### Patient ID:

<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
<th>Demographics Tab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>O Male</td>
</tr>
<tr>
<td></td>
<td>O Female</td>
</tr>
<tr>
<td></td>
<td>O Unknown</td>
</tr>
<tr>
<td><strong>Patient Gender Identity</strong></td>
<td>O Male</td>
</tr>
<tr>
<td></td>
<td>O Female</td>
</tr>
<tr>
<td></td>
<td>O Female-to-Male (FTM)/Transgender Male/Trans Man</td>
</tr>
<tr>
<td></td>
<td>O Male-to-Female (MTF)/Transgender Female/Trans Woman</td>
</tr>
<tr>
<td></td>
<td>O Genderqueer, neither exclusively male nor female</td>
</tr>
<tr>
<td></td>
<td>O Additional gender category or other. _________________</td>
</tr>
<tr>
<td></td>
<td>O Did not disclose.</td>
</tr>
<tr>
<td><strong>Patient-Identified Sexual Orientation</strong></td>
<td>O Straight or heterosexual</td>
</tr>
<tr>
<td></td>
<td>O Lesbian or gay</td>
</tr>
<tr>
<td></td>
<td>O Bisexual</td>
</tr>
<tr>
<td></td>
<td>O Queer, pansexual, and/or questioning</td>
</tr>
<tr>
<td></td>
<td>O Something else; please specify: _________________</td>
</tr>
<tr>
<td></td>
<td>O Don't know</td>
</tr>
<tr>
<td></td>
<td>O Declined to answer</td>
</tr>
<tr>
<td><strong>Date of Birth</strong></td>
<td><em><strong>/</strong></em>/______ (MM/DD/YYYY)</td>
</tr>
<tr>
<td><strong>Patient Postal Code</strong></td>
<td>__________ - __________</td>
</tr>
<tr>
<td><strong>Payment Source</strong></td>
<td>O Medicare</td>
</tr>
<tr>
<td></td>
<td>O Medicaid</td>
</tr>
<tr>
<td></td>
<td>O Medicare – Private/HMO/PPO/Other</td>
</tr>
<tr>
<td></td>
<td>O Medicaid – Private/HMO/PPO/Other</td>
</tr>
<tr>
<td></td>
<td>O VA/CHAMPVA/Tricare</td>
</tr>
<tr>
<td></td>
<td>O Self-pay/No Insurance</td>
</tr>
<tr>
<td></td>
<td>O Other/Not Documented/UTD</td>
</tr>
</tbody>
</table>

### RACE AND ETHNICITY

<table>
<thead>
<tr>
<th>Demographics Tab</th>
</tr>
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<tbody>
<tr>
<td><strong>Race</strong></td>
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</tr>
</tbody>
</table>

| **Hispanic Ethnicity** | O Yes |
|                       | O No/UTD |

| **If yes,** | O Mexican, Mexican American, Chicano/a |
|             | O Puerto Rican |
|             | O Cuban |
|             | O Another Hispanic, Latino, or Spanish Origin |

### ARRIVAL AND ADMISSION INFORMATION

<table>
<thead>
<tr>
<th>Admission Tab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arrival Date/Time</strong></td>
</tr>
</tbody>
</table>

| **Point of Origin for Admission** | O Home |
|                                   | O Transfer from a Hospital (Different Facility) |
|                                   | O Clinic |
|                                   | O Transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) |
|                                   | O Transfer from another Health Care Facility |
|                                   | O Non-Healthcare Facility Point of Origin |
|                                   | O Transfer from Hospice and is Under a Hospice Plan of Care or Enrolled in a Hospice Program |
|                                   | O Information not available |

<p>| <strong>Referring hospital arrival Date/Time</strong> | <em><strong>/</strong></em>/______ :__ |
|                                         | O Unknown |</p>
<table>
<thead>
<tr>
<th>Referring hospital discharge Date/Time</th>
<th><em><strong>/</strong></em>/________</th>
<th>o Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial point of hospital arrival</td>
<td>o Emergency Department</td>
<td>o Cath Lab/Operating Room</td>
</tr>
<tr>
<td></td>
<td>o Direct to inpatient unit</td>
<td>o Other</td>
</tr>
<tr>
<td></td>
<td>o Intensive Care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Non-ICU</td>
<td></td>
</tr>
</tbody>
</table>

