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| **Enable if catnum = 53 or 55. If DESCSURG = 2, go to RECVPRBC; else go to TYPESCRN** |
| 1 | typescrn | During the 30 days prior to surgery, does the record document the results of a pre-operative type and screen? | 1,2If 2, auto-fill typscrdt as 99/99/9999, and go to typecros | **A type and screen performed on the day of surgery must be done prior to the start of surgery.** Blood typing is a laboratory test that identifies blood group antigens (substances that stimulate an immune response) belonging to the ABO blood group system. The test classifies blood into four groups designated A, B, AB, and O. The type and screen (T&S) is performed on persons who may need a transfusion of blood products.Suggested data source: laboratory reports |
| 2 | typscrdt | Enter the date the results of the pre-operative type and screen were documented.  | mm/dd/yyyyWill be auto-filled as 99/99/9999 if typescrn = 2

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| < = 30 days prior to or = incizedt  |

 | Enter the exact date. The use of 01 to indicate missing month and day is not acceptable. |
| 3 | typecros | During the 4 days prior to the surgery, does the record document the results of a pre-operative type and cross?  | 1,2If 2, auto-fill crossdt as 99/99/9999 and go to prehbhct | **A type and cross performed on the day of surgery must be done prior to the start of surgery.** Type and screen tests may be followed by the blood compatibility test (cross-match). Crossmatch insures that no antibodies are detected in the recipient's serum that will react with the donor's red blood cells.Suggested data source: laboratory reports |
| 4 | crossdt | Enter the date the results of the pre-operative type and cross were documented. | mm/dd/yyyyWill be auto-filled as 99/99/9999 if typecros = 2

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| < = 4 days prior to or = incizedt |

 | Enter the exact date. The use of 01 to indicate missing month and day is not acceptable. |
| 5 | prehbhct | Was there documentation of a hemoglobin or hematocrit result during the 45 days prior to Anesthesia Start Date? | 1,2If 2, auto-fill prehgbdt as 99/99/9999 and go to anemiscr | To select “1”, there must be documentation that a hemoglobin or hematocrit result was completed during the 45 days prior to surgery. Suggested data source: laboratory reports |
| 6 | prehgbdt | Enter the date of the most recent hemoglobin or hematocrit performed during the 45 days prior to Anesthesia Start Date. | mm/dd/yyyyWill be auto-filled as 99/99/9999 if prehbhct = 2

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| <= 45 days prior to or = anebegdt and < = dtofdc |

 | Enter the exact date. |
| 7 | anemiscr | Was there documentation of preoperative anemia screening during the 45 days prior to Anesthesia Start Date?1. Preoperative anemia screening performed 14 to 45 days prior to Anesthesia Start Date2. Preoperative anemia screening performed less than 14 days prior to Anesthesia Start Date99. No documentation preoperative anemia screening was performed during the 45 days prior to Anesthesia Start Date | 1,2,99 | To select “1”, there must be written documentation of preoperative anemia screening.If there is documentation that the patient received iron alone or in conjunction with epogen during the 45 days prior to surgery, select “1.” **Erythropoiesis Stimulating Agents (ESAs):** Darbepoetin alfa (Aranesp ®), Epoetin alfa (Procrit ® & Epogen ®)**Iron:**Ferumoxytol (FerahemeTM )Ferric Carboxymaltose (Injectafer)Iron sucrose injection (Venofer®)Sodium ferric gluconate complex in sucrose injection (Ferrlecit®)**Iron Dextran Injection**  Low molecular weight dextran (INFed®), High molecular weight, (DexFerrum®)Suggested data sources: consultation notes, history and physical, progress notes, preop checklist |
| 8 | recvprbc | Does the record document the patient received a blood (red blood cell) transfusion during this episode of care?1. Yes2. No99. Unable to determine | 1,\*2, \*99**\*If 2 or 99, go to end** | Blood is transfused either as whole blood (with all its parts) or, more often, as individual parts. Red blood cells (RBC) are the component of whole blood most commonly transfused.Blood transfusion may be coded using procedure codes 99.02, 99.03 or 99.04. Suggested data sources: Blood transfusion summary, blood transfusion record, nursing note, nursing operative notes |
| 9 | rbcevent | Enter the number of RBC events that occurred during this episode of care. | \_\_ \_\_

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| > 0 and < 30 |

 | **A RBC event is determined by the transfusion order associated with the administration of the RBCs.** For example, an order by the surgeon to “give 2 units PRBCs today” would count as one event. RBC transfusions administered during surgery would be considered one event.  |
| 10 | signcons | Was there documentation of a signed consent prior to the first blood transfusion event?1. There was documentation of a signed consent prior to the first blood transfusion event
2. The first blood transfusion event was deemed a medical emergency

