# Supplemental Materials

**Contents**

| Supplemental Table 1: Existing North American Cardiac Arrest Databases | | | | | |
|---|---|---|---|---|---|
| Database | Geographical Population | Years | Patient Population | Data Collected | Database Website |
| King County Cardiac Arrest Surveillance System (CASS) | Paramedic services in King County, Washington. United States<br><br>A large metropolitan population in the state of Washington | 1976 to present | Out-of-hospital arrests, all ages | Demographics, intra-arrest details, and outcomes including death at scene, hospital admission, and hospital discharge | https://kingcounty.gov/en/dept/dph/health-safety/health-centers-programs-services/emergency-medical-services/strategic-planning/cardiac-arrest-surveillance-system |
| Get With The Guidelines®-Resuscitation (GWTG®-R) | Participating hospitals within the United States<br><br>A diverse inclusion of hospitals across different US regions | 2000 to present | In-hospital cardiac arrest, all ages | Demographics, hospital characteristics, baseline and pre-arrest characteristics, intra-arrest details, limited post-arrest data, detailed outcomes | https://www.heart.org/en/professional/quality-improvement/get-with-the-guidelines/get-with-the-guidelines-resuscitation |
| Save Hearts in Arizona Registry and Education (AZ SHARE) | The state of Arizona in the United States (approximately 90% of the population) | 2004 to present | Out-of-hospital cardiac arrest, all ages | Demographics, intra-arrest characteristics, post-arrest care practice, detailed outcomes | https://www.azdhs.gov/preparedness/emergency-medical-services-trauma-system/save-hearts-az-registry-education/index.php |
| University of Ottawa Heart Institute Regional Cardiac Arrest Registry (Code ROSC) | Hospitals of the Champlain Local Health Integrated Network in Ottawa Canada | 2011 to present | Out-of-hospital cardiac arrests with non-shockable rhythms, adults | Post-arrest use of hypothermia, outcomes such as length of stay, survival, and neurologic status | https://www.ottawaheart.ca/healthcare-professionals/regional-and-national-programs/regional-cardiac-arrest-program-code-rosc |
| Cardiac Arrest Registry to | Participating hospitals | 2013 to present | Non-traumatic out-of-hospital | Demographics, hospital characteristics, | https://mycares.net/sitepages/aboutcares.jsp |

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| Enhance Survival (CARES) | within the United States<br><br>A diverse inclusion of hospitals and emergency medical services across the US | | cardiac arrest, all ages | arrest characteristics, intra-arrest characteristics, outcomes | |
| Resuscitation Outcomes Consortium Cardiac Arrest Epistry (ROC Epistry) | Participating hospitals in the United States and Canada<br><br>A diverse inclusion of hospitals | 2011 to 2015 | Out-of-hospital cardiac arrest, all ages | Demographics, hospital and emergency medical system characteristics, intra-arrest characteristics, pre-hospital interventions, outcomes | Contact the steering committee and registry administrators managing the data for access |
| Canada Resuscitation Outcomes Consortium (CanROC) | Participating hospitals in Canada<br><br>A diverse inclusion of hospitals | 2016 to present | Out-of-hospital cardiac arrest, all ages | Demographics, hospital and emergency medical system characteristics, Intra-arrest characteristics, pre-hospital interventions, outcomes | Contact the steering committee and registry administrators managing the data for access |

**Supplemental Table 2: STROBE Checklist**

STROBE Statement—checklist of items that should be included in reports of observational studies

| | Item No. | Recommendation | Location in manuscript | Relevant text from manuscript |
|---|---|---|---|---|
| **Title and abstract** | 1 | (*a*) Indicate the study's design with a commonly used term in the title or the abstract | Abstract | This is a multicenter, prospectively collected, observational cohort study of patients who have suffered IHCA and have been successfully resuscitated (achieved ROSC). |
| | | (*b*) Provide in the abstract an informative and balanced summary of what was done and what was found | Abstract | The study collects data on patient characteristics including pre-arrest frailty, arrest characteristics, and detailed information on post-arrest practices and outcomes. |
| **Introduction** | | | | |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported | Introduction | Existing cardiac arrest databases are not equipped to answer detailed questions about post-IHCA care. Our project, "Discover In-Hospital Cardiac Arrest (Discover IHCA)," is designed to fill this gap. |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | Introduction | This report describes Discover IHCA, a novel multicenter collaboration endorsed by the Society of Critical Care Medicine (SCCM) Discovery Network aimed at characterizing post-IHCA practices, specifically focusing on temperature control and prognostication. |
| **Methods** | | | | |
| Study design | 4 | Present key elements of study design early in the paper | Discover IHCA Summary and Study Design | Discover IHCA is a multicenter, prospective observational study designed and conducted in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines (Supplemental e-Table 2), and is registered as an observational study (NCT06207201). The study is primarily descriptive, exploring variation in usual practices following IHCA. |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection | Discover IHCA Summary and Study Design | Data collection is being conducted over a limited time frame, as has been done in other successful studies conducted through the SCCM Discovery platform. (12, 13) Enrollment is currently underway, |

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| | | | | with 24 participating hospital systems. |
| Participants | 6 | (*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up<br>*Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls<br>*Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants | Data Elements | The inclusion and exclusion criteria are displayed in Table 1, and the rationale for these criteria is described in Supplemental e-Table 3; all inclusion and exclusion criteria were chosen based on expert consensus by the Discover IHCA executive committee, and agreed upon by participating hospital systems. |
| | | (*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed<br>*Case-control study*—For matched studies, give matching criteria and the number of controls per case | N/A | N/A |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable | Data Elements | See the entire Case Report Form with Data Dictionary in Supplemental e-Document 1. In brief, baseline information for patients is captured by the data collection forms “Demographics and Admission Data” and “Pre-Arrest (Baseline Data)”. These sections encompass the demographic information for patients, pre-hospital functional status, chronic and acute medical conditions, location of the arrest, and organ support at the time the arrest starts. It also collects pre-arrest frailty for enrolled patients, using the clinical frailty scale. (22) The database collects pertinent intra-arrest information, including the day (relative to the day of hospital presentation) and time when the arrest resuscitation was initiated, the initial rhythm, the presumed etiology of the arrest, and whether extracorporeal life support was initiated during the arrest. |

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| | | | | Granular post-arrest data are then collected for the first 96 hours after ROSC. |
| Data sources/ measurement | 8* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group | Data Elements | See the entire Case Report Form with Data Dictionary in Supplemental e-Document 1. |
| Bias | 9 | Describe any efforts to address potential sources of bias | Data Elements | Abstractors are responsible for narrative review of the medical record to determine if a patient meets the inclusion and exclusion criteria. Sessions were held with participating hospital systems to review the inclusion and exclusion criteria and the workflow for data abstraction prior to the initiation of the data collection period. |
| Study size | 10 | Explain how the study size was arrived at | Data Collection | The goal of 1,000 enrollments was selected to collect a large enough cohort to explore variations in care and perform risk adjustments as necessary, while taking into account pragmatic considerations regarding the burden of data abstraction. |

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| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why | N/A | N/A |
| Statistical methods | 12 | (*a*) Describe all statistical methods, including those used to control for confounding | N/A | N/A |
| | | (*b*) Describe any methods used to examine subgroups and interactions | N/A | N/A |
| | | (*c*) Explain how missing data were addressed | N/A | N/A |
| | | (*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy | N/A | N/A |
| | | (*e*) Describe any sensitivity analyses | N/A | N/A |
| **Results** | | | | |
| Participants | 13* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed | N/A | N/A |
| | | (b) Give reasons for non-participation at each stage | N/A | N/A |
| | | (c) Consider use of a flow diagram | N/A | N/A |
| Descriptive data | 14* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders | N/A | N/A |
| | | (b) Indicate number of participants with missing data for each variable of interest | N/A | N/A |
| | | (c) *Cohort study*—Summarise follow-up time (eg, average and total amount) | N/A | N/A |
| Outcome data | 15* | *Cohort study*—Report numbers of outcome events | N/A | N/A |

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|---|---|---|---|---|
| | | or summary measures over time | | |
| | | *Case-control study*—Report numbers in each exposure category, or summary measures of exposure | N/A | N/A |
| | | *Cross-sectional study*—Report numbers of outcome events or summary measures | N/A | N/A |
| Main results | 16 | (*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included | N/A | N/A |
| | | (*b*) Report category boundaries when continuous variables were categorized | N/A | N/A |
| | | (*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period | N/A | N/A |

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|---|---|---|---|---|
| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses | N/A | N/A |
| **Discussion** | | | | |
| Key results | 18 | Summarise key results with reference to study objectives | N/A | N/A |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias | Limitations | Some variable definitions were altered slightly after data collection was initiated; this was done for clarity based on feedback from early data abstraction. Since this is an observational study, resulting data should not be used to determine causal inference. Participation in Discover IHCA was voluntary, and it is possible that hospital systems interested in participation have innately better adherence to published guidelines, limiting generalizability; however this is a limitation of any voluntary registry. Although sites were not asked to alter their post-IHCA treatment protocols in any way during the study period, or to provide any specific interventions, it is possible that the increased focus on post-IHCA care due to participation in the study could alter treatment practices. There were also changes to AHA guidelines that occurred during the study period, as they were published in January of 2024. Changes to the guidelines may alter post-IHCA practice during the months of data collection. |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | N/A | N/A |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | N/A | N/A |
| **Other information** | | | | |

| | | | | |
|---|---|---|---|---|
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based | Society of Critical Care Medicine Discovery Network | *As noted in the disclosures: This study did not receive any financial support from any source.<br>Discover IHCA is endorsed by the SCCM Discovery Critical Care Research Network. Discovery is a critical care research network from SCCM that promotes collaborative research to improve outcomes for critically ill patients. (17) The network launched in 2016, (18) and has supported several successful projects (a full list of programs and publications can be found through the SCCM website). (19) The network offers resources such as data storage, data management, data analysis, central institutional review board (IRB) services, and project management. Discover IHCA has utilized several of these resources, including data storage through a Research Electronic Data Capture (REDCap) Cloud database hosted by SCCM and project management. |

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

| Supplemental Table 3: Study Details | |
|---|---|
| **Title** | Discover In-Hospital Cardiac Arrest (Discover IHCA) |
| **Clinical Trials Number** | NCT06207201 (registered as an observational study) |
| **Sources of Monetary of Material Support** | This study does not receive any funding.<br>The SCCM Discovery Network has endorsed the project and provides support as described. |
| **Design** | Prospectively collected observational study. |
| **Condition Studied** | In-hospital cardiac arrest with return of spontaneous circulation (ROSC). |
| **Number of Participating Sites** | 24 hospital systems enrolling at a total of 69 individual hospitals across the United States and internationally. |
| **Study Aims** | Aim 1: To characterize practice variation in temperature management after in-hospital cardiac arrest at diverse hospital systems and find associations between different methods of temperature management and outcomes.<br>Aim 2: To characterize practice variation in prognostication methods after in-hospital cardiac arrest at diverse hospital systems, and find factors associated with early withdrawal of life sustaining therapy. |
| **Inclusion Criteria with Rationale** | |
| Adult (≥18 years old) patients | The study population is adult IHCA. Pediatric arrests differ from adult arrests in several important characteristics. |
| Patients with a cardiac arrest (a lack of palpable pulse or perfusing cardiac activity) while admitted to the hospital | This study is focused on IHCA, and does not include OHCA, which differs from IHCA in several important characteristics. |
| Patients admitted to a ward (telemetry or non-telemetry) or an intensive care unit, or who are admitted but still in the emergency department waiting for a hospital bed | We include any patients admitted to the hospital to capture all IHCA. Some hospitals board patients in the emergency department after the patients have been admitted, while the patients wait for a bed in the hospital. Although physically in the emergency department, these patients are included because they have been admitted to the hospital. Patients with cardiac arrest in the emergency department before being admitted to the hospital are not included, as the investigators determined these patients to be more similar to the OHCA population than the IHCA population. |
| Patients who achieved return of spontaneous circulation (ROSC defined as >20 minutes of sustained spontaneous circulation) OR were placed on extracorporeal membrane oxygenation (eCPR) with chest compressions ongoing | We are including all patients who have suffered IHCA and achieved a sustained ROSC. The investigators decided on a definition of sustained ROSC as ROSC >20 minutes. We included IHCA that were resuscitated by extracorporeal support (eCPR) during the resuscitation, and the time of ROSC is defined as the time that eCPR begins. |
| Patients survived for 6 hours after ROSC | We do not expect adequate information regarding temperature control and prognostication to be available for patients who achieved ROSC but died shortly thereafter. |

| **Exclusion Criteria** | |
|---|---|
| Cardiac arrest in non-inpatients (e.g. outpatients, visitors) | This study is focused on IHCA and does not include OHCA, which differs from IHCA in several important characteristics. |
| Patients whose cardiopulmonary resuscitation (CPR) starts outside of the hospital | This study is focused on IHCA, and does not include any OHCA. OHCA differs from IHCA in several important characteristics. |
| Non-index arrests (arrests that are not the patient's first arrest during the hospital admission; this also excludes patients who were initially admitted for an out-of-hospital cardiac arrest) | Our goal is to characterize practices after the first cardiac arrest during hospital admission, and do not wish to include subsequent arrests as new entries. |
| Patients suffering IHCA in the operating room (OR) or post anesthesia care unit (PACU) | These patients frequently have a different etiology of arrest than our study population of interest. |
| Patients with cardiac arrest after arriving to an emergency department (ED) but prior to being evaluated and admitted to the hospital | Patients who present to the emergency department and then have cardiac arrest prior to admission have many characteristics in common with OHCA and are not our study population of interest. |
| Cardiac arrests lasting <2 minutes (i.e. chest compressions performed <2 minutes) | Cardiac arrests that are immediately reversible are not our population of interest as they are not likely to benefit from the interventions we are examining. |
| Cardiac arrests where the patient is transitioned to comfort focused care within 6 hours of return of spontaneous circulation (ROSC) | Patients who are quickly transitioned to comfort care after ROSC are unlikely to receive the interventions we are examining and, therefore, are not our study population of interest. |
| **Target Sample Size** | 1,000 patients. |
| **Variables and Definitions** | Full case-report form and data dictionary are displayed in Supplemental e-Document 1. |
| **Primary Outcomes** | The incidence of fever from ROSC until 96 hours after ROSC among patients who remain comatose.<br>The use of at least two approaches for prognostication prior to withdrawal of care from ROSC until hospital discharge.<br>The withdrawal of care from ROSC until 72-hour after ROSC. |

