**Appendix 5: Feasibility Matrix**

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| --- | --- | --- | --- | --- |
| **Variable Name** | **Types of data, data sources and data attributes** | **Data completeness** How likely that structured data is available and extractable? | **Data correctness** How likely is that structured  data is accurate and reliable? | **Data normalization** How likely is the data to be encoded in a standard terminology? |
| Date of Birth | • Demographic data | 5 Very likely | 5 Very likely | 5 Very likely |
| Sex | • Demographic data | 5 Very likely | 5 Very likely | 5 Very likely |
| Creatinine | • Laboratory test results (current admission) • Laboratory test results (prior to current admission) | 4 Likely | 5 Very likely | 4 Likely |
| Height | • Vital signs (most recent) | 4 Likely | 5 Very likely | 4 Likely |
| Weight | • Vital signs (most recent) | 4 Likely | 5 Very likely | 4 Likely |
| Hepatic Failure | • Active Diagnoses • Laboratory test results (current admission) • Laboratory test results (prior to current admission) | 3 Somewhat likely | 5 Very likely | 4 Likely |
| Previous PCI, This Admission | • Interventional cardiology procedures (current admission) • Interventional cardiology procedures (prior to current admission, at a transferring hospital) | 3 Somewhat likely | 4 Likely | 4 Likely |
| Diabetes Requiring Medication | • Active medications (prior to current admission) | 3 Somewhat likely | 3 Somewhat likely | 3 Somewhat likely |
| Vessels Diseased | • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) • Interventional cardiology findings (current admission) • Interventional cardiology findings (prior to current admission) | 3 Somewhat likely | 3 Somewhat likely | 2 Unlikely |
| Renal Failure, Dialysis | • Non-surgical procedures (dialysis) | 2 Unlikely |  |  |
| Any Other Previous Cardiac Surgery | • Surgical history | 2 Unlikely |  |  |
| Previous CABG - No Patent Grafts | • Surgical history • Surgical procedures (current admission) • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) • Interventional cardiology findings (current admission) • Interventional cardiology findings (prior to current admission) | 2 Unlikely |  |  |
| Previous CABG - Patent Grafts | • Surgical history • Surgical procedures (current admission) • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) • Interventional cardiology findings (current admission) • Interventional cardiology findings (prior to current admission) | 2 Unlikely |  |  |
| Previous Valve Surgery | • Surgical history | 2 Unlikely |  |  |
| Ejection Fraction | • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) • Interventional cardiology findings (current admission) • Interventional cardiology findings (prior to current admission) | 2 Unlikely |  |  |
| Any Previous Organ Transplant | • Surgical history | 2 Unlikely |  |  |
| Cerebrovascular Disease | • Medical history • Surgical history • Surgical procedures (current admission) • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) | 1 Very unlikely |  |  |
| Heart Transplant Candidate | • Transplant planning data | 1 Very unlikely |  |  |
| Congestive Heart Failure, Current | • Active diagnoses • Medical history • Active medications (current admission) • Symptoms (within defined timeframes prior to cardiac surgery)  • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) | 1 Very unlikely |  |  |
| Congestive Heart Failure, Past | • Active diagnoses • Medical history • Active medications (current admission) • Symptoms (within defined timeframes prior to cardiac surgery)  • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) | 1 Very unlikely |  |  |
| Stent Thrombosis | • Active Diagnoses • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) • Symptoms (current admission) | 1 Very unlikely |  |  |
| Peripheral Vascular Disease | • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) • Surgical history • Physical exam findings (current admission) • Physical exam findings (prior to current admission) | 1 Very unlikely |  |  |
| Previous MI (most recent) | • Active diagnoses (date/time of of symptom onset) • Medical history (date/time of symptom onset) | 1 Very unlikely |  |  |
| Emergency Transfer to OR after DX Cath | • Diagnostic imaging studies (current admission) • Surgical procedures (current admission) + surgical priority • Patient location within the facility (current admission) | 1 Very unlikely |  |  |
| Emergency Transfer to OR after PCI | • Interventional cardiology procedures (current admission) • Surgical procedures (current admission) + surgical priority • Patient location within the facility (current admission) | 1 Very unlikely |  |  |
| Malignant Ventricular Arrhythmia | • Ressuscitation documentation (current admission) • Ressuscitation documentation (within defined timeframes prior to cardiac surgery) • Medication administration record (current admission) • Active diagnoses (onset date and time) | 1 Very unlikely |  |  |
| Chronic Obstructive Pulmonary Disease | • Active diagnoses • Active medications (prior to current admission) • Pulmonary function test results (current admission) • Pulmonary function test results (prior to current admission) • Laboratory test results (current admission) • Laboratory test results (prior to current admission) • Vital signs | 1 Very unlikely |  |  |
| Extensive Aortic Atherosclerosis | • Diagnostic imaging results (current admission) • Diagnostic imaging results (prior to current admission) | 1 Very unlikely |  |  |
| Hemodynamic Instability at Time of Procedure – Shock | • Vital signs (closest and prior to cardiac surgery) • Mechanical support devices applied (current admission) • Medication administration record • Surgical procedures (current admission) | 1 Very unlikely |  |  |