99. No documentation of a blood transfusion consent prior to the first blood transfusion event or unable to determine | 1,2,99 | * **The consent may be signed by either the patient or caregiver.**
* If organizations required consent prior to every transfusion, then review the record for the first transfusion event to answer this data element.
* For hospitals that use a general consent for treatment that includes transfusions, select “yes.”
* If a patient receives chronic transfusions and a previous consent is acceptable for a defined timeframe within the organization, select “1” if the consent is valid.
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| 11 | ictrans | Was there documentation that information regarding risks, benefits, and alternatives to transfusion was given to the patient/caregiver prior to the first blood transfusion event?1. Yes2. No | 1,2 | Use only documentation provided in the medical record.If the patient refused information about the risks, benefits, and alternatives to transfusion, select “1.”The caregiver is defined as the patient’s family or any other person (e.g. guardian) who will be responsible for care of the patient.Suggested data sources: consent form, blood infusion record, progress note |
| 12 | clinind1 | For RBC event 1, what was the clinical indication documented by the physician/APN/PA for the RBC transfusion event?1. Bleeding2. No bleeding, but evidence of inadequate oxygen delivery3. Other99.No documentation of clinical indication for the RBC transfusion | 1,2,3,99If 99 and rbcevent > 1 , go to clinind2; else if 99, go to nonorbc  | **The clinical indication for the transfusion must be documented within 24 hours after the start of the transfusion event.**If there are more than 3 RBC events during this hospitalization, select the first three RBC transfusion events after hospital arrival forabstraction.Select "1" if there is documentation of ‘hemorrhagic shock' or'evidence of acute hemorrhage and hemodynamic instability orinadequate oxygen delivery' or a 'massive transfusion protocol' wasused.Select “2” if there is documentation that the patient was transfused for a physiologic indication with evidence of inadequate oxygen delivery. Examples include documentation such as: shortness of breath at rest (with no other cause such as underlying pulmonary dysfunction), syncope or fainting (once hypovolemia is ruled out), tachycardia or hypotension (that volume replacement failed to correct), unresponsive or signs of organ ischemia (somnolence, or ST segment changes).Select "3" if there is an indication for RBCs but the documentation isunclear as to whether the blood was administered due to aphysiologic indication that caused an oxygen carrying deficit. |
| 13 | prehct1 | For RBC event 1, enter the pre-transfusion hematocrit result completed within 24 hours prior to start of the RBC transfusion. | \_\_ \_\_If <> zz, auto-fill prehgb1 as zz.z, and go to rbcnum1Abstractor can enter zz

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| **Warning if < 35** **or > 60** |

 | The hematocrit result must be completed within 24 hours prior to the start of the RBC transfusion event 1. When recording the allowable value, enter 18 if the patient’shematocrit is 18%.**If a hematocrit was not obtained prior to the RBC transfusion, enter default zz.** |
| 14 | prehgb1 | For RBC event 1, enter the pre-transfusion hemoglobin result completed within 24 hours prior to start of the RBC transfusion. | \_\_ \_\_. \_\_Abstractor can enter zz.z

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| **Warning if < 5** **or > 25** |

 | The hemoglobin result must be completed within 24 hours prior to the start of the RBC transfusion event 1. Hemoglobin (Hb), the main component of red blood cells, is a protein that carries oxygen away from the lungs and carbon dioxide back to the lungs. Normal values are between 11.5 to 15.5 mg/dL, but vary by age, gender, and testing laboratory.**If a hemoglobin was not obtained prior to the RBC transfusion, enter default zz.z.** |  |
| 15 | rbcnum1 | For RBC event 1, what was the total number of RBC units (bags) or doses transfused?  | \_\_ \_\_Abstractor can enter zzIf rbcevent > 1 , go to clinind2; else go to nonorbc