**Supplemental Table 4: Hospital System Characteristics**

| De-Identified Hospital System | Number of Hospitals Enrolling | Geographic Region | Type of Hospitals Within System | Hospital Types Within Hospital System | Public or Private |
|---|---|---|---|---|---|
| **A** | 3 | Middle Atlantic | Academic/Teaching | Tertiary or quaternary and Community | Private |
| **B** | 1 | New England | Academic/Teaching | Tertiary or quaternary | Private |
| **C** | 2 | East South Central | Academic/Teaching | Tertiary or quaternary | Public |
| **D** | 1 | Pacific | Academic/Teaching | Tertiary or quaternary | Public |
| **E** | 1 | Middle Atlantic | Academic/Teaching | Tertiary or quaternary | Private |
| **F** | 4 | Middle Atlantic | Academic/Teaching | Tertiary or quaternary | Private |
| **G** | 2 | Pacific | Academic/Teaching | Tertiary or quaternary | Private |
| **H** | 30 | International | Both Academic/Teaching and General/Non-Teaching | Tertiary or quaternary and Community | Both Private and Public |
| **I** | 1 | New England | Academic/Teaching | Tertiary or quaternary | Private |
| **J** | 4 | Middle Atlantic | Both Academic/Teaching and Genteral/Non-Teaching | Tertiary or quaternary and Community | Private |
| **K** | 1 | South Atlantic | Academic/Teaching | Community | Private |
| **L** | 4 | Mountain | Both Academic/Teaching and General/Non-Teaching | Tertiary or quaternary and Community | Private |
| **M** | 1 | East North Central | Academic/Teaching | Tertiary or quaternary | Private |
| **N** | 1 | East South Central | Academic/Teaching | Tertiary or quaternary | Private |
| **O** | 1 | West North Central | Academic/Teaching | Tertiary or quaternary | Public |
| **P** | 1 | East North Central | Academic/Teaching | Tertiary or quaternary | Private |

| | | | | | |
|---|---|---|---|---|---|
| **Q** | 2 | South Atlantic | Academic/Teaching | Tertiary or quaternary and Community | Private |
| **R** | 1 | West South Central | Academic/Teaching | Tertiary or quaternary | Private |
| **S** | 1 | South Atlantic | Academic/Teaching | Tertiary or quaternary | Private |
| **T** | 1 | West South Central | Academic/Teaching | Tertiary or quaternary | Private |
| **U** | 1 | Mountain | Academic/Teaching | Tertiaty or quaternary | Public |
| **V** | 2 | North Atlantic | Academic/Teaching | Tertiary or quaternary | Private |
| **W** | 1 | Pacific | Academic/Teaching | Tertiary or quaternary | Public |
| **X** | 2 | East North Central | Academic/Teaching | Tertiary or quaternary | Public |

**Supplemental Table 4 Continued**

| De-Identified Hospital System | Population Served | Number of Beds Across Hospital System | ICU Beds Across Hospital System | Estimated Number of Arrests Per Month | Inpatient Services |
|---|---|---|---|---|---|
| **A** | Urban | >800 | >30 | 30 or more | Adult and Pediatric |
| **B** | Urban | 600 - 799 | >30 | 10 - 20 | Adult only |
| **C** | Urban | >800 | >30 | 20 - 30 | Adult and Pediatric |
| **D** | Urban | 400 - 599 | >30 | <10 | Adult and Pediatric |
| **E** | Urban | >800 | >30 | 20 - 30 | Adult and Pediatric |
| **F** | Urban | 600 - 799 | >30 | 20 - 30 | Adult only |
| **G** | Urban | 600 - 799 | >30 | 10 - 20 | Adult only |
| **H** | Urban, Suburban, and Rural | >800 | >30 | <10 | Adult and Pediatric |
| **I** | Suburban | 200 - 399 | >30 | 10 - 20 | Adult only |

| | | | | | |
|---|---|---|---|---|---|
| **J** | Urban and Rural | >800 | >30 | 30 or more | Adult only |
| **K** | Urban | 200 - 399 | 10 - 19 | <10 | Adult and Pediatric |
| **L** | Urban and Suburban | >800 | >30 | 30 or more | Adult and Pediatric |
| **M** | Urban | >800 | >30 | 10 - 20 | Adult only |
| **N** | Urban | 600 - 799 | >30 | 20 - 30 | Adult only |
| **O** | Urban | 400 - 599 | >30 | <10 | Adult and Pediatric |
| **P** | Suburban | 200 - 399 | 20 - 29 | 10 - 20 | Adult and Pediatric |
| **Q** | Urban | >800 | >30 | 20 - 30 | Adult and Pediatric |
| **R** | Suburban | 400 - 599 | >30 | 20 - 30 | Adult only |
| **S** | Urban | >800 | >30 | 20 - 30 | Adult and Pediatric |
| **T** | Urban | 600 - 799 | >30 | 20 - 30 | Adult only |
| **U** | Urban | 400 - 599 | >30 | 10 - 20 | Adult and Pediatric |
| **V** | Urban | >800 | >30 | 20 - 30 | Adults only |
| **W** | Urban | 400 - 599 | >30 | <10 | Adults only |
| **X** | Urban | 400 - 599 | >30 | <10 | Adult and Pediatric |

**Supplemental Table 4 Continued**

| De-Identified Hospital System | Most Common Inpatient Code Leader | Enroller for Get With The Guidelines Resuscitation | Dedicated Post Arrest Team | Is ECPR Available Within Hospital System |
|---|---|---|---|---|
| **A** | Critical Care Attenting/Fellow or Medical Resident | Yes | No | Yes |
| **B** | Medical Resident | Yes | Yes | Yes |
| **C** | Medical Resident | No | No | Yes |

| | | | | |
|---|---|---|---|---|
| **D** | Critical Care Attending/Fellow | Yes | No | Yes |
| **E** | Medical Resident | No | No | Yes |
| **F** | Critical Care Attending/Fellow | No | No | Yes |
| **G** | Critical Care Attending/Fellow or Medical Resident | Yes | No | Yes |
| **H** | Critical Care Attending/Fellow | No | No | Yes |
| **I** | Critical Care Attending/Fellow | Yes | Yes | Yes |
| **J** | Critical Care Attending/Fellow | Yes | Yes | Yes |
| **K** | Critical Care Attending/Fellow | No | Yes | No |
| **L** | Medical Resident or Hospitalist Attending or Critical Care Attending/Fellow | Yes | No | Yes |
| **M** | Critical Care Attending/Fellow or Medical Resident | Yes | No | Yes |
| **N** | Medical Resident | Yes | No | Yes |
| **O** | Medical Resident | No | No | Yes |
| **P** | Medical Resident | No | Yes | No |
| **Q** | Hospitalist Attending | No | No | Yes |
| **R** | Critical Care Attending/Fellow | Yes | No | Yes |
| **S** | Critical Care Attending/Fellow or Medical Resident | Yes | No | Yes |
| **T** | Emergency Medicine Attending | Yes | No | No |
| **U** | Critical Care Attending/Fellow | Yes | No | No |
| **V** | Critical Care Attentding/Fellow | Unknown | Yes | Yes |
| **W** | Critical Care Attending/Fellow | Unknown | No | Yes |
| **X** | Critical Care Attending/Fellow | Unknown | No | Yes |

# Supplemental Document 1: Case Report Form and Data Dictionary

Montefiore | EINSTEIN


| Data Dictionary Instructions | |
|---|---|
| **Who qualifies (inclusion criteria):** | ○ Adult (≥18 years old) patients<br>○ Patients with a cardiac arrest (a lack of palpable pulse or perfusing cardiac activity) while admitted to the hospital<br>○ Patients admitted to a ward (telemetry or non-telemetry) or an intensive care unit, or who are admitted but still in the emergency department waiting for a hospital bed<br>○ Patients who achieved return of spontaneous circulation (ROSC defined as >20 minutes of sustained spontaneous circulation) OR were placed on extracorporeal membrane oxygenation (eCPR) with chest compressions ongoing<br>○ Patients survived for 6 hours after ROSC |
| **Who does NOT qualify (exclusion criteria):** | ○ Cardiac arrest in non-inpatients (e.g. outpatients, visitors)<br>○ Patients whose cardiopulmonary resuscitation (CPR) starts outside of the hospital<br>○ Non-index arrests (arrests that are not the patient's first arrest during the hospital admission; this also excludes patients who were initially admitted for an out-of-hospital cardiac arrest)<br>○ Patients suffering IHCA in the operating room (OR) or post anesthesia care unit (PACU) |

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| | ○ Patients with cardiac arrest after arriving to an emergency department (ED) but prior to being evaluated and admitted to the hospital<br>○ Cardiac arrests lasting <2 minutes (i.e. chest compressions performed <2 minutes)<br>○ Cardiac arrests where the patient is transitioned to comfort focused care within 6 hours of return of spontaneous circulation (ROSC) |
| Include **ONLY** one record for each patient. If a patient suffers recurrent cardiac arrests with intervening periods of spontaneous circulation, record data only for the initial (index) cardiac arrest. | |
| **Where to find it** | All data should be abstracted from the electronic health record, the defibrillator, or other quality improvement databases.<br><br>Variation in data collection procedures by site is expected, as they relate to local cardiac arrest data collection practice. |

# Demographics and Admission Information

| | | | |
|---|---|---|---|
| **1.** | Hospital system (ihca_hosp) | Select one: | Select the hospital system from which the patient was included.<br><br>After selecting the hospital system, you will be instructed to select the specific enrolling hospital within the hospital system. |
| **2.** | Age (ihca_age) | Select one:<br>*0, 18 – 19*<br>*1, 20 – 29*<br>*2, 30 – 39*<br>*3, 40 – 49*<br>*4, 50 – 59*<br>*5, 60 – 69*<br>*6, 70 – 79*<br>*7, 80 – 89*<br>*8, 90+*<br>*9, Unknown* | Select the age range that applies for the patient at the time of the cardiac arrest.<br><br>If the patient is 90-years old or older, select **90+.** |

| | | | |
|---|---|---|---|
| **3.** | Sex<br>(ihca_Sex) | Select one:<br>*0, Male*<br>*1, Female*<br>*2, Unknown/Not reported* | Select the patient's genetic sex at birth.<br><br>If genetic sex is not available in the medical record, select **Unknown/Not reported.** |
| **4.** | Ethnicity<br>(ihca_ethnicity) | Select one:<br>*0, Not Hispanic*<br>*1, Hispanic*<br>*2, Unknown/Not reported*<br>*3, Other* | Reported ethnicity via documented registration/demographics form (face sheet).<br><br>Hispanic<br>A person descended from Spanish-speaking populations. People who identify their origin as Hispanic, Latino, or Spanish may be of any race. Most people with origins in Brazil are considered Latino but not Hispanic because most Brazilians speak Portuguese. Similarly, Spanish people may be considered Hispanic but not Latino. Because the terms are vague, use the more specific geographic origin (Colombian, Honduran, Brazilian), if possible. |
| **5.** | Ethnicity_Other<br>(ihca_Ethnicity_Other) | Text: | If selected **Other** as Ethnicity then type the patient's ethnicity here. |
| **6.** | Race<br>(ihca_Race) | Select one:<br>*0, Alaska Native*<br>*1, American Indian or Native Alaskan (including native North American and native South American)*<br>*2, Asian or Asian American*<br>*3, Biracial*<br>*4, Black or African American*<br>*5, Latino/a or Latinx*<br>*6, Middle East*<br>*7, Hawaiian* | Patient's race.<br><br>Alaska Native<br>An Alaska Native (not Alaskan Native) is a person whose origins are in any of the original peoples of Alaska and who maintains cultural identification through Tribal affiliation or community attachment. An Alaskan is anyone who was born in Alaska or who is a long-term resident of Alaska.<br><br>American Indian or Native American<br>A person whose origins are in any of the original peoples of North, Central, or South America (except Alaska) and who maintains cultural identification through |