### MEDICAL HISTORY

#### Medical History (Select all that apply):

- None
- Atherosclerotic vascular disease
  - Cerebrovascular disease (including previous TIA/CVA)
  - Coronary Artery Disease (CAD)
  - Peripheral Arterial Disease
  - Prior CABG
  - Prior MI
  - Prior PCI
- Atrial fibrillation or flutter
- Chronic Kidney Disease
  - Chronic hemodialysis
- Chronic pulmonary disease
- Chronic liver disease
- Smoking/Vaping
  - Cigarette use
  - e-cigarette use
  - Vaping
- Diabetes Mellitus
- Hypertension
- Heart Failure (HF)
  - Reduced EF
  - Ischemic Cardiomyopathy
  - Nonischemic Cardiomyopathy
  - History of heart transplantation
  - Presence of durable left ventricular assist device (LVAD)
  - Presence of Implantable cardioverter-defibrillator (ICD)
  - Presence of biventricular pacemaker (CRT)
  - Preserved EF
- Cardiac amyloidosis
- Congenital Heart Disease
- Hypertrophic cardiomyopathy
- Isolated right ventricular failure
- Pulmonary hypertension
- Valvular heart disease
- Emerging Infectious Disease
  - MERS
  - SARS-COV-1
  - SARS-COV-2 (COVID-19)
  - Other infectious respiratory pathogen

### MEDICATIONS AT HOSPITAL ADMISSION

#### Medications Used Prior to Admission: [Select all that apply]

- No meds prior to admission
- ACE Inhibitor
- Angiotensin receptor blocker (ARB)
- Angiotensin Receptor Neprilysin Inhibitor (ARNI)
- Anticoagulation Therapy
  - Direct oral anticoagulant
  - Warfarin
  - Other
- Antihyperglycemic medications:
  - Insulin
  - Oral
- Antiplatelet Medication:
  - Aspirin
  - P2Y12 Inhibitors
  - Other Antiplatelet
- Beta-Blocker
- Home IV Inotropes
- Loop Diuretic
- Mineralocorticoid Receptor Antagonist (MRA)
- SGLT2 Inhibitor
- GLP-1 agonist
- Unknown/Unable to Determine

### EXAMS/LABS AT ADMISSION

#### Date/Time of vital signs | ___/___/________ | o Not Documented

<table>
<thead>
<tr>
<th>Initial Vital signs</th>
<th>Height</th>
<th>_________</th>
<th>o inches</th>
<th>o cm</th>
<th>o Not Documented</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Weight</td>
<td>_________</td>
<td>o Lbs.</td>
<td>o Kgs.</td>
<td>o Not Documented</td>
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<tr>
<td></td>
<td>BMI</td>
<td>_________</td>
<td>(Automatically Calculated)</td>
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</tr>
<tr>
<td></td>
<td>BSA</td>
<td>_________</td>
<td>(Automatically Calculated)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Heart Rate</td>
<td>_________</td>
<td>bpm</td>
<td>o Not Documented</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BP</td>
<td><em><strong>/</strong></em></td>
<td>mmHg (systolic/diastolic)</td>
<td>o Not Documented</td>
<td></td>
</tr>
<tr>
<td>Admission Labs</td>
<td>Temperature</td>
<td>__________</td>
<td>O C</td>
<td>O F</td>
<td>O Not Documented</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>------------</td>
<td>-----</td>
<td>-----</td>
<td>------------------</td>
</tr>
<tr>
<td>Lactate</td>
<td>(mmol/L)</td>
<td>Unavailable</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hgb</td>
<td>g/dL</td>
<td>g/L</td>
<td>Unavailable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NT-proBNP</td>
<td>pg/mL</td>
<td>ng/L</td>
<td>Unavailable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BNP</td>
<td>pg/mL</td>
<td>pmol/L</td>
<td>ng/L</td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td>SCr</td>
<td>mg/dL</td>
<td>µmol/L</td>
<td>Unavailable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALT</td>
<td>IU/L</td>
<td>Unavailable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platelet Count</td>
<td>(mm³)</td>
<td>Unavailable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Troponin</td>
<td>ng/L</td>
<td>ng/mL</td>
<td>ug/L</td>
<td>Normal</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Random Blood Glucose</td>
<td>(mg/dL)</td>
<td>Unavailable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most favorable neurological status at admission:
- Conscious without severe disability
- Conscious with severe disability
- Comatose
- Unable to assess due to sedation
- Unknown/Not Documented

