Weaning from CBP</li> <li>• Prophylactic</li> </ul>	<p>Critical care notes</p> <p>Cardiac cath record</p> <p>Operative note</p> <p>Perfusion record</p>
1460	Intraop Blood Products	<p>Indicate whether blood products were transfused any time intraoperatively during the initial surgery. Intraoperative is defined as any blood started inside of the OR.</p>	<p>To capture if any blood products were administered during the surgical procedure while the patient was in the operating room.</p>	<p>Perfusion record</p> <p>Operating Room Record</p> <p>Blood Bank Records</p>
1470	Intraop Blood Products – RBC Units	<p>Indicate the number of units of Red Blood Cells (RBC's) that were transfused intraoperatively.</p>	<p>To capture RBC utilization during the surgical procedure while the patient was in the operating room.</p>	<p>Perfusion record</p> <p>Operating Room Record</p> <p>Blood Bank Records</p>
1480	Intraop Blood Products – FFP Units	<p>Indicate the number of units of Fresh Frozen Plasma (FFP) that were transfused intraoperatively.</p>	<p>To capture FFP utilization during the surgical procedure while the patient was in the operating room.</p>	<p>Perfusion record</p> <p>Operating Room Record</p> <p>Blood Bank Records</p>
1490	Intraop Blood Products – Cryo Units	<p>Indicate the number of units of Cryoprecipitate that were transfused intraoperatively.</p>	<p>To capture Cryoprecipitate utilization during the surgical procedure while the patient was in the operating room.</p>	<p>Perfusion record</p> <p>Operating Room Record</p> <p>Blood Bank Records</p>

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1500	Intraop Blood Products – Platelet Units	Indicate the number of units of Platelets that were transfused intraoperatively.	To capture Platelet utilization during the surgical procedure while the patient was in the operating room. A ten pack of platelets = 10 units, not 1 unit.	Perfusion record Operating Room Record Blood Bank Records

**Following are one institutions example of an Operating Room Record and an Operating Room CPB Perfusion Record.**

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