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| | | *8, Pacific Islander*<br>*9, White*<br>*10, Unknown/Not reported*<br>*11, Other* | Tribal affiliation or community attachment.<br><br>Asian, Asian American<br>A person whose origins are in any of the original populations of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippines, Thailand, and Vietnam. Do not use the word oriental.<br><br>Biracial, multiracial, of mixed race<br>A person who has parents or ancestors of different racial backgrounds. Some consider using mixed alone to be stigmatizing, while others claim the term positively. Mixed race is used frequently in academia and elsewhere, though some say it has stigmatizing potential.<br><br>Black, African American<br>An African American is a person whose origins are in any of the Black racial groups of Africa. If appropriate, specific terms such as Haitian or Nigerian may also be used. Black is broader and more inclusive than African American; someone within your target audience could be born in Jamaica and live in the U.S. and identify as Black but not African American. Use of the capitalized Black recognizes that language has evolved and, especially in the United States, the term reflects a shared identity and culture beyond skin color.<br><br>Latino/a or Latinx<br>A person whose origins are in Latin America, including Cuba, Mexico, Puerto Rico, South America, or Central America. Latino is reserved for men and Latina for women. The plural Latinas is for a group of women and Latinos is for a group of men. A mixed gender group of Latin American descent, however, would revert to the masculine Latinos. |

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| | | | Middle East, MENA, Arab American<br>When writing about people of Middle Eastern or North African (MENA) descent, allowing individuals to self-identify is best. State the nation of origin (e.g., Iran, Iraq, Egypt, Lebanon, Israel) when possible. In some cases, people of MENA descent who claim Arab ancestry and reside in the United States may be referred to as Arab Americans.<br><br>Hawaiian<br>The Asian American Journalists Association(link is external) points out that Hawaiian "[r]efers to a person who is of Polynesia descent. Unlike a term like Californian, Hawaiian should not be used for everyone living in Hawaii."<br><br>Pacific Islander<br>The Asian American Journalists Association(link is external) calls Pacific Islander a "U.S. Census term, referring to one of eight groups—Fijian, Guamanian, Hawaiian, Northern Mariana Islander, Palauan, Samoan, Tahitian and Tongan."<br><br>White<br>A person whose origins are in any of the original peoples of Europe, the Middle East, or North Africa. Avoid the term Caucasian because it technically refers to people from the Caucasus region. Avoid language that frames being White as a default, normal, or "raceless" identity. Non-Hispanic White is sometimes used to clarify that the described group does not include White Hispanic people. |
| **7.** | Race_Other<br>(ihca_Race_Other) | Text: | If selected **Other** as Race then type the patient's Race here. |
| **8.** | Height (cm)<br>(ihca_Height) | Text: | Height in centimeters. Use the value for Height measured closest to hospital admission time.<br><br>If the height of the patient is **unknown**, please enter "99999" into the text. |

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| **9.** | Weight (kg)<br>(ihca_Weight) | Text: | Weight in kilograms. Use the value for patients Weight measured closest to hospital admission time.<br><br>If the weight is **unknown**, please enter "99999" into the text. |
| **Pre-Arrest (Baseline Data)** | | | |
| **10.** | Pre-admission location/residence<br>(ihca_pre-admission disposition) | Select one:<br>*0, Home*<br>*1, Facility for residential care*<br>*2, Unknown*<br>*3, Other* | Last known living location prior to admission.<br><br>A Facility for residential care includes a skilled nursing facility (SNF), a rehabilitation facility, a long term acute care facility (LTAC), a hospice facility. Any facility where patients take residence, where there are skilled personnel who help in there care should be included.<br><br>If patient was transferred from another hospital directly to the present hospital, select the location the patient was living at prior to the initial hospital admission. |
| **11.** | Pre-admission location/residence, Other<br>(ihca_Pre-admission disposition_Other) | Text: | If selected **Other** as Pre-admission location/residence then type the patient's pre-admission location/residence here. |
| **12.** | Patient's mRS on admission<br>(ihca_Patient's baseline mRS) | Select one:<br>*0, 0 – No symptoms*<br>*1, 1 – No significant disability. Able to carry out all usual activities*<br>*2, 2 – Slight disability. Able to look after own affairs without assistance*<br>*3, 3 – Moderate disability. Requires some help*<br>*4, 4 – Moderately severe disability. Unable to* | If it is available, please select the option that best fits the patient's modified Rankin Scale (mRS) prior to the cardiac arrest.<br><br>Please review notes in the chart and provide a best estimate of the mRS.<br><br>Modified Rankin Scale from 0 to 6:<br>0 - No symptoms.<br>1 - No significant disability. Able to carry out all usual activities, despite some symptoms. |

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| | | *attend to own bodily needs without assistance*<br>*5, 5 – Severe disability. Requires constant nursing care and attention*<br>*6, 6 - Dead*<br>*7, Unable to determine mRS* | 2 - Slight disability. Able to look after own affairs without assistance, but unable to carry out all previous activities.<br>3 - Moderate disability. Requires some help, but able to walk unassisted.<br>4 - Moderately severe disability. Unable to attend to own bodily needs without assistance, and unable to walk unassisted.<br>5 - Severe disability. Requires constant nursing care and attention, bedridden, incontinent.<br>6 - Dead. |
| **13.** | Patient's CPC on admission (ihca_patient_baseline_cpc) | Select one:<br>*0, 1 – Good cerebral performance (normal life)*<br>*1, 2 – Moderate cerebral disability (disabled but independent)*<br>*2, 3 – Severe cerebral disability (conscious but disabled and dependent)*<br>*3, 4 – Coma or vegetative stat (unconscious)*<br>*4, 5 – Brain death*<br>*5, Unable to determine baseline CPC score* | Please select the option that best fits the patient's Cerebral Performance Category (CPC) prior to the cardiac arrest.<br><br>Please review notes in the chart and provide the best estimate of CPC score.<br><br>1 – Good cerebral performance (normal life): Conscious, alert, able to work and lead a normal life. May have minor psychological or neurological deficits.<br>2 – Moderate cerebral disability (disabled but independent): Conscious. Sufficient cerebral function for part-time work in sheltered environment or independent activities of daily life (dressing, travel by public transport, food preparation). May have hemiplegia, seizures, dysarthria, dysphasia, permanent memory changes.<br>3 – Severe cerebral disability (conscious but disabled and dependent): Conscious. Dependent on others for daily support (in an institution or at home with exceptional caregiver effort). Has at least limited cognition. This category includes a wide range of cerebral abnormalities, from patients who are ambulatory but have severe memory disturbances or dementia precluding independent existence, to those who are paralyzed and can communicate only with their eyes.<br>4 – Coma or vegetative state (unconscious): Unconscious. Unaware of surroundings. No cognition. No verbal or |

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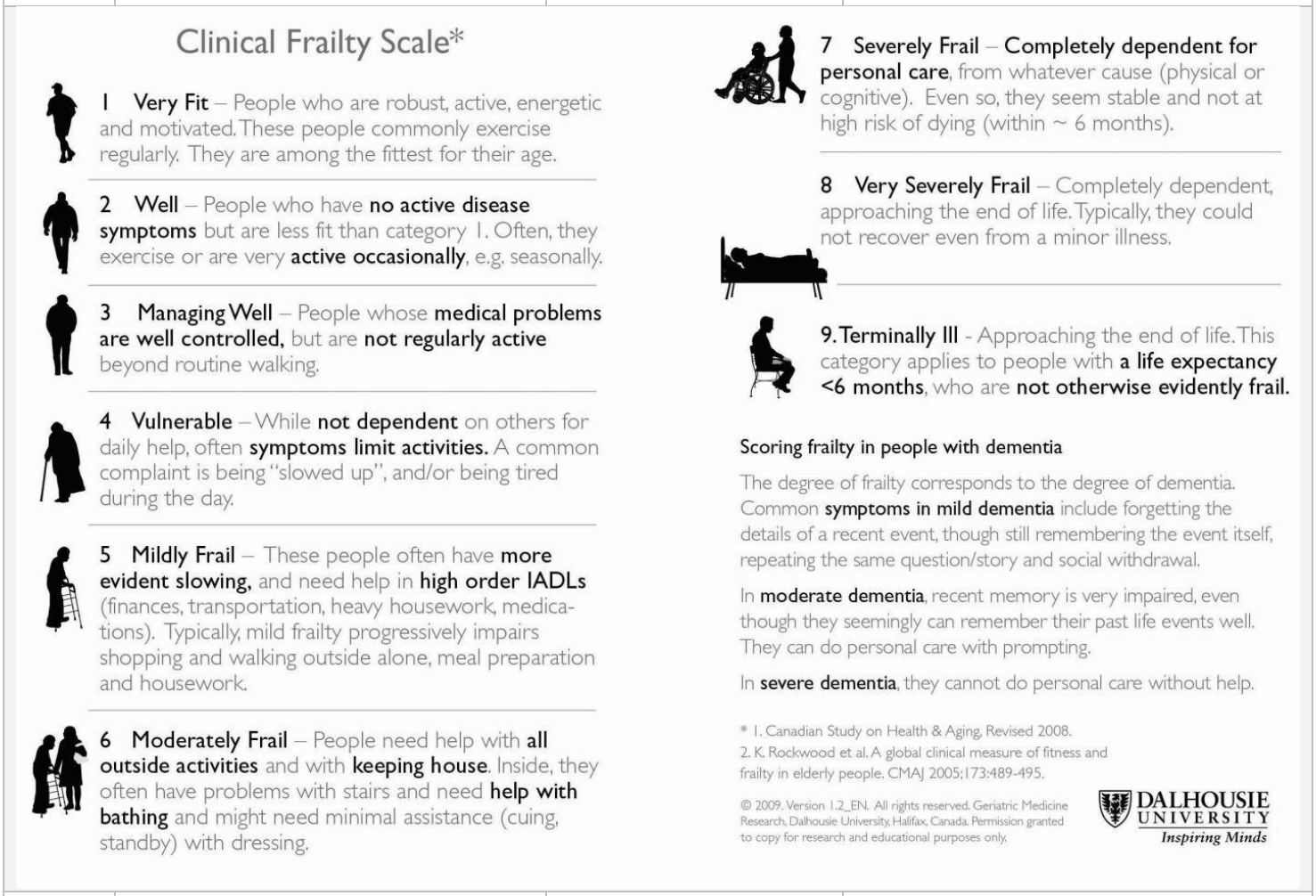
| | | | psychologic interaction with environment.<br>5 – Brain death: Certified brain dead or dead by traditional criteria. |



Clinical Frailty Scale*

1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 **Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 **Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

5 **Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 **Moderately Frail** – People need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

7 **Severely Frail** – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. **Terminally Ill** - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.