### SHOCK ONSET

<table>
<thead>
<tr>
<th>Certainty of shock etiology</th>
<th>Cardiogenic shock was a clear contributor to the shock state</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where was the onset of Cardiogenic Shock present?</td>
<td>Shock present on participating hospital arrival</td>
</tr>
<tr>
<td>Cardiac arrest prior to shock onset?</td>
<td>Yes</td>
</tr>
<tr>
<td>Most favorable neurological status after the arrest and prior to hospital discharge</td>
<td>Conscious without severe disability</td>
</tr>
<tr>
<td>Onset of shock (Date/Time):</td>
<td><strong>/</strong>/_______ :<strong>:</strong></td>
</tr>
<tr>
<td>Was a multidisciplinary shock team involved in patient management?</td>
<td>Yes</td>
</tr>
<tr>
<td>If multidisciplinary shock team was involved, select the timeframe</td>
<td>Within 3hrs of shock onset</td>
</tr>
</tbody>
</table>

SCAI Shock Stage at Onset (first 6hrs)
- O Deceased
- O Stage B
- O Stage C
- Stage D
- Stage E
- ND/Unable to Determine

SCAI Shock Stage Serial assessment (Assessed at 6h-12h)
- O Deceased
- O Stage B
- O Stage C
- Stage D
- Stage E
- ND/Unable to Determine

Presenting Physiology
- O Biventricular Failure
- O Left Ventricular Failure
- O Right Ventricular Failure
- Primary Other Cardiac (Arrhythmia, Valvular Stenosis, etc.)
- Not Documented

Cardiogenic shock category
- O Acute, de novo HF
- O Acute-on-chronic HF
- Unable to determine
## Etiologies and Contributors to Cardiogenic Shock:

- None of the causes below
- Acute Transplant Rejection
- ACS/AMI
  - STEMI
  - NSTEMI
- Arrhythmia
  - Bradyarrhythmia
  - Tachyarrhythmia
- COVID-19 related complication
- Isolated Right Heart Failure
  - Acute PE
  - Pulmonary HTN

## MEDICATIONS AT SHOCK ONSET

**Medications administered at Onset of Shock** *(Select all that apply)*

- None
- Anticoagulation Therapy
  - Direct oral anticoagulant
  - Warfarin
  - IV heparin
  - Other
- Antiplatelet Medication:
  - Aspirin
  - P2Y12 Inhibitors
  - Other Antiplatelet

## EXAMS/LABS AT SHOCK ONSET

**Enter parameters closest to shock onset.** *(To be entered only if shock onset was after arrival)*

**Date/Time of vital signs (closest to shock onset)**

**Height**
- _______ inches
- _______ cm

**Weight**
- _______ lbs
- _______ kg

**BMI**
- _______ (Automatically Calculated)

**BSA**
- _______ (Automatically Calculated)

**Heart Rate**
- _______ bpm

**BP**
- ___ / ___ mmHg (systolic/diastolic)

**Temperature**
- _______ °C
- _______ °F

**Lactate**
- _______ (mmol/L)

**Hgb**
- _______ g/dL
- _______ g/L

**NT-proBNP**
- _______ pg/mL
- _______ ng/L

**BNP**
- _______ pg/mL
- _______ pmol/L
- _______ ng/L

**SCr**
- _______ mg/dL
- _______ µmol/L

**ALT**
- _______ IU/L

**Platelet Count**
- _______ (mm$^3$)

**Troponin (Peak related to shock onset)**
- _______ ng/mL
- _______ ug/L
- _______ ng/L

**Random Blood Glucose**
- ______________ (mg/dL)

## IN-HOSPITAL CARE

**Medications at Shock Onset Tab**

- Vasoactive Medications (IV Continuous, during first 6hrs after shock onset)
  - Dobutamine
  - Dopamine
  - Epinephrine
  - Levosimendan
  - Milrinone
  - Nitroprusside
  - Norepinephrine
  - Phenylephrine
  - Vasopressin
- Not Documented
## Cardiovascular Procedures during this hospitalization

