**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 |   |   |