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| **14.** | Frailty index<br>(ihca_frailty) | Select one:<br>*0, Unknown*<br>*1, 1 – Very fit*<br>*2, 2 – Well*<br>*3, 3 – Managing well*<br>*4, 4 – Vulnerable*<br>*5, 5 – Mildly frail*<br>*6, 6 – Moderately frail*<br>*7, 7 – Severely frail*<br>*8, 8 – Very severely frail*<br>*9, 9 – Terminally ill* | Select the description that best fits with the patient's condition prior to admission to the hospital. Use documentation in the chart to best assess the patient's frailty.<br><br>Refer to the image directly above for definitions regarding frailty and the clinical frailty scale. |
| **15.** | Chronic medical conditions (pre-hospital)<br>(ihca_Comorbid conditions) | Select all that apply:<br>*0, None of the below*<br>*1, Chronic cardiac disease* | Select all that appear in the problem list or are documented in the medical record as being **present prior to the hospital admission**. |

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| | | *2, Chronic neurologic disease*<br>*3, Chronic diabetes*<br>*4, Chronic malignancy*<br>*5, Chronic lung disease*<br>*6, Chronic kidney disease*<br>*7, Chronic tracheotomy* | Definitions as below. Select **None of the below** if patient meets no below criteria.<br><br>Chronic (pre-hospital) cardiac disease: Any chronic coronary artery disease (CAD), congestive heart failure (CHF), atrial fibrillation (AF), cardiac stents, coronary artery bypass graft (CABG) surgery, prior myocardial infarction (MI), endocarditis, prior cardiac valve surgery or cardiac valve disease including aortic stenosis (AS), aortic regurgitation (AR), mitral regurgitation (MR), mitral stenosis (MS), tricuspid regurgitation (TR), or mitral prolapse prior to the hospital admission.<br><br>Chronic (pre-hospital) neurologic disease: Any chronic history of chronically depressed CNS function including dementia (i.e. Alzheimer, vascular dementia, dementia with Lewy bodies, frontotemporal dementia), Multiple sclerosis, Parkinson's disease, cerebral palsy, epilepsy, seizure disorder, or myotonic dystrophy prior to the hospital admission.<br><br>Chronic (pre-hospital) diabetes: Any chronic history of diabetes mellitus of either type 1 or 2 prior to the hospital admission.<br><br>Chronic (pre-hospital) malignancy: Any chronic history of malignancy including solid tumors, metastasis, and hematologic malignancies prior to the hospital admission.<br>*Does not include non-melanoma skin cancers<br><br>Chronic (pre-hospital) lung disease: Any chronic history of COPD (Chronic Obstructive Pulmonary Disease), chronic bronchitis, emphysema, cystic fibrosis, asthma, pulmonary fibrosis, or interstitial lung disease prior to the hospital admission. |

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| | | | Chronic (pre-hospital) kidney disease: Any chronic kidney disease (CKD) stage 2 through 5 or end stage renal disease (ESRD) or chronic dialysis.<br><br>Chronic (pre-hospital) tracheotomy: Select if the patient had a tracheotomy tube in place prior to being admitted to the hospital. Whether or not they were requiring mechanical ventilation through the tracheotomy will be answered in subsequent questions. |
| **16.** | Acute medical conditions (pre-arrest) (ihca_acute_prearrest_cond) | Select all that apply:<br>*0, None of the below*<br>*1, Acute heart failure*<br>*2, Acute myocardial infarction*<br>*3, Acute hepatic insufficiency*<br>*4, Acute hypotension*<br>*5, Acute stroke*<br>*6, Acute pneumonia*<br>*7, Acute renal insufficiency*<br>*8, Acute sepsis* | Select all that appear in the problem list or are documented in the medical record as being present prior to the cardiac arrest.<br><br>Definitions as below. Select None of the below if patient meets no below criteria.<br><br>All of these conditions are acute, or acute on chronic, conditions present immediately prior to the cardiac arrest.<br><br>Acute (pre-arrest) heart failure: Any newly diagnosed congestive heart failure (CHF) during this admission prior to the cardiac arrest.<br><br>Acute (pre-arrest) myocardial infarction: Any new diagnosis of myocardial ischemia (NSTEMI, STEMI) during this admission prior to the cardiac arrest.<br><br>Acute (pre-arrest) hepatic insufficiency: Any presence of liver cirrhosis. Direct bilirubin > 2 mg/dl and AST greater than two times the upper limit of normal in the 24-hours prior to the cardiac arrest.<br><br>Acute (pre-arrest) hypotension: Any hypotension with a mean blood pressure of < 60 mmHg, or a systolic blood pressure < 90 mmHg in the 4 hours prior to the cardiac arrest. Any requirement for vasopressors in the 4 hours prior to the cardiac arrest. Any mechanical |

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| | | | support of blood pressure (IABP, VA ECMO).<br><br>Acute (pre-arrest) stroke: Any stroke, ischemic stroke, or hemorrhagic stroke during the current admission prior to the cardiac arrest.<br><br>Acute (pre-arrest) pneumonia: Any active pneumonia at the time of the cardiac arrest.<br><br>Acute (pre-arrest) renal insufficiency: Any renal insufficiency prior to the cardiac arrest including requiring ongoing dialysis prior to the cardiac arrest, or creatinine > 2 mg/dL within 24 hours prior to the cardiac arrest.<br><br>Acute (pre-arrest) sepsis: Any sepsis identified, suspected, or being treated at the time of the cardiac arrest. This would include the presence of bacteremia, other infectious organisms, or toxins created by infections organisms in the bloodstream. Sepsis may be associated with clinical symptoms of systemic illness such as fever, chills, malaise, low blood pressure, and mental status changes. |
| **17.** | Pregnancy status<br>(ihca_Pregnancy_status) | Select one:<br>*0, Not pregnant at time of arrest*<br>*1, Pregnant at time of arrest*<br>*2, Immediately post-partum at time of arrest* | Immediately post-partum refers to patients within 48-hours of delivery. |
| **18.** | Reason for hospitalization<br>(ihca_Reason for hospitalization) | Select one:<br>*0, Medical cardiac*<br>*1, Medical non-cardiac*<br>*2, Surgical cardiac*<br>*3, Surgical non-cardiac* | Select the category that BEST describes the reason for the hospitalization. This should not be the reason for the arrest, but rather the primary reason the patient sought care.<br><br>If patient was transferred from an outside facility, select the reason for admission to the outside facility. |

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| | | | Medical cardiac: Any primarily medical condition that is cardiac including pulmonary embolism, myocardial infarction, heart failure exacerbation, ventricular or atrial arrhythmias (not including torsades-de-pointes), heart block.<br><br>Medical non-cardiac: Any primarily medical condition that is non-cardiac including critical lab abnormality, infection, sepsis, acute stroke, gastrointestinal bleeding, respiratory distress, COPD or asthma exacerbation, torsades-de-pointes, renal injury, liver injury, evaluation/treatment of malignancy.<br><br>Surgical cardiac: Any primarily surgical condition that is cardiac including cardiac surgery, valve replacement, coronary artery bypass graft (CABG), lung transplant, heart transplant, ascending aorta repair.<br><br>Surgical non-cardiac Any primarily surgical condition that is non-cardiac including admission for elective or acute surgical needs, neurosurgery (decompressive craniectomy), subarachnoid hemorrhage, amputation, liver transplant, renal transplant, descending aorta repair. |
| **19.** | Location of arrest<br>(ihca_Location of arrest) | Select one:<br>*0, Emergency department*<br>*1, Non-telemetry floor/ward*<br>*2, Telemetry floor/ward*<br>*3, Intensive care unit*<br>*4, Non-invasive imaging suite*<br>*5, Procedural suite (e.g. endoscopy, IR)*<br>*6, Operating room*<br>*7, Post anesthesia recovery unit (PACU)*<br>*8, Labor and delivery* | Please indicate the location of the patient at the time of the arrest start. |

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| | | *9, Other* | |
| **20.** | Location of arrest_Other (ihca_Location of arrest_Other) | Text: | Complete if Location of arrest is **Other.** |
| **21.** | Organ support prior to the arrest (ihca_Organ support prior to the arrest) | Select all that apply:<br>*0, No organ supportive therapy*<br>*1, Invasive mechanical ventilation (IMV)*<br>*2, Bilevel noninvasive ventilation (BIPAP) or continuous positive airway pressure ventilation (CPAP)*<br>*3, High flow nasal canula (HFNC)*<br>*4, Intermittent hemodialysis*<br>*5, Continuous renal replacement therapy (CRRT, CVVH, CVVHD, SCUF, SLED)*<br>*6, Vasopressor or inotropic support*<br>*7, Extracorporeal pulmonary support (VV-ECMO)*<br>*8, Extracorporeal cardiovascular support (VA-ECMO)*<br>*9, Mechanical circulatory device (eg. LVAD, IABP, impella)*<br>*10, Extracorporeal carbon dioxide removal (ECCOR)*<br>*11, Extracorporeal liver support (molecular* | Select if patient received within the 24-hours prior to the cardiac arrest.<br><br>Organ supportive therapies instituted immediately prior to the arrest (i.e. within 30 minutes of the arrest) as part of response to acute decompensation should **NOT** be included.<br><br>If patient is receiving intermittent hemodialysis in the 72-hours preceding the arrest, select intermittent hemodialysis.<br><br>If patient is receiving continuous renal replacement therapies in the 72-hours preceding the arrest, select continuous renal replacement therapy.<br><br>Extracorporeal pulmonary and cardiovascular support is divided into venovenous (VV ECMO) and venoarterial (VA ECMO) support, please choose appropriately which type of ECMO the patient is on, if any.<br><br>Continuous renal replacement therapy includes any CRRT, CVVH, CVVHD, SCUF, SLED. |

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| | | *absorbent recirculating system – MARS; extracorporeal cellular therapy – ELAD)*<br>*12, Other* | |
| **22.** | Other organ support prior to the arrest (ihca_Organ_support_Other_prior) | Text: | If the answer to Organ support prior to the arrest was Other, please describe. |

# Arrest Information

**For all hospital days, consider Day 0 to be the calendar day that the patient <u>first presents</u> to the hospital. All subsequent days (Day 1, Day 2, Day 3, etc.) are to be considered subsequent calendar days turning over at midnight (00:00, or 12:00 am).**

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| **23.** | Day of arrest start (ihca_day_arrest_start) | Text: | Enter the day of hospital stay when the arrest occurred.<br><br>Consider **Day 0** to be the day that the patient **first presented to the hospita**l on the current admission.<br><br>If the day is **unknown**, please enter "99999" into the text. |
| **24.** | Time of arrest start (ihca_time_arrest_start) | Text: | Enter time of arrest in hour:minute (HH:MM) format. Use a 24-hour clock.<br><br>This is the time pulselessness was first recognized.<br><br>If the time is **unknown**, please enter 99:99 into the text. |
| **25.** | Initial rhythm during arrest (ihca_initial_rhythm_during_a) | Select one:<br>*0 , Asystole*<br>*1, PEA*<br>*2, VF*<br>*3, Pulseless VT*<br>*4, Unknown* | Please select the initial pulseless rhythm of the arrest as available in the documentation.<br><br>If this information is not available, select unknown. |

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| **26.** | Defibrillation during arrest (ihca_defib_during_a) | Select one:<br>*0, No*<br>*1, Yes*<br>*2, Unknown* | Select the category that indicates if a defibrillation was performed during the arrest (after pulselessness was first recognized).<br><br>If selecting **Yes,** please answer the question below regarding Time of first defibrillation, otherwise skip the question<br><br>Please do not include defibrillations or synchronized cardioversions that were performed prior to the arrest or >20 minutes after ROSC was achieved |
| **27.** | Time of first defibrillation (ihca_time_first_defib) | Text: | Enter time of first defibrillation in hour:minute (HH:MM) format. Use a 24-hour clock.<br><br>Enter the time rounded to the nearest minute.<br><br>If the time of administration is unknown, please enter 99:99 into the text. |
| **28.** | ECPR initiation (ihca_ecpr_initation) | Select one:<br>*0, No*<br>*1, Yes* | Select the category that indicates if extracorporeal cardiopulminary resuscitation (ECPR) was initiated<br>Eg: VA-ECMO initiated while chest compressions were ongoing.<br><br>If the answer to this is **Yes**, please use the time of ECPR initiation as the time of ROSC. |
| **29.** | Time of ECPR start (ihca_time_ECPR_start) | Text: | If the answer to **ECPR initiation** was **Yes**, please enter the time that the ECPR was indicated as being initiated hour:minute (HH:MM) format. Use a 24-hour clock.<br><br>Enter the time rounded to the nearest minute. |

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| | | | If the time of initiation is unknown, please enter 99:99 into the text. |
| **30.** | Time of first sustained ROSC (ihca_time_ROSC) | Text: | Enter time of ROSC in hour:minute (HH:MM) format. Use a 24-hour clock.<br><br>Enter the time rounded to the nearest minute.<br><br>Time of ROSC is the first documented time that a sustained pulse is achieved; a sustained pulse has to remain for ≥20 minutes. Select the time pulse first regained and NOT the time at the end of the 20 minutes.<br><br>If the time of ROSC is unknown, please enter 99:99 into the text.<br><br>ROSC: return of spontaneous circulation |
| **31.** | Primary etiology of arrest (ihca_primary_etiology_of_a) | Select one:<br>*0, Primary cardiac*<br>*1, Primary respiratory*<br>*2, Severe electrolyte derangement or acidemia*<br>*3, Shock*<br>*4, Medication effect*<br>*5, Other*<br>*6, Unknown* | Select the category that BEST describes the reason for the cardiac arrest, as per information from the medical record.<br><br>Primary cardiac: refers to arrests likely related to coronary ischemia. These arrests commonly occur in patients admitted for cardiac reasons and often have initial vfib or vtach rhythms.<br><br>Primary respiratory: refers to arrests preceded by severe hypoxia or hypercapnia. Patients will often have documented hypoxemia and may arrest while receiving non-invasive ventilatory support. |