- No Procedures
- Cardiac Cath/Cardiogenic Shock (CRF) 
  - Date/Time of transplantation: ___/___/___ __:__
- Coronary Artery Bypass Graft (CABG) 
  - Date/Time of CABG: ___/___/___ __:__
- Electrophysiology (EP) procedure 
  - Date/Time of EP: ___/___/___ __:__
- Percutaneous Cardiac Intervention (PCI) 
  - Date/Time of PCI: ___/___/___ __:__
- Pulmonary embolectomy (surgical or transcatheter) 
- Targeted temperature management 
- Other Procedures/Advanced therapies (Specify): ________________________

### Was a right heart catheterization or pulmonary artery catheterization performed?
- Date/Time of first RHC/PAC: ___/___/___ __:__
- Yes ☐ No ☐ Unknown/Not Documented ☐

### Was the PA catheter used for a period of hemodynamic monitoring outside the Cath Lab/OR?
- Date/Time of implantation: ___/___/___ __:__
- Yes ☐ No ☐ Unknown/Not Documented ☐

### Was the patient managed with invasive mechanical ventilation at any time during the hospitalization?
- Date/Time of first intubation related to this hospitalization: ___/___/___ __:__
- Yes ☐ No ☐ Unknown/Not Documented ☐

### Was patient managed with renal replacement therapy at any time during the hospitalization?
- Date/Time of implantation: ___/___/___ __:__
- Yes ☐ No ☐ Unknown/Not Documented ☐

**Primary Indications for advanced renal therapy**
- Acidemia ☐
- Hyperkalemia ☐
- Severe uremia ☐
- Volume overload causing hemodynamic or respiratory compromise ☐
- Volume overload in the absence of any of the above ☐
- Other (specify) ________________________
- Unknown/Not Documented ☐
### Data for Patient transferred to ICU from any other floor in the hospital

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was the patient admitted to ICU at any point during this hospitalization?</td>
<td>☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICU Admission Date/Time</td>
<td>/<strong>/</strong>  :__</td>
<td></td>
<td>Unknown</td>
</tr>
<tr>
<td>ICU discharge (transfer out) Date/Time</td>
<td>/<strong>/</strong>  :__</td>
<td></td>
<td>Unknown</td>
</tr>
<tr>
<td>Number of days patient was in ICU (auto-calc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Clinical Outcomes

#### In-Hospital Tab

- **Severe/Moderate GUSTO bleeding event:**
  - Date/Time GUSTO detected: /__/__  :__
  - Yes ☐ No ☐ Unknown/ND

- **Intracranial Hemorrhage**
  - Date/Time Intracranial Hemorrhage detected: /__/__  :__
  - Yes ☐ No ☐ Unknown/ND

- **Cardiac Arrest**
  - Date/Time Cardiac Arrest detected: /__/__  :__
  - Yes ☐ No ☐ Unknown/ND

- **Stroke**
  - Date/Time Stroke detected: /__/__  :__
  - Yes ☐ No ☐ Unknown/ND

### Complications from procedures during this admission:

- No complications from procedures
- Acute Limb ischemia
- Amputation
- Fasciotomy
- Arterial non-CNS thrombosis
- Bleeding – Vascular access site – MCS-Related
- Bleeding – Vascular access site – Other access site
- Bleeding – Other site
- Cardiac tamponade
- Vascular injury (any)
- Venous thromboembolism
- Other (Specify): __________

### Mechanical Circulatory Support Form

#### MCS Tab

- **Implanted Device – VA ECMO**
  - ☐ ECMO (VA)

- **Date/Time of Implant Procedure – VA ECMO**
  - /__/__  :__ (MM/DD/YYYY HH:MM)
  - ☐ Not Documented

- **Device explant date/Time VA ECMO:**
  - /__/__  :__ (MM/DD/YYYY HH:MM)

- **Arterial Implant Site - VA ECMO:**
  - ☐ Right ☐ Left ☐ Central
  - ☐ Axillary ☐ Femoral

- **Venous Implant Site - VA ECMO:**
  - ☐ Right ☐ Left ☐ Central
  - ☐ Axillary ☐ Femoral

- **Receiving CPR at time of Implant – VA ECMO**
  - ☐ Yes ☐ No ☐ Unknown/ND

- **Reason for device implant – VA ECMO** *(Select all that apply)*
  - Critical Left Main/Severe CAD
  - Incessant Arrhythmia
  - Refractory Ischemia
  - Shock
  - Severe Heart Failure without Shock
  - Severe Valvular Dysfunction
  - Supported PCI
  - Ventricular Septal Defect
  - Left-ventricular venting during VA-ECMO
  - Other reason for device implant (Specify): __________