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| > 0 and < 12 |

 | **Calculate the total number of units (bags) or doses that were****administered (not ordered) for RBC Event 1.** If the number of units (bags) or doses ordered for the RBC Event 1 is different from the number of units (bags) or doses administered, select the number of units (bags) or doses administered.If more than 10 units (bags) or doses of RBCs wereadministered for the RBC event, enter “11.”If unable to determine the number of RBC units (bags) ordoses administered for the RBC event, enter default zz. |
| 16 | clinind2 | For RBC event 2, what was the clinical indication documented by the physician/APN/PA for the RBC transfusion event?1. Bleeding2. No bleeding, but evidence of inadequate oxygen delivery3. Other99.No documentation of clinical indication for the RBC transfusion | 1,2,3,99If 99 and rbcevent > 2 , go to clinind3; else if 99, go to nonorbc  | The clinical indication for the transfusion must be documented within 24 hours after the start of the transfusion event.Select "1" if there is documentation of ‘hemorrhagic shock' or'evidence of acute hemorrhage and hemodynamic instability orinadequate oxygen delivery' or a 'massive transfusion protocol' wasused.Select “2” if there is documentation that the patient was transfused for a physiologic indication with evidence of inadequate oxygen delivery. Examples include documentation such as: shortness of breath at rest (with no other cause such as underlying pulmonary dysfunction), syncope or fainting (once hypovolemia is ruled out), tachycardia or hypotension (that volume replacement failed to correct), unresponsive or signs of organ ischemia (somnolence, or ST segment changes).Select "3" if there is an indication for RBCs but the documentation isunclear as to whether the blood was administered due to aphysiologic indication that caused an oxygen carrying deficit. |
| 17 | prehct2 | For RBC event 2, enter the pre-transfusion hematocrit result completed within 24 hours prior to start of the RBC transfusion. | \_\_ \_\_If <> zz, auto-fill prehgb2 as zz.z, and go to rbcnum2Abstractor can enter zz

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| **Warning if < 35** **or > 60** |

 | The result must be completed within 24 hours prior to the start of theRBC transfusion event 2.When recording the allowable value, enter 18 if the patient’shematocrit is 18%.**If a hematocrit was not obtained prior to the RBC transfusion, enter default zz.** |
| 18 | prehgb2 | For RBC event 2, enter the pre-transfusion hemoglobin result completed within 24 hours prior to start of the RBC transfusion. | \_\_ \_\_. \_\_Abstractor can enter zz.z

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| **Warning if < 5** **or > 25** |

 | The hemoglobin result must be completed within 24 hours prior to the start of the RBC transfusion event 2.Hemoglobin (Hb), the main component of red blood cells, is a protein that carries oxygen away from the lungs and carbon dioxide back to the lungs. Normal values are between 11.5 to 15.5 mg/dL, but vary by age, gender, and testing laboratory.**If a hemoglobin was not obtained prior to the RBC transfusion, enter default zz.z.** |  |
| 19 | rbcnum2 | For RBC event 2, what was the total number of RBC units (bags) or doses transfused?  | \_\_ \_\_Abstractor can enter zzIf rbcevent > 2 , go to clinind3; else go to nonorbc

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| > 0 and < 12 |

 | Calculate the total number of units (bags) or doses that wereadministered (not ordered) for RBC Event 2. If the number of units (bags) or doses ordered for the RBC Event 2 is different from the number of units (bags) or doses administered,select the number of units (bags) or doses administered.If more than 10 units (bags) or doses of RBCs wereadministered for the RBC event, enter “11.”If unable to determine the number of RBC units (bags) ordoses administered for the RBC event, enter default zz. |
| 20 | clinind3 | For RBC event 3 what was the clinical indication documented by the physician/APN/PA for the RBC transfusion event?1. Bleeding2. No bleeding, but evidence of inadequate oxygen delivery3. Other99.No documentation of clinical indication for the RBC transfusion | 1,2,3,99If 99, go to nonorbc  | The clinical indication for the transfusion must be documented within 24 hours after the start of the transfusion event.Select "1" if there is documentation of ‘hemorrhagic shock' or evidence of acute hemorrhage and hemodynamic instability orinadequate oxygen delivery' or a 'massive transfusion protocol' wasused.Select “2” if there is documentation that the patient was transfused for a physiologic indication with evidence of inadequate oxygen delivery. Examples include documentation such as: shortness of breath at rest (with no other cause such as underlying pulmonary dysfunction), syncope or fainting (once hypovolemia is ruled out), tachycardia or hypotension (that volume replacement failed to correct), unresponsive or signs of organ ischemia (somnolence, or ST segment changes).Select "3" if there is an indication for RBCs but the documentation isunclear as to whether the blood was administered due to aphysiologic indication that caused an oxygen carrying deficit. |
| 21 | prehct3 | For RBC event 3, enter the pre-transfusion hematocrit result completed within 24 hours prior to start of the RBC transfusion. | \_\_ \_\_If <> zz, auto-fill prehgb3 as zz.z, and go to rbcnum3Abstractor can enter zz