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| | | | Severe electrolyte derangement or acidemia: refers to arrests occurring in the setting of severe electrolyte abnormality (e.g. hyperkalemia) or severe acidemia (pH generally < 7.15)<br><br>Shock: refers to arrests occurring in the setting of severe or rapidly worsening shock.<br><br>Medication effect: refers to arrests resulting from medication averse effect. A common example would be torsade vfib from QTc prolonging agents.<br><br>Other: cannot be categorized into one of the above |
| **32.** | Etiology of arrest other (ihca_primary_etiology_other) | Text: | If the answer to Primary etiology of arrest was Other, please describe the cause of the arrest. |
| **Post-Arrest** | | | |
| **33.** | ICU admission (ihca_icu_admission) | Select one:<br>*0, No*<br>*1, Yes* | Please indicate if the patient was admitted to an intensive care unit in the 24-hours after ROSC.<br><br>If the patient was already in an ICU at the time of arrest, please also select yes. |
| **34.** | Reason for no ICU admission (ihca_ICU_admission_reason) | Select one:<br>*0, Patient too unstable to be transferred*<br>*1, No ICU beds available*<br>*2, Patient receiving comfort measures* | If the answer to ICU admission was **No**, please select the reason that best describes why the patient was not transferred to an ICU in the first 24-hours after cardiac arrest. |

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| | | *3, Deemed not an ICU candidate due to overall poor prognosis*<br>*4, Code status change*<br>*5, Patient transferred to a different hospital system*<br>*6, Unknown reason* | |
| **35.** | Hospital transfer after arrest (ihca_hospital_transfer) | Select one:<br>*0, No*<br>*1, Yes* | Please select the best response that indicates if the patient was transferred to another hospital in the 24-hours **after ROSC**. |
| **36.** | Hospital transfer location (ihca_transfer_location) | Select one:<br>*0, Transferred to another hospital in the same hospital system*<br>*1, Transferred to a different hospital system* | Describe where the patient was transferred to. |
| **37.** | Hospital transfer Reason (ihca_hospital_transfer_reason) | Text: | If the answer to Hospital transfer was **Yes**, please detail the reason. |
| **38.** | Post-arrest status (0 to 6 hours after ROSC (ihca_post_arrest_status) | Select one:<br>*0, Patient follows commands*<br>*1, Patient does not follow commands*<br>*2, Unknown* | Select the patient's status at the first assessment in the 6-hour period after ROSC as documented in the medical record. |
| **39.** | Initial vasopressors (0-6 hours after ROSC) (ihca_initial_vasopressor) | Select all that apply:<br>*0, Norepinephrine*<br>*1, Epinephrine*<br>*2, Phenylephrine*<br>*3, Dobutamine*<br>*4, Dopamine*<br>*5, Vasopressin*<br>*6, Milrinone*<br>*7, Angiotensin II*<br>*8, Isoproterenol*<br>*9, Levosimendan* | Select all vasopressors that were given in the 6-hour period after ROSC as documented in the medical record. |
| **40.** | Post-arrest antibiotics (ihca_postarrest_antibiotics) | Select one:<br>*0, Patient receiving antibiotics prior to arrest* | Select the answer that indicates if and how the patient was administered antibiotics during the 24-hour period. |

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| | | *1, Patient not receiving antibiotics prior to arrest, antibiotics were administered 0 – 6 hours after ROSC*<br>*2, Patient not receiving antibiotics prior to arrest, antibiotics were administered 6 – 24 hours after ROSC*<br>*3, Patient not receiving antibiotics prior to arrest, no antibiotics administered in the first 24 hours after ROSC* | The answer choices are not mutually exclusive and more than one may be selected, for example a patient may be on antibiotics prior to the arrest and also have no antibiotics administered in the 24-hours after ROSC.<br><br>Antibiotics to be considered include any agent administered to the patient either orally or intravenously that is antibacterial and given with the goal of treating or preventing a bacterial infection.<br><br>This would NOT include antibiotics given to a patient with the intention of preventing an opportunistic infection (opportunistic infection prophylaxis), such as in the case of a patient with a solid organ transplant or immunodeficiency.<br><br>This would NOT include antiviral, antifungal, or antiretroviral medications.<br><br>This would NOT include oral vancomycin given with the intention to treat clostridium difficile gastrointestinal infection.<br><br>This would NOT include inhaled antibiotics.<br><br>This would NOT include topical antibiotics.<br><br>This would NOT include rifaximin given to prevent hyperammonemia in cirrhosis.<br><br>Examples of antibiotics that WOULD QUALIFY include:<br>- Vancomycin<br>- Linezolid<br>- Daptomycin<br>- Doxycycline<br>- Clindamycin<br>- Trimethoprim/sulfamethoxazole (TMP/SMX) |

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| | | | - Amikacin<br>- Gentamycin<br>- Cephalosporins: Cefazolin, Ceftriaxone, Cefepime, Ceftaroline, etc<br>- Penicillins: Amoxicillin, Ampicillin, Piperacillin, etc<br>- Carbapenems: Meropenem, Imipenem, etc<br>- Fluoroquinolones: Levofloxacin, Ciprofloxacin |

# 0-Hours to 24-Hours After ROSC

**For the following questions, give the best answer based on documentation during the first 24-hours from the time ROSC was achieved (hours 0 to <24).**

**These questions will be repeated in 24-hour segments for a total of 96-hours after ROSC.**

**Consider hour 0 to be the hour that ROSC was achieved.**

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| **41.** | Patient alive | Select one:<br>*0, No*<br>*1, Yes*<br>*2, No data exists for this entire 24-hour period (example: patient transferred to a different hospital system)* | Select the answer that indicates I the patient is **alive and not declared brain dead at the start of the 24-hour period**. |
| **42.** | Patient location | Select one:<br>*0, Emergency department*<br>*1, Non-telemetry floor/ward*<br>*2, Telemetry floor/ward*<br>*3, Intensive care unit*<br>*4, Other* | Please indicate the location of the patient during the 24-hour period.<br><br>If the patient was in more than one location during the 24-hour period, select the location with **the highest level of monitoring**. In order, the highest level of monitoring should be considered 1) intensive care unit 2) emergency department 3) telemetry 4) inpatient ward. |

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| **43.** | Patient location Other | Text: | Complete if **Patient location** is **Other.** |
| **Organ Support** | | | |
| **44.** | Highest lactate (mmol/L) | Text: | Please indicate the highest value for lactate or lactic acid in mmol/L reported in the 24-hour period.<br><br>Enter the value as a number.<br><br>If there is **none documented** in this 24-hour period, please enter "99999" into the text. |
| **45.** | Lowest platelet count (k/µL) | Text: | Please enter the **lowest number** of platelets that the patient had during the 24-hour period.<br><br>Please enter the result in thousands per microliter (k/µL).<br>For **example**, if the number of platelets is 204,000/µL, enter 204.<br><br>If your electronic records to not report platelets in thousands per microliter, please round the number of platelets per microliter to the nearest thousand.<br><br>If there is no platelet number checked in this 24-hour period, please enter 99999 into the text. |
| **46.** | Highest total bilirubin level (mg/dL) | Text: | Please enter the **highest value** of total bilirubin that the patient had during the 24-hour period.<br><br>Please enter the result in miligrams per deciliter (mg/dL).<br><br>If there is no bilirubin value checked in this 24-hour period, please enter 99999 into the text.<br><br>Please indicate the total bilirubin value. This is often listed, but could be the direct bilirubin plus indirect bilirubin. This could also be the conjugated bilirubin plus unconjugated bilirubin. |

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| **47.** | Highest creatinine level (mg/dL) | Text: | Please enter the **highest value** of creatinine that the patient had during the 24-hour period.<br><br>Please enter the result in miligrams per deciliter (mg/dL).<br><br>If patient had any renal replacement therapy (hemodialysis, continuous renal replacement therapy like CVVHD or CVVH) **within last 3 days prior** to score calculation or if the patient is documented as having end stage renal disease (ESRD) during this admission, please enter **88888** regardless of creatinine value.<br><br>If there is no creatinine value checked in this 24-hour period (and the patient is not on renal replacement therapy), please enter **99999**. |
| **48.** | Arterial blood gas availability | Select one:<br>0, Arterial blood gas is not available<br>1, Arterial blood gas is available | Please select the value indicating whether an arterial blood gas was collected during the 24-hour period. |
| **49.** | Highest PaO2 (mmHg) | Text: | Enter the highest $PaO_2$ value documented during the 24-hour period.<br><br>$PaO_2$ is the partial pressure of oxygen taken from an arterial blood gas. |
| **50.** | Lowest PCO2 (mmHg) | Text: | Enter the lowest $PCO_2$ value documented during the 24-hour period.<br><br>$PCO_2$ is the partial pressure of carbon dioxide taken from an arterial blood gas. |
| **51.** | Post arrest organ support | Select all that apply:<br>*0, No organ supportive therapy*<br>*1, Invasive mechanical ventilation (IMV)* | Select if patient received any of the following during the specified 24-hour period.<br><br>Extracorporeal pulmonary and cardiovascular support is divided into |

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| | | *2, Bilevel noninvasive ventilation (BIPAP) or continuous positive airway pressure ventilation (CPAP)*<br>*3, High flow nasal canula (HFNC)*<br>*4, Intermittent hemodialysis*<br>*5, Continuous renal replacement therapy (CRRT, CVVH, CVVHD, SCUF, SLED)*<br>*6, Vasopressor or inotropic support*<br>*7, Extracorporeal pulmonary support (VV-ECMO)*<br>*8, Extracorporeal cardiovascular support (VA-ECMO)*<br>*9, Mechanical circulatory device (eg. LVAD, IABP, impella)*<br>*10, Extracorporeal carbon dioxide removal (ECCOR)*<br>*11, Extracorporeal liver support (molecular absorbent recirculating system – MARS; extracorporeal cellular therapy – ELAD)*<br>*12, Other* | venovenous (VV ECMO) and venoarterial (VA ECMO) support, please choose appropriately which type of ECMO the patient is on, if any.<br><br>Continuous renal replacement therapy includes any CRRT, CVVH, CVVHD, SCUF, SLED. |
| **52.** | Cardiovascular SOFA | Select one:<br>*0, Mean arterial pressure ≥70 mmHg*<br>*1, Mean arterial pressure <70 mmHg*<br>*2, On norepinephrine dose of ≤0.05 mcg/kg/min or any vasopressor with equivalent dose* | Please select the value indicating the **highest amount** of cardiovascular support that the patient received during the 24-hour period.<br><br>Mean arterial pressure (MAP) can be calculated from systolic (SBP) and diastolic (DBP) blood pressures when the MAP is not available using:<br>MAP = (1/3)*(systolic BP) + (2/3)*(diastolic BP). |

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| | | *3, On norepinephrine dose of >0.05 mcg/kg/min or any vasopressor with equivalent dose*<br>*4, On norepinephrine dose of >0.15 mcg/kg/min or any vasopressor with equivalent dose*<br>*5, On extracorporeal cardiovascular support (VA ECMO)*<br>*6, Unknown* | Cuff and A-line will be treated the same when calculating MAP.<br>If both cuff pressures and A-line pressures are available, please use the A-line pressures.<br><br>If the patient is on no vasopressors, but is on an inotrope (dobutamine or milrinone) select the third option "*On norepinephrine dose of >0.05 mcg/kg/min or any vasopressor with equivalent dose"*<br><br>Norepinephrine equivalents to 0.05 mcg/kg/min:<br>Epinephrine: 0.05 mcg/kg/min<br>Phenylephrine: 0.5 mcg/kg/min<br>Dopamine: 5 mcg/min<br>Vasopressin: 0.02 units/min (or 1.2 units/hr)<br>Angiotensin II: 0.005 mcg/min<br><br>Norepinephrine equivalents to 0.15 mcg/kg/min:<br>Epinephrine: 0.15 mcg/kg/min<br>Phenylephrine: 1.5 mcg/kg/min<br>Dopamine: 15 mcg/min<br>Vasopressin: 0.06 units/min (or 3.6 units/hr)<br>Angiotensin II: 0.015 mcg/min<br><br>Norepinephrine equivalents in mcg/min:<br>Norepinephrine – 1:1<br>Epinephrine – 1:1<br>Phenylephrine – divide dose (mcg/min) by 10<br>Dopamine – divide dose (mcg/min) by 100<br>Vasopression – multiply dose (units/min) by 2.5<br>Angiotensin II – multiply dose (mcg/min) by 10 |