- **Vascular closure applied – VA ECMO:**
  - ☐ Collagen-based plug with MANTA
<table>
<thead>
<tr>
<th>Implanted Device – IABP</th>
<th>□ IABP</th>
<th>○ 25 cc</th>
<th>○ 30 cc</th>
<th>○ 34 cc</th>
<th>○ 40 cc</th>
<th>○ 50 cc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/Time of Implant Procedure – IABP</td>
<td><em><strong>/</strong></em>/______  <strong>:</strong> (MM/DD/YYYY HH:MM)</td>
<td>□ Not Documented</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Device explant date/Time IABP:</td>
<td><em><strong>/</strong></em>/______  <strong>:</strong> (MM/DD/YYYY HH:MM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial Implant Site - IABP:</td>
<td>o Right  o Left  o Central  ○ Axillary  ○ Femoral</td>
<td></td>
<td></td>
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<tr>
<td>Receiving CPR at time of Implant - IABP</td>
<td>o Yes  o No  o Unknown/ND</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Reason for device implant – IABP (Select all that apply)</td>
<td>□ Critical Left Main/Severe CAD  □ Incessant Arrhythmia  □ Refractory Ischemia  □ Shock  □ Severe Heart Failure without Shock  □ Severe Valvular Dysfunction  □ Supported PCI  □ Ventricular Septal Defect  □ Left-ventricular venting during VA-ECMO  □ Other reason for device implant (Specify): __________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vascular closure applied – IABP:</td>
<td>□ Collagen-based plug with MANTA  □ Dry-based  □ Manuel compression (Femostop)  □ Planned open surgical repair  □ Suture-based (Proglide, Prostar XL)  □ Other (Specify): __________</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Implanted Device – Impella</td>
<td>□ Impella</td>
<td>□ Impella 2.5  □ Impella CP  □ Impella ECP  □ Impella 5.0  □ Impella 5.5  □ Impella RP</td>
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<tr>
<td>Date/Time of Implant Procedure – Impella</td>
<td><em><strong>/</strong></em>/______  <strong>:</strong> (MM/DD/YYYY HH:MM)</td>
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<tr>
<td>Device explant date/Time Impella:</td>
<td><em><strong>/</strong></em>/______  <strong>:</strong> (MM/DD/YYYY HH:MM)</td>
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<td></td>
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</tr>
<tr>
<td>Arterial Implant Site - Impella:</td>
<td>o Right  o Left  o Central  ○ Axillary  ○ Femoral</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving CPR at time of Implant - Impella</td>
<td>o Yes  o No  o Unknown/ND</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reason for device implant – Impella (Select all that apply)</td>
<td>□ Critical Left Main/Severe CAD  □ Incessant Arrhythmia  □ Refractory Ischemia  □ Shock  □ Severe Heart Failure without Shock  □ Severe Valvular Dysfunction  □ Supported PCI  □ Ventricular Septal Defect  □ Left-ventricular venting during VA-ECMO  □ Other reason for device implant (Specify): __________</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Vascular closure applied – Impella:</td>
<td>□ Collagen-based plug with MANTA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Implant Device – iVAC

- Dry-based
- Manuel compression (Femostop)
- Planned open surgical repair
- Suture-based (Proglide, Prostar XL)
- Other (Specify): __________

#### Date/Time of Implant Procedure – iVAC

__/__/______  __:__ (MM/DD/YYYY HH:MM)

- Not Documented

#### Device explant date/Time iVAC:

__/__/______  __:__ (MM/DD/YYYY HH:MM)

- Arterial Implant Site - iVAC:
  - Right
  - Left
  - Central

- Venous Implant Site - iVAC:
  - Right
  - Left
  - Central

- Receiving CPR at time of Implant – iVAC
  - Yes
  - No
  - Unknown/ND

#### Reason for device implant – iVAC

- Critical Left Main/Severe CAD
- Incessant Arrhythmia
- Refractory Ischemia
- Shock
- Severe Heart Failure without Shock
- Severe Valvular Dysfunction
- Supported PCI
- Ventricular Septal Defect
- Left-ventricular venting during VA-ECMO
- Other reason for device implant (Specify): __________