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| **Warning if < 35** **or > 60** |

 | The result must be completed within 24 hours prior to the start of theRBC transfusion event 3.When recording the allowable value, enter 18 if the patient’shematocrit is 18%.**If a hematocrit was not obtained prior to the RBC transfusion, enter default zz.** |
| 22 | prehgb3 | For RBC event 3, enter the pre-transfusion hemoglobin result completed within 24 hours prior to start of the RBC transfusion. | \_\_ \_\_. \_\_Abstractor can enter zz.z

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| **Warning if < 5** **or > 25** |

 | The hemoglobin result must be completed within 24 hours prior to the start of the RBC transfusion event 3. Hemoglobin (Hb), the main component of red blood cells, is a protein that carries oxygen away from the lungs and carbon dioxide back to the lungs. Normal values are between 11.5 to 15.5 mg/dL, but vary by age, gender, and testing laboratory.**If a hemoglobin was not obtained prior to the RBC transfusion, enter default zz.z.** |  |
| 23 | rbcnum3 | For RBC event 3, what was the total number of RBC units (bags) or doses transfused?  | \_\_ \_\_Abstractor can enter zz

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| > 0 and < 12 |

 | Calculate the total number of units (bags) or doses that wereadministered (not ordered) for RBC Event 3. If the number of units (bags) or doses ordered for the RBC Event 3 is different from the number of units (bags) or doses administered,select the number of units (bags) or doses administered.If more than 10 units (bags) or doses of RBCs wereadministered for the RBC event, enter “11.”If unable to determine the number of RBC units (bags) ordoses administered for the RBC event, enter default zz. |
| 24 | nonorbc | Was any RBC unit transfused prior to Anesthesia Start Time or after Anesthesia End Time?  | 1,\*2**\*If 2, go to end** | **For the purposes of this pilot, RBC unit level data will not be collected for RBC transfusion during the intraoperative period (from Anesthesia Start Time through Anesthesia End Time).****If any RBC unit was transfused prior to Anesthesia Start Time or after Anesthesia End Time, answer “1.”** |
|  |  | **The next series of questions ask for unit level information for the first unit of RBCs transfused prior to Anesthesia Start Time or after Anesthesia End Time.**  |  |  |
| 25 | rbcdt1rbctm1 | Enter the transfusion start date and time for the first RBC unit administered. | mm/dd/yyyy

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| > = arivldt and < = dtofdc |

\_\_\_\_\_\_UMTAbstractor can enter 99:99 | Enter the exact date. If the transfusion start time is unable to be determined, enter 99:99. |
| 26 | rbcordr1 | Was there documentation of an order to transfuse the first RBC unit prior to the transfusion? | 1,2 | **A verbal or telephone order that was written prior to the transfusion is acceptable.**The Transfusion Order must be associated with the first RBC transfusion for Event 1. For example, if a patientreceived RBCs, the abstractor will select the first order for RBCs"Transfuse one unit of RBCs" as RBC Event ID #1. Select “no” if there is only an order to T & C or T & S.Note: Transfusion Order is written per event and may apply to morethan one unit (bag) or dose. For example: An order written to"Transfuse two doses of RBCs" would apply to both units that wereadministered. |
| 27 | rbcid1 | Was there documentation that two unique patient identifiers were checked or that an automated identification system was used? | 1,2 | * *Patient ID Verification* can be documented by the signature of two persons that attest that two unique patient identifiers were checked to verify the identification of the patient prior to the transfusion or the signature of one person and an automated identification device.
* **Patient identifiers that could be used include: name, date of birth, patient identification number or unique identifier given at the time the crossmatch was drawn.**
* The patient room number should not be used to identify the patient.
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| 28 | rbcbp1 | Was the BP monitored pre-transfusion, within 15 minutes of the initiation of the transfusion, and within one hour of transfusion completion? | 1,2 | **Blood pressure must be recorded at the following times: pre-transfusion, within 15 minutes of the initiation of the transfusion and within one hour of transfusion completion.** To select "1", all BP recordings must be documented.* The pre-transfusion BP must be within one hour of the Transfusion Start Time.
* Vitals documented at the completion of the transfusion are

considered “within one hour of transfusion completion". |
| 29 | rbctemp1 | Was the temperature monitored pre-transfusion, during the transfusion, within four hours of transfusion completion? | 1,2 | **Temperature must be recorded at all of the following times: pre-transfusion, during the transfusion and within four hours of transfusion completion. To select "1", all temperature recordings must be documented.*** The pre-transfusion BP and temperature must be within one hour of the Transfusion Start Time.
* Vitals documented at the completion of the transfusion are considered “within four hours of transfusion completion".
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