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| **53.** | Vasopressors used | Select all that apply:<br>*0, Norepinephrine*<br>*1, Epinephrine*<br>*2, Phenylephrine*<br>*3, Dobutamine*<br>*4, Dopamine*<br>*5, Vasopressin*<br>*6, Milrinone*<br>*7, Angiotensin II*<br>*8, Isoproterenol*<br>*9, Levosimendan* | Select all vasopressors that were given during the 24-hour period. |
| **54.** | MAP goal specified | Select one:<br>*0, No*<br>*1, Yes* | Select the value that indicates if a mean arterial pressure (MAP) goal was specified for the patient during the 24-hour period.<br><br>Mean arterial pressure (MAP) can be calculated from systolic (SBP) and diastolic (DBP) blood pressures when the MAP is not available using:<br>MAP = (1/3)*(systolic BP) + (2/3)*(diastolic BP). |
| **55.** | MAP goal value (mmHg) | Text: | If a MAP goal was specified, please write the goal mean arterial pressure (MAP) specified during the 24-hour period.<br><br>Enter the value that is the low end of the MAP goal. Examples:<br>- If the goal is 70 mmHg to 80 mmHg, enter 70.<br>- If the goal is ≥65 mmHg, enter 65.<br><br>Please enter the value in whole numbers.<br><br>If more than one goal is described in the medical record, enter the higher MAP goal recorded.<br><br>Mean arterial pressure (MAP) can be calculated from systolic (SBP) and diastolic (DBP) blood pressures when the MAP is not available using:<br>MAP = (1/3)*(systolic BP) + (2/3)*(diastolic BP). |

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| **56.** | Respiratory SOFA | Select one:<br>*0, Patient on no oxygen support*<br>*1, Nasal cannula or other low-flow oxygen*<br>*2, High-flow nasal cannula or noninvasive positive pressure (BiPAP or CPAP) support*<br>*3, Mechanical ventilation*<br>*4, Extracorporeal oxygen support (VV or VA ECMO)*<br>*5, Unknown* | Please select the value indicating the **most** oxygen support that the patient needed during the 24-hour period.<br><br>$FiO_2$ is the percent of oxygen that the ventilator is delivering.<br><br>Regular nasal cannula, face mask, and non-rebreather mask are considered low-flow oxygen. |
| **57.** | Ventilator FiO2 | *0, Mechanical ventilation, set $FiO_2$ <60%*<br>*1, Mechanical ventilation, set $FiO_2$ ≥60% and <80%*<br>*2, Mechanical ventilation, set $FiO_2$ ≥80%*<br>*3, Mechanical ventilation, $FiO_2$ unavailable* | Select the highest FiO2 that the patient was on while mechanically ventilated during the 24-hour period. FiO2 is the percent of oxygen that is set on a ventilator. |
| **58.** | Max tidal volume (mL) | Text: | Enter the highest tidal volume set on the ventilator during the 24-hour period.<br><br>Enter in units of milliliters (mL).<br><br>Please enter the number rounded to the nearest whole digit.<br><br>If the patient is receiving mechanical ventilation, but the tidal volume is not specified, enter “99999” into the text. |
| **59.** | Consciousness | Select one:<br>*0, Patient awake and following commands*<br>*1, Patient awake but not following commands*<br>*2, Patient is not awake and is not following commands*<br>*3, Unknown* | Please select the value that best describes the patient’s ability to wake up and follow commands.<br><br>Please indicate the best status that the patient had during the 24-hour period. |

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| **60.** | Sedation | Select one:<br>0, Patient is on sedation<br>1, Patient is not on sedation | If the patient's best neurologic status during the 24-hour period was not awake and not following commands, select the value that indicates whether the patient was on sedation when consciousness was determined. |
| **Temperature Management** | | | |
| **61.** | Documented target temperature | Select all that apply:<br>*0, No specific temperature target defined*<br>*1, Fever avoidance*<br>*2, Targeted normothermia*<br>*3, Specific targeted temperature below normal* | Select the category that BEST describes the goal temperature (if any) that was documented in the medical record in the 24-hour period.<br><br>If more than one plan for temperature management was described in the 24-hour period, select all that apply.<br><br>Fever avoidance should include any documentation of a reactive strategy. Example: acetaminophen for fever. Fever is defined as ≥37.8°C.<br><br>Targeted normothermia should include documentation of a goal temperature in the normothermic range (36.5°C to 37.5°C). It often uses closed loop devices, but does not have to.<br><br>Specific targeted temperature below normal often requires use of a closed loop cooling device: A method of cooling that circulates cold fluid through a closed circuit either through direct skin contact (such as Arctic Sun) or via an intravascular catheter (such as Cool-Gard). |
| **62.** | Goal temperature (°C) | Text: | If **Specific targeted temperature below normal** was selected, please enter the **lowest described target temperature** (in degrees Celsius) in the 24-hour period. |

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| | | | Please format the value as XX.X, in degrees Celsius. |
| **63.** | Temperature monitoring route | Select all that apply:<br>*0, None described or documented*<br>*1, Oral*<br>*2, Axillary*<br>*3, Tympanic*<br>*4, Temporal*<br>*5, Rectal*<br>*6, Bladder*<br>*7, Esophageal*<br>*8, Intravascular*<br>*9, Other* | Select any method of temperature monitoring that was used during the 24-hour period. |
| **64.** | Temperature monitoring other | Text: | If the answer to Temperature monitoring route was **Other**, then enter the type of temperature monitoring that was used. |
| **65.** | Method of cooling | Select all that apply:<br>*0, None of the below were used*<br>*1, External cooling without closed loop device (e.g. cooling blanket or ice packs)*<br>*2, Anti-pyretics*<br>*3, Cold intravenous fluids*<br>*4, Closed loop cooling device (e.g. arctic sun or coolgard)*<br>*5, Transnasal evaporative cooling*<br>*6, Extracorporeal cooling (ECMO or CRRT with intention of lowering temperature)*<br>*7, Exposure or external evaporative*<br>*8, Other* | Please indicate which method(s) of TTM were utilized (select all that apply) during the specified time period.<br><br>If any of the methods here are selected, please specify details in the follow up questions below, if the data is available.<br><br>Closed loop cooling device: A method of cooling that circulates cold fluid through a closed circuit. The cold fluid comes into contact with the patient either through direct skin contact (such as Arctic Sun) or via an intravascular catheter (such as Cool-Gard). A cooling blanket that does not make substantial direct skin contact should not be considered as a closed loop cooling device. |

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| **66.** | Initial set temperature (°C) | Text: | If the answer to Method of cooling was **Closed loop cooling device**, enter the initial set temperature as indicated in the medical record.<br><br>Please format the value as XX.X, in degrees Celsius.<br><br>If it was initiated but the initial temperature is unknown, please enter "99999" into the text. |
| **67.** | Method of cooling_External | Select all that apply:<br>*0, Ice packs placed on the patient*<br>*1, External cooling blankets applied*<br>*2, Other* | If the answer to Method of cooling was **External cooling**, please select the method that best describes the type of external cooling.<br><br>Please do NOT enter externally placed closed loop cooling devices like Arctic Sun in this category. |
| **68.** | Method of cooling_Antipyretics | Select all that apply:<br>*0, Acetaminophen ordered as needed*<br>*1, Acetaminophen ordered at scheduled intervals*<br>*2, NSAIDs ordered as needed*<br>*3, NSAIDs ordered at scheduled intervals*<br>*4, Other* | If the answer to Method of cooling was **Anti-pyretics**, please describe the method used.<br><br>Brand name for acetaminophen is tylenol.<br>Brand names for NSAIDs include ibuprofen, motrin, naproxen. |
| **69.** | Method of cooling_Cold fluids | Select all that apply:<br>*0, Bolus of cold iv fluids*<br>*1, Continuous drip of cold iv fluids*<br>*2, Other* | If the answer to Method of cooling was **Cold intravenous fluids**, please describe the method used. |
| **70.** | Method of cooling_Closed loop | Select all that apply:<br>*0, Surface/external device*<br>*1, Internal/intravascular device*<br>*2, Other* | If the answer to Method of cooling was **Closed loop cooling device**, please describe the method used.<br><br>Example of a surface/external closed loop device would be Arctic sun.<br>Example of a internal/intravascular device would be Alsius CoolGard. |

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| **71.** | Method of cooling_Other | Text: | If the answer to Method of cooling was **Other**, please describe the method used. |
| **72.** | Temperature max 0 – 6 (°C) | Text: | Enter the maximum temperature reported in the first 6 hours of the 24-hour period (hours 0 to <6).<br><br>Please format the value as XX.X, in degrees Celsius.<br><br>If the patient is DECEASED and there is no temperature recorded in the 0 – 6 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature recorded in the 0 – 6 hour period, please enter “99999” into the text. |
| **73.** | Temperature min 0 – 6 (°C) | Text: | Enter the minimum temperature reported in the first 6 hours of the 24-hour period (hours 0 to <6).<br><br>Please format the value as XX.X, in degrees Celsius.<br><br>If the patient is DECEASED and there is no temperature recorded in the 0 – 6 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature available in the 0 – 6 hour period, please enter “99999” into the text. |
| **74.** | Temperature max 6 – 12 (°C) | Text: | Enter the minimum temperature reported in the first 6 hours of the 24-hour period (hours 0 to <6). |

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| | | | Please format the value as XX.X, in degrees Celsius.<br><br>If the patient is DECEASED and there is no temperature recorded in the 0 – 6 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature available in the 0 – 6 hour period, please enter “99999” into the text. |
| **75.** | Temperature min 6 – 12 (°C) | Text: | Enter the minimum temperature reported in the second 6 hours of the 24-hour period (hours 6 to <12).<br><br>Please format the value as XX.X, in degrees Celsius.<br><br>If the patient is DECEASED and there is no temperature recorded in the 6 – 12 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature available in the 6 – 12 hour period, please enter “99999” into the text. |
| **76.** | Temperature max 12 – 18 (°C) | Text: | Enter the maximum temperature reported in the third 6 hours of the 24-hour period (hours 12 to <18).<br><br>Please format the value as XX.X, in degrees Celsius.<br><br>If the patient is DECEASED and there is no temperature recorded in the 12 – 18 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature available in the 12 – 18 |

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| | | | hour period, please enter “99999” into the text. |
| **77.** | Temperature min 12 – 18 (°C) | Text: | Enter the minimum temperature reported in the third 6 hours of the 24-hour period (hours 12 to <18).<br><br>Please format the value as XX.X, in degrees Celsius.<br><br>If the patient is DECEASED and there is no temperature recorded in the 12 – 18 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature available in the 12 – 18 hour period, please enter “99999” into the text. |
| **78.** | Temperature max 18 – 24 (°C) | Text: | Enter the maximum temperature reported in the last 6 hours of the 24-hour period (hours 18 to <24).<br><br>Please format the value as XX.X, in degrees Celsius.<br><br>If the patient is DECEASED and there is no temperature recorded in the 18 – 24 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature available in the 18 – 24 hour period, please enter “99999” into the text. |
| **79.** | Temperature min 18 – 24 (°C) | Text: | Enter the minimum temperature reported in the last 6 hours of the 24-hour period (hours 18 to <24).<br><br>Please format the value as XX.X, in degrees Celsius. |

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| | | | If the patient is DECEASED and there is no temperature recorded in the 18 – 24 hour period, please enter "88888" into the text.<br><br>If the patient is ALIVE and there is no temperature available in the 18 – 24 hour period, please enter “99999” into the text. |
| **Prognostication** | | | |
| **80.** | Neuro SOFA | Select one:<br>*0, GCS 15*<br>*1, GCS 13-14*<br>*2, GCS 10-12*<br>*3, GCS 6-9*<br>*4, GCS <6*<br>*5, Documentation is not sufficient to determine GCS*<br>*6, Patient receiving deep sedation throughout 24-hour period* | Please select the value that most acurately categorizes the patient’s **best** Glasgow coma scale (GCS) during the 24-hour period.<br><br>If the patient is receiving sedation that prevents accurate assessment of the GCS during the 24 hour period, please select **Patient receiving deep sedation throughout 24-hour period.**<br><br>Glascow coma scale is defined as follows<br>Eye opening<br>- 4 points if spontaneous<br>- 3 points if to speech<br>- 2 points if to pain<br>- 1 point if not at all<br>Verbal response<br>- 5 points if oriented to person, time, and place<br>- 4 points if confused<br>- 3 points if inappropriate words<br>- 2 points if incomprehensible sounds<br>- 1 point if no response<br>Motor response<br>- 6 points if obeying commands<br>- 5 points if moving to avoid pain<br>- 4 points if flexing to withdraw from pain<br>- 3 points if flexing abnormally<br>- 2 points if extending abnormally<br>- 1 point if no response<br><br>If the patient cannot provide a verbal response due to placement of an endotracheal tube, give the patient 1 point for no verbal response. |