#### Vascular closure applied – iVAC:

- Collagen-based plug with MANTA
- Dry-based
- Manuel compression (Femostop)
- Planned open surgical repair
- Suture-based (Proglide, Prostar XL)
- Other (Specify): __________

### Implant Device – TandemHeart

- TandemHeart

#### Date/Time of Implant Procedure – TandemHeart

__/__/______  __:__ (MM/DD/YYYY HH:MM)

- Not Documented

#### Device explant date/Time TandemHeart:

__/__/______  __:__ (MM/DD/YYYY HH:MM)

- Arterial Implant Site - TandemHeart:
  - Right
  - Left
  - Central

- Venous Implant Site - TandemHeart:
  - Right
  - Left
  - Central

- Receiving CPR at time of Implant – TandemHeart
  - Yes
  - No
  - Unknown/ND

#### Reason for device implant – Tandemheart

- Critical Left Main/Severe CAD
- Incessant Arrhythmia
- Refractory Ischemia
- Shock
- Severe Heart Failure without Shock
- Severe Valvular Dysfunction
- Supported PCI
- Ventricular Septal Defect
- Left-ventricular venting during VA-ECMO
<table>
<thead>
<tr>
<th>Reason for device implant – Temporary surgical VAD (e.g. CentriMag) (Select all that apply)</th>
<th>Vascular closure applied – Temporary surgical VAD (e.g. CentriMag):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Left Main/Severe CAD</td>
<td>Collagen-based plug with MANTA</td>
</tr>
<tr>
<td>Incessant Arrhythmia</td>
<td>Dry-based</td>
</tr>
<tr>
<td>Refractory Ischemia</td>
<td>Manuel compression (Femostop)</td>
</tr>
<tr>
<td>Shock</td>
<td>Planned open surgical repair</td>
</tr>
<tr>
<td>Severe Heart Failure without Shock</td>
<td>Suture-based (Proglide, Prostar XL)</td>
</tr>
<tr>
<td>Severe Valvular Dysfunction</td>
<td>Other (Specify):</td>
</tr>
</tbody>
</table>
- Shock
- Severe Heart Failure without Shock
- Severe Valvular Dysfunction
- Supported PCI
- Ventricular Septal Defect
- Left-ventricular venting during VA-ECMO
- Other reason for device implant (Specify): __________

Vascular closure applied – Other:
- Collagen-based plug with MANTA
- Dry-based
- Manuel compression (Femostop)
- Planned open surgical repair
- Suture-based (Proglide, Prostar XL)
- Other (Specify): __________

**PRE-ECMO EVENTS**

Select any current device(s) supporting patient pre-ECMO

[Device(s) already selected from the MCS tab will be auto-populated here]

- None
- Intra-Aortic Balloon Pump (IABP)
- Impella (any)
- Tandem Heart
  - Left
  - Right
- Temporary surgical VAD (e.g. CentriMag)
  - Left
  - Right
- Other (Specify): __________

Circumstances of ECMO Cannulation (select all that apply):

- Planned for patient deterioration (Prophylactic)
- Emergent (ECPR or Salvage)
- Failure to Wean from CPB
- Progression of Illness Despite Established VAD/
  Temporary Mechanical Circulatory Support / IABP

GCS Score (if assessed immediately pre-ECMO)

__________

- GCS not assessed

Is there an ELSO record for this patient?

- Yes
- No
- Unknown/Not Documented

If yes, enter ELSO Patient Record Number (optional)

____________

**VASCULAR ACCESS & INITIATION OF ECMO**

Date/Time ECMO started

/ /

- Unknown

Type of cannulation

- Central
- Peripheral
- Unknown/Not Documented

Purpose

- Drainage
- Reinfusion
- Unknown/Not Documented

Cannulation anatomical site (check all that apply)

[repeat for each cannula placed]

- Right internal jugular vein
- Right Femoral Artery
- Left Femoral Artery
- Right Femoral Vein
- Left Femoral Vein
- Other (Specify): __________
- Aorta (Central)
- Right Atrium (Central)
- Left Atrium (Central)
### Pulmonary Artery (Central)

- [ ] Pulmonary Artery (Central)
- [ ] Unknown/Not Documented

### Date/Time of insertion

<table>
<thead>
<tr>
<th>Date/Time of insertion</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>/</strong>/_______ <em><strong>:</strong></em></td>
<td></td>
</tr>
</tbody>
</table>