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| **81.** | Neurologic exam | Select one:<br>*0, No*<br>*1, Yes* | Please select the answer that indicates whether a neurologic examination was performed in the 24-hour period. |
| **82.** | Pupil exam | Select one:<br>*0, None documented*<br>*1, Present bilaterally*<br>*2, One pupil lacking pupillary light reflex*<br>*3, Both pupils lacking pupillary light reflex* | Please specify the result of a pupillary light reflex test performed during the 24-hour period.<br><br>If more than one neurologic exam was performed in the 24-hour period, select the finding that is the best (highest amount of function).<br><br>A present light reflex is the presence of pupil constriction in response to light. Sometimes called “reactive to light”. The abbreviation PERL is often used to document Pupils are Equal and Reactive to Light. |
| **83.** | Pupillometry | Select one:<br>*0, No electronic pupillometer was used*<br>*1, Electronic pupillometer was used*<br>*2, Unknown if pupillometer was used* | Please specify if an electronic pupillometer was used to measure the pupillary light reflex during the 24-hour period. |
| **84.** | Corneal reflex | Select one:<br>*0, None documented*<br>*1, Present bilaterally*<br>*2, Present on only one side*<br>*3, Absent bilaterally* | Please specify the result of a corneal reflex test performed during the 24-hour time period.<br><br>A present corneal reflex is blinking of the eyelid triggered by something foreign coming into contact with the cornea. |
| **85.** | Eye response | Select one:<br>*0, None documented*<br>*1, Eyelids open to command and eyes track* | Please specify the patient’s eye response during the 24-hour time period.<br><br>If more than one neurologic exam was performed in the 24-hour period, |

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| | | *2, Eyelids open to command but are not tracking*<br>*3, Eyelids closed but open to loud voice*<br>*4, Eyelids closed but open to pain*<br>*5, Eyelids remain closed with pain* | select the finding that is the best (highest amount of function). |
| **86.** | Motor response | Select one:<br>*0, None documented*<br>*1, Patient able to follow a motor command*<br>*2, Localizing to pain*<br>*3, Flexion response to pain*<br>*4, Abnormal flexion to pain*<br>*5, Extension response to pain*<br>*6, No response to pain* | Please specify the result of testing the presence of motor response to painful stimuli performed during the 24-hour time period.<br><br>If more than one neurologic exam was performed in the 24-hour period, select the finding that is the best (highest amount of function).<br><br>A motor command would be considered moving an extremity when asked, giving a thumbs up sign, giving a peace sign, or equivalent gesture.<br><br>Localizing to pain would be considered moving an extremity that was painfully stimulated.<br><br>If the patient has a triple flexion motor response, please select **Abnormal flexion to pain.** |
| **87.** | Myoclonus | Select one:<br>*0, None documented*<br>*1, Isolated myoclonic jerks or undifferentiated myoclonic movements documented*<br>*2, Documented as continuous multifocal status myoclonus* | Please specify the presence oof any myoclonus during the 24-hour time period.<br><br>Status myoclonus are continuous, multifocal, repetitive, irregular jerking movements that are present in the absence of seizures, multifocal, and persist >30 min. |

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| **88.** | Neuron specific enolase | Select one:<br>*0, Not sent*<br>*1, Sent* | Please select the category **best** indicating the status of a neuro specific enolase test during the 24-hour period. |
| **89.** | Somatosensory evoked potential (SSEP) | Select one:<br>*0, No documentation to indicate one was performed*<br>*1, Documented as N20 absent bilaterally*<br>*2, Documented as N20 absent unilaterally*<br>*3, Documented as N20 present bilaterally*<br>*4, Documented as not interpretable* | Please select the category indicating the result of N20 somatosensory evoked potentials performed during the 24-hour time period. |
| **90.** | Electroencephalogram | Select all that apply:<br>*0, No documentation to indicate one was performed*<br>*1, No seizures reported*<br>*2, Seizures reported*<br>*3, Burst suppression reported*<br>*4, Suppressed background (<10 mV) reported*<br>*5, Periodic patterns reported*<br>*6, EEG performed – no acute finding*<br>*7, EEG performed – other acute finding not listed here* | Please select any findings on the electroencephalogram (EEG) report during the 24-hour time period.<br><br>If the patient was on a Ceribell device (not a full montage), please also include the results of the report here.<br><br>Please read through the EEG report, and select responses that are best represented in the report.<br><br>EEG: Electroencephalogram<br><br>Periodic patterns: generalized periodic discharges (GPDs) or lateralized periodic discharges (LPDs)<br><br>Please select all findings that apply based on the EEG report. More than one combination of answers may be selected based on what is found on the EEG. Only select "EEG performed - no acute finding" if there were no abnormal findings on the EEG report |

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| | | | (ie no seizures, no burst suppression, no suppressed background, no periodic patterns, and no other abnormal reported findings). |
| **91.** | Other EEG | Text: | If the answer to Electroencephalogram included **EEG performed – other acute finding not listed here**, please describe the finding from the EEG. |
| **92.** | EEG sedation | Select one:<br>*0, Patient was not on any sedation during the EEG*<br>*1, Patient was on sedation throughout the EEG* | Please indicate if the patient was receiving any sedating medications during the performance of the electroencephalogram (EEG) during the 24-hour period.<br><br>Sedating medications would include any continuous infusion of sedatives or opioids. This would include but is not limited to: propofol or ketamine infusions, any opioid as fentanyl, morphine, or hydromorphone, any benzodiazepines or barbiturates. |
| **93.** | Periodic patterns Hz | Text: | If **Periodic patterns reported** was selected for electroencephalogram, please enter the maximum Hertz (Hz) reported for the periodic patterns. The maximum Hz will be the highest number. |
| **94.** | Invasive intracranial monitoring | Select one:<br>*0, No invasive intracranial monitoring*<br>*1, Yes* | Select the option that describes if the patient received any invasive intracranial monitoring during the 24-hour period.<br><br>Consider any devices that remain within the skull and that can provide intermittent or continuous monitoring of physiologic or metabolic measures to be invasive intracranial monitoring. |

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| **95.** | Type of invasive intracranial monitoring | Select all that apply:<br>*0, Intracranial oxygen monitoring*<br>*1, Intracranial pressure monitoring*<br>*2, Intracranial temperature monitoring*<br>*3, Intracranial metabolic monitoring (microdialysis)* | Please select all that apply for any type of invasive intracranial monitoring that was being performed during the 24-hour period.<br><br>Some common names (including brand names) for catheters and equipment that can perform these type of invasive monitoring include:<br>Camino monitor for intracranial oxygenation and/or temperature.<br>External ventricular drain for intracranial pressure.<br>MAMBA or ICE catheters for microdialysis. |
| **96.** | New CT head findings | Select all that apply:<br>*0, No documentation to indicate one was performed*<br>*1, Evidence of anoxic brain injury and/or cerebral edema*<br>*2, Acute ischemic stroke*<br>*3, Acute hemorrhagic stroke*<br>*4, CT head performed but no acute pathology identified*<br>*5, Acute finding identified, other* | Please select any that apply to results of any CT of the head performed during the 24-hour time period.<br><br>Evidence of anoxic brain injury may include loss of grey-white matter differentiation, or a reduced grey-white matter ratio.<br><br>Please only select acute hemorrhagic stroke if the patient suffered a subarachnoid hemorrhage (SAH), intraparenchymal hemorrhage (IPH), or intraventricular hemorrhage (IVH).<br><br>If an acute finding was identified on the head CT but was not listed as one of the options, select Acute finding identified, other.<br><br>CT: computed tomography |
| **97.** | Other new CT head finding | Text: | If the answer to CT head included **Acute finding identified, other**, please describe the finding. |

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| **98.** | CT scan, body | Select all that apply:<br>*0, No documentation to indicate any body CT was performed*<br>*1, CT chest performed*<br>*2, CT abdomen/pelvis performed*<br>*3, Other CT of the body performed* | Please select the options that specify whether any CT imaging was performed BESIDES a CT head during the 24-hour period.<br><br>CT chest includes non-contrast studies, contrast studies, focused pulmonary embolism (PE) studies, and any other CT that is of the chest.<br><br>CT abdomen/pelvis includes non-contrast studies, contrast studies, and any other CT that includes imaging of the abdomen and/or pelvis.<br><br>CT: computed tomography |
| **99.** | New/acute body CT finding | Select all that apply:<br>*0, None of the following acute findings were identified*<br>*1, Acute coronary syndrome or obstructive coronary artery disease*<br>*2, Acute pulmonary embolism*<br>*3, Acute aortic dissection*<br>*4, Acute pneumothorax*<br>*5, Acute post-surgical complication*<br>*6, Acute bleed (e.g. peritoneal or retroperitoneal bleed)*<br>*7, Acute intestinal perforation*<br>*8, Acute intestinal ischemia*<br>*9, Acute pneumonia* | Please select any of the acute critical CT findings found during the 24-hour period (not including those found on CT head).<br><br>Please only select options that were found acutely after the cardiac arrest and not previously known. Do not select the option if the finding was noted on the scan but was also known prior to the cardiac arrest.<br><br>Acute coronary syndrome or obstructive coronary artery disease are defined as any critical stenosis as determined by CT imaging in a major coronary artery identified on CT scan<br><br>CT: computed tomography |

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| | | *11, Liver/spleen laceration*<br>*12, Endotracheal tube misplacement*<br>*13, Catheter misplacement*<br>*14, Mediastinal hematoma with active extravasation*<br>*15, Hemopericardium*<br>*16, Rib fracture*<br>*17, Other acute finding* | |
| **100.** | Other acute (non-head CT) CT finding | Text: | If the answer to New/acute time critical CT finding was Other, please specify what new finding was found on the CT scan. |
| **101.** | MRI brain | Select all that apply:<br>*0, No documentation to indicate one was performed*<br>*1, Evidence of anoxic brain injury and/or cerebral edema*<br>*2, Acute ischemic stroke*<br>*3, Acute hemorrhagic stroke*<br>*4, MRI head performed but no acute pathology identified*<br>*5, Acute finding identified, other* | Please select any that apply to results of any MRI of the head performed during the 24-hour time period.<br><br>Evidence of anoxic brain injury may include diffuse restricted diffusion on diffusion weighted imaging.<br><br>Please only select acute hemorrhagic stroke if the patient suffered a subarachnoid hemorrhage (SAH), intraparenchymal hemorrhage (IPH), or intraventricular hemorrhage (IVH).<br><br>If an acute finding was identified on the head MRI but was not listed as one of the options, select **Acute finding identified, other**.<br><br>MRI: magnetic resonance imaging |

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| **102.** | Other MRI finding | Text: | If the answer to MRI brain included Acute finding identified, other, please describe the finding.<br><br>MRI: magnetic resonance imaging |
| **103.** | Family meeting | Select one:<br>*0, No documentation of family meeting being performed*<br>*1, Family meeting documented* | Please indicate if there is documentation of a family meeting having occurred during the 24-hour time period.<br><br>A family meeting should document that there was discussion between the care team and the patient, patient's health care proxy, patient's surrogate, or other family member of the patient. There should be documentation that the clinical condition of the patient was discussed, AND that prognostic information was shared.<br><br>Documentation that the family was updated on the events/plan for the day does not qualify as a family meeting. |
| **104.** | Palliative care consult | Select one:<br>*0, None*<br>*1, New palliative care evaluation*<br>*2, Palliative care was already consulted and following prior to the arrest* | Please indicate if an evaluation by a palliative care team was performed and documented during the 24-hour time period. |
| **105.** | Neurology consult | Select one:<br>*0, None*<br>*1, Neurology evaluation* | Please indicate if an evaluation by a neurology team was performed and documented during the 24-hour time period. |

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| **106.** | Code status | Select one:<br>*0, Full code*<br>*1, Do not resuscitate but do intubate*<br>*2, Do resuscitate but do not intubate*<br>*3, Do not resuscitate and do not intubate*<br>*4, Comfort care* | Please select the category to best indicate the patient's code status during the 24-hour time period.<br><br>If the patient had more than one code status indicated during the time period, please select the most restrictive. |
| **107.** | Anticipated prognosis | Select one:<br>*0, None documented*<br>*1, Good prognosis*<br>*2, Poor prognosis*<br>*3, Uncertain prognosis* | Select the category that best describes any mention of prognosis in a note by an attending physician during the 24-hour time period.<br><br>If more than one suspected prognosis is written by an attending physician, select the predicted prognosis that is the worst.<br><br>Words like optimistic, or favorable in reference to prognosis should be considered good.<br>Words like unlikely to survive should be considered bad.<br>Words like guarded prognosis should be considered uncertain. |
| **At this point the reviewer will return to the header cell for 0-Hours to 24-Hours After ROSC, and repeat the questions for 24-hours to 48-hours after ROSC, and continue this process in 24-hour intervals for a total of 4 times up to 96-hours.** | | | |
| # Outcomes | | | |
| **108.** | Total duration of hypothermia (hours) | Text: | Enter the total number of hours for which the patient was receiving targeted temperature management with a set temperature equal to or less than 36 degrees Celsius. |