### Was this cannula removed for a reason other than death?

- [ ] Yes
- [ ] No
- [ ] Not Documented

### Date/Time of removal

<table>
<thead>
<tr>
<th>Date/Time of removal</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>/</strong>/_______ <em><strong>:</strong></em></td>
<td></td>
</tr>
</tbody>
</table>

---

### LV Decompression

#### LV Decompression Procedures

- [ ] None/Not Performed
- [ ] Atrial Septostomy
  - Date/Time: __/__/_______ ___:___
- [ ] LA Vent
  - Date/Time: __/__/_______ ___:___
- [ ] LV Vent
  - Date/Time: __/__/_______ ___:___
- [ ] PA Vent
  - Date/Time: __/__/_______ ___:___
- [ ] Intra-Aortic Balloon Pump
  - Date/Time: __/__/_______ ___:___
- [ ] Transaortic Valve Impella
  - Date/Time: __/__/_______ ___:___
- [ ] L-VAD
  - Date/Time: __/__/_______ ___:___
- [ ] R-VAD
  - Date/Time: __/__/_______ ___:___
- [ ] Other (Specify):
  - Date/Time: __/__/_______ ___:___

### Rationale for Decompression on ECLS (select one):

- [ ] Institutional routine
- [ ] Progressive Pulmonary Edema on CXR
- [ ] Lack of native ejection
- [ ] Decreased pulse pressure on Arterial Waveform
- [ ] Evidence of Ischemia
- [ ] Other (Specify): _________

---

### ECMO Cannulation Location (area)

#### ECMO Cannulation Location:

- [ ] Another hospital (pre-transfer)
- [ ] Ambulatory/Outpatient Area
- [ ] Adult cardiac ICU (CICU)
- [ ] Adult general ICU
- [ ] Cardiac Catheterization Lab
- [ ] Delivery Suite
- [ ] Diagnostic/Intervention. Area (excluding Cath Lab)
- [ ] Emergency Department (ED)
- [ ] Operating Room (OR)
- [ ] Post-Anesthesia Recovery Unit (PACU)
- [ ] Same-day Surgical Area
- [ ] Telemetry unit or Step-down unit
- [ ] Other (Specify) ______________
- [ ] Unknown/Not Documented

#### Team Member(s) Performing ECMO Cannulation:

- [ ] Anesthesiologist
- [ ] Intensive care physician
- [ ] ER Physician
- [ ] Perfusionist
- [ ] Surgeon (cardiac/cardiothoracic)
- [ ] Other (Specify) ______________
- [ ] Unknown/Not Documented

---

### ECMO circuit and components

#### Pump

- Pump name: ______________
- Manufacturer: ______________

#### Common device used (e.g., Cardiohelp)

- [ ] Yes
- [ ] No
- [ ] Unknown / Not Documented

#### Console/Drive unit

- Console Name/Type: ______________
- Console Manufacturer: ______________

#### Oxygenator

- Type/Name: ______________

---

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| **Safety features incorporated in the ECMO circuit for this event** |
|-----------------------------|-----------------------------|-----------------------------|
| Bridge                     | Transonic flow meter        |
| Bubble detectors            | Venous bladder and pump controller |
| O₂ saturation monitor       | Other (Specify): __________|
| Pressure alarms             |                             |

<table>
<thead>
<tr>
<th><strong>Was any component exchanged or replaced?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unknown/ Not Documented</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Component Exchanged</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Console</td>
</tr>
<tr>
<td>Heat Exchanger</td>
</tr>
<tr>
<td>Oxygenator</td>
</tr>
<tr>
<td>Other (Specify): ________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reason(s) for exchange</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Date/time of exchange</strong></th>
</tr>
</thead>
</table>

**Additional exchange(s)**

If applicable, multiple instances of Component Exchanged/Replaced repeat group can be added to the form

<table>
<thead>
<tr>
<th><strong>Component Exchanged #2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Console</td>
</tr>
<tr>
<td>Oxygenator</td>
</tr>
<tr>
<td>Other (Specify): ________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Exchange #2 reason</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Date/Time of exchange #2</strong></th>
</tr>
</thead>
</table>

**Neurologic injury or events detected during ECMO or after ECMO (Less than 6 weeks after separation from ECMO or by Hospital Discharge, which ever one comes first). (check all that apply):**

<table>
<thead>
<tr>
<th>Neurological injury or events detected during ECMO or after ECMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anoxic Brain Injury</td>
</tr>
<tr>
<td>Date/Time detected: <em><strong>/</strong></em>/_______ <em><strong>:</strong></em></td>
</tr>
<tr>
<td>Brain death</td>
</tr>
<tr>
<td>Date/Time detected: <em><strong>/</strong></em>/_______ <em><strong>:</strong></em></td>
</tr>
<tr>
<td>Cerebral Microbleeds</td>
</tr>
<tr>
<td>Date/Time detected: <em><strong>/</strong></em>/_______ <em><strong>:</strong></em></td>
</tr>
<tr>
<td>New clinical seizure(s)</td>
</tr>
<tr>
<td>Date/Time detected: <em><strong>/</strong></em>/_______ <em><strong>:</strong></em></td>
</tr>
<tr>
<td>Spinal cord ischemia</td>
</tr>
<tr>
<td>Date/Time detected: <em><strong>/</strong></em>/_______ <em><strong>:</strong></em></td>
</tr>
</tbody>
</table>

**Other Complications/Events**

[Relevant options already captured will be auto-populated]

**Device-Related Events**

<table>
<thead>
<tr>
<th>None</th>
<th>Oxygenator failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air embolism</td>
<td>Pump failure</td>
</tr>
<tr>
<td>Circuit clots</td>
<td>Other (Specify): ______</td>
</tr>
</tbody>
</table>

**Other ECMO complications/events**

<table>
<thead>
<tr>
<th>None</th>
<th>Oxygenator failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential hypoxia</td>
<td>Pump failure</td>
</tr>
<tr>
<td>(Harlequin syndrome)</td>
<td>Other (Specify): ______</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left ventricular distention</th>
<th>Pulmonary edema</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulmonary hemorrhage</td>
<td>Other (Specify): ______</td>
</tr>
</tbody>
</table>

**OUTCOMES / END OF EVENT**

<table>
<thead>
<tr>
<th><strong>ECMO Tab</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/Time ECMO ended: <em><strong>/</strong></em>/_______ <em><strong>:</strong></em></td>
</tr>
<tr>
<td>SAVE (Survival After Veno-Arterial ECMO) Score: ________________</td>
</tr>
</tbody>
</table>

**Reason(s) ECMO ended**

<table>
<thead>
<tr>
<th>Converted to other support</th>
<th>Significant deterioration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECMO complication</td>
<td>Transition to surgical LVAD</td>
</tr>
<tr>
<td>Limited resources</td>
<td>Transplant (Heart/Lung)</td>
</tr>
<tr>
<td>Patient (or family) refused treatment</td>
<td>Patient died</td>
</tr>
<tr>
<td>Patient recovered/improved</td>
<td>Other (specify): __________</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**DISCHARGE INFORMATION**

<table>
<thead>
<tr>
<th><strong>Discharge Tab</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge disposition: O Home</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Date/Time of Discharge from hospital:</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
</tbody>
</table>
| Most favorable neurological status at discharge | [ ] Not Documented without severe disability  
[ ] Conscious with severe disability  
[ ] Comatose  
[ ] Unable to assess due to sedation  
[ ] Unknown/Not Documented |
| If patient died, Date/Time of death | [ ] Not Documented |
| Primary cause of death | [ ] Cardiovascular  
[ ] Non-Cardiovascular  
[ ] Unknown |
| If Cardiovascular: | [ ] Sudden Cardiac Death  
[ ] Other Cardiovascular |
| If Non-Cardiovascular | [ ] Anoxic brain injury  
[ ] Other non-cardiovascular |
| If Other Health Care Facility: | [ ] Long Term Care Hospital (LTCH)  
[ ] Intermediate Care Facility (ICF)  
[ ] Other |

**SOCIAL DETERMINANTS OF HEALTH**

**Discharge Tab**

During this admission, was a standardized health related social needs form or assessment completed?  
[ ] Yes  
[ ] No/Not Documented

If yes, identify the areas of unmet social need. (select all that apply):  
[ ] None  
[ ] Education  
[ ] Employment  
[ ] Financial Strain  
[ ] Food  
[ ] Living Situation/Housing  
[ ] Mental Health  
[ ] Substance Abuse  
[ ] Transportation Barriers

END OF FORM