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| | | | Round to the nearest hour.<br><br>If the number of hours is unknown, enter 99999 into the text. |
| **109.** | Rewarming | Select one:<br>*0, Passive rewarming (removing source of cooling)*<br>*1, Controlled rewarming at a rate of 0.10 degrees Celsius per hour*<br>*2, Controlled rewarming at a rate of 0.25 degrees Celsius per hour*<br>*3, Controlled rewarming at a rate of 0.50 degrees Celsius per hour*<br>*4, Other controlled rewarming rate*<br>*5, Unknown* | Select the answer that best describes the method of rewarming after the completion of targeted temperature management. |
| **110.** | Other rewarming rate (degrees Celsius per hour) | Text: | If the answer to Rewarming was Other controlled rewarding rate, please enter the rate in degrees Celcius per hour. |
| **111.** | Ever in ICU post-ROSC | Select one:<br>*0, No*<br>*1, Yes* | Select whether the patient was ever in an intensive care unit after ROSC during the hospital admission. |
| **112.** | ICU admission day post-ROSC | Text: | Enter the day of ICU admission post-ROSC.<br><br>If the patient was in the ICU at the time of the arrest, enter the day that ROSC was achieved.<br><br>Consider Day 0 to be the day that the patient first presented to the hospital on the current admission.<br><br>If the patient was admitted to an ICU but the day is unknown, please enter “77777” into the text. |

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| **113.** | ICU discharge day post-ROSC | Text: | Enter the day of the first ICU discharge after ROSC.<br><br>If the patient was in the ICU after ROSC and discharge (first discharge), then brought back to the ICU later and discharged again (second discharge), put the day of the first time the patient was discharged after ROSC.<br><br>Consider Day 0 to be the day that the patient first presented to the hospital on the current admission.<br><br>If the patient was discharged from an ICU but the day is unknown, please enter "77777" into the text.<br><br>If the patient was in the ICU but never discharged (example: died in the ICU), please enter "99999" into the text. |
| **114.** | Ever follow commands post-ROSC | Select one:<br>*0, No*<br>*1, Yes* | Select the option that indicates whether the patient ever was able to follow commands after cardiac arrest during the hospital stay.<br><br>The patient should be able to follow commands between the time of ROSC and either<br>- hospital discharge<br>- death<br>- or 60-days post ROSC.<br>Whichever occurs first. |
| **115.** | Commands day post-ROSC | Text: | If the answer to **Ever follow commands** was **Yes**, please indicate the day that the patient **first was able to follow commands.**<br><br>Consider **Day 0** to be the day that the patient **first presented to the hospita**l on the current admission. |

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| | | | If the patient started following commands but the day is **unknown**, please enter “77777” into the text.<br><br>If the patient **never followed commands** during the hospital stay, please enter “99999” into the text. |
| **116.** | Tracheostomy | Select one:<br>*0, Existing tracheostomy prior to arrest*<br>*1, No existing tracheostomy; No new tracheotomy placed after arrest*<br>*2, No existing tracheostomy; New tracheostomy placed after arrest*<br>*3, No existing tracheostomy; New tracheostomy placed during arrest*<br>*4, Unknown* | Select the option that best describes the timing/presence of a tracheotomy for the patient before and after the cardiac arrest. |
| **117.** | Day tracheostomy | Text: | Enter the day that the patient received a tracheotomy surgery/procedure.<br><br>Consider Day 0 to be the day that the patient first presented to the hospital on the current admission. |
| **118.** | NSE result | Select one:<br>*0, No NSE resulted post-ROSC*<br>*1, NSE resulted post-ROSC* | Please select the option that describes whether a neuro specific enolase (NSE) test drawn after ROSC resulted during the hospital admission. |
| **119.** | Day of NSE result | Text: | Enter the day that the neuron specific enolase (NSE) resulted.<br><br>Consider Day 0 to be the day that the patient first presented to the hospital on the current admission. |

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| **120.** | NSE value (mcg/L) | Text: | If a neuron specific enolase (NSE) resulted at any point post-ROSC, please enter the value of the test in micrograms per liter.<br><br>If multiple NSE values resulted, please enter the highest value. |
| **121.** | NSE upper limit (mcg/L) | Text: | If there was a neuron specific enolase (NSE) that resulted at any point post-ROSC, please enter the value of the upper limit of normal for the test per the institution's laboratory data in micrograms per liter. |
| **122.** | Brain death determination | Select one:<br>*0, No*<br>*1, Yes* | Select the choice that indicates whether the patient was declared brain dead.<br><br>Only select yes if brain death was declared while the patient was still receiving organ support.<br>If the patient was pronounced dead after a subsequent cardiac arrest where resuscitation was stopped, select no. |
| **123.** | Day of brain death | Text: | If the answer to **Brain death determination** was **Yes,** enter the day that the clinical exam was first consistent with brain death (coma, absence of all brainstem reflexes).<br><br>Consider **Day 0** to be the day that the patient **first presented to the hospita**l on the current admission.<br><br>If the patient was pronounced brain dead but the day is **unknown**, please enter "77777" into the text.<br><br>If a brain death examination was **not performed**, please enter "99999" into the text. |

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| **124.** | Discharge status | Select one:<br>*0, Discharged alive*<br>*1, Patient deceased in hospital*<br>*2, Patient still in the hospital and alive at 60 days* | Select the option that indicates whether the patient died in the hospital or was discharged alive. |
| **125.** | Hospital discharge day | Text: | Enter the day of hospital discharge.<br><br>Consider **Day 0** to be the day that the patient **first presented to the hospita**l on the current admission.<br><br>If the patient was discharged from the hospital but the day is **unknown**, please enter "77777" into the text. |
| **126.** | Discharge location | Select one:<br>*0, Home*<br>*1, Acute rehabilitation facility*<br>*2, Subacute rehabilitation facility, nursing home, long term acute care facility, skilled nursing facility*<br>*3, Any hospice (home hospice or dedicated hospice center)*<br>*4, Transferred to an outside hospital that is not part of the original hospital's network*<br>*5, Unknown* | If the answer to **Discharged alive** was **Discharged alive,** please indicate the location to which the patient was discharged.<br><br>Long term acute care facility would include facilities that are capable of taking care of patients on a ventilator long-term. |
| **127.** | mRS at discharge | Select one:<br>*1, 1 – No significant disability. Able to carry out all usual activities*<br>*2, 2 – Slight disability. Able to look after own affairs without assistance* | Please indicate their modified Rankin Score (mRS) at discharge.<br><br>Please review notes in the chart and provide a best estimate of the mRS.<br><br>Modified Rankin Scale from 0 to 6:<br>0 - No symptoms. |

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| | | *3, 3 – Moderate disability. Requires some help*<br>*4, 4 – Moderately severe disability. Unable to attend to own bodily needs without assistance*<br>*5, 5 – Severe disability. Requires constant nursing care and attention*<br>*6, 6 - Dead*<br>*7, Unable to determine mRS* | 1 - No significant disability. Able to carry out all usual activities, despite some symptoms.<br>2 - Slight disability. Able to look after own affairs without assistance, but unable to carry out all previous activities.<br>3 - Moderate disability. Requires some help, but able to walk unassisted.<br>4 - Moderately severe disability. Unable to attend to own bodily needs without assistance, and unable to walk unassisted.<br>5 - Severe disability. Requires constant nursing care and attention, bedridden, incontinent.<br>6 - Dead. |
| **128.** | CPC score at discharge | Select one:<br>*0, 1 – Good cerebral performance (normal life)*<br>*1, 2 – Moderate cerebral disability (disabled but independent)*<br>*2, 3 – Severe cerebral disability (conscious but disabled and dependent)*<br>*3, 4 – Coma or vegetative stat (unconscious)*<br>*4, 5 – Brain death*<br>*5, Unable to determine baseline CPC score* | Please select the option that best fits the patient's Cerebral Performance Category (CPC) at the time of discharge.<br><br>Please review notes in the chart and provide the best estimate of CPC score.<br><br>1 – Good cerebral performance (normal life): Conscious, alert, able to work and lead a normal life. May have minor psychological or neurological deficits.<br>2 – Moderate cerebral disability (disabled but independent): Conscious. Sufficient cerebral function for part-time work in sheltered environment or independent activities of daily life (dressing, travel by public transport, food preparation). May have hemiplegia, seizures, dysarthria, dysphasia, permanent memory changes.<br>3 – Severe cerebral disability (conscious but disabled and |

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| | | | dependent): Conscious. Dependent on others for daily support (in an institution or at home with exceptional caregiver effort). Has at least limited cognition. This category includes a wide range of cerebral abnormalities, from patients who are ambulatory but have severe memory disturbances or dementia precluding independent existence, to those who are paralyzed and can communicate only with their eyes.<br>4 – Coma or vegetative state (unconscious): Unconscious. Unaware of surroundings. No cognition. No verbal or psychologic interaction with environment.<br>5 – Brain death: Certified brain dead or dead by traditional criteria. |
| **129.** | New organ support at discharge | Select all that apply:<br>*0, No new organ support at discharge*<br>*1, New hemodialysis*<br>*2, New mechanical ventilation*<br>*3, New mechanical circulatory support*<br>*4, Other* | Please select any organ support that were present at the patient's discharge, but that the patient was not requiring prior to arrival to the hospital.<br><br>New mechanical circulatory support should be considered any ventricular assist device (e.g. LVAD). |
| **130.** | Other new organ support at discharge | Text: | If Other was selected for New organ support at discharge, please describe the new organ support that was not present prior to admission. |
| **131.** | Day of death | Text: | If the patient died during the hospital admission, enter the day the patient was declared deceased.<br><br>This would be either the day the patient was declared brain dead or the daay that death was declared after the stop of cardiopulmonary activity. |

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| | | | Consider **Day 0** to be the day that the patient **first presented to the hospita**l on the current admission.<br><br>If the patient died but the day is **unknown**, please enter "77777" into the text.<br><br>If the patient was discharged alive and **does not have a day of death**, please enter "99999" into the text. |
| **132.** | Reason for death | Select one:<br>*0, Sudden cardiac death*<br>*1, Progressive, refractory hemodynamic shock*<br>*2, Respiratory failure*<br>*3, Neurological withdrawal of care*<br>*4, Comorbid withdrawal of care* | Select the option that best encompasses the patient's cause of death.<br><br>Sudden cardiac death: Recurrent cardiac arrest without return of spontaneous circulation with or without extraordinary measure (e.g. ECPR) in place.<br><br>Progressive, refractory hemodynamic shock: Progressive, refractory hemodynamic shock despite aggressive ICU care, or withdrawal of care based on same. Hemodynamically stable patients (e.g. maintaining their mean arterial blood pressure) on aggressive ICU care (e.g. full vasopressor support) should not be included in this category.<br><br>Respiratory failure: Respiratory failure or withdrawal of care based on same. Respiratory failure may be related to hypoxemia, hypercapnia or the combination thereof. Patients who are oxygenating sufficiently on highest ventilator settings should not be included in this category. |

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| | | | Neurologic withdrawal of care: Withdrawal of care based on expectations of a poor neurological recovery based on brain imaging, a neurologic exam, or a formal opinion of a neurologist stating that the prognosis for neurologic recovery is very poor. If an assessment off sedation is not done, there must be other evidence of severe neurologic injury (e.g. severe cerebral edema or herniation).<br><br>Comorbid withdrawal of care: Withdrawal of care or refusal of life-sustaining therapy based on the expectation of a poor quality of life. This may be related to a preexisting or newly discovered terminal illness or other serious medical condition (e.g. dementia or cancer). To categorize patients with multiple potential causes of death (e.g. refractory hemodynamic shock, respiratory failure and multi system organ failure), an attempt should be made to identify the primary cause of death or reason for withdrawal of care. |
| **133.** | mRS at 60 days | Select one:<br>*1, 1 – No significant disability. Able to carry out all usual activities*<br>*2, 2 – Slight disability. Able to look after own affairs without assistance*<br>*3, 3 – Moderate disability. Requires some help* | Please indicate their modified Rankin Score (mRS) at 60 days.<br><br>Please review notes in the chart and provide a best estimate of the mRS.<br><br>Modified Rankin Scale from 0 to 6:<br>0 - No symptoms.<br>1 - No significant disability. Able to carry out all usual activities, despite some symptoms. |

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| | | *4, 4 – Moderately severe disability. Unable to attend to own bodily needs without assistance*<br>*5, 5 – Severe disability. Requires constant nursing care and attention*<br>*6, 6 - Dead*<br>*7, Unable to determine mRS* | 2 - Slight disability. Able to look after own affairs without assistance, but unable to carry out all previous activities.<br>3 - Moderate disability. Requires some help, but able to walk unassisted.<br>4 - Moderately severe disability. Unable to attend to own bodily needs without assistance, and unable to walk unassisted.<br>5 - Severe disability. Requires constant nursing care and attention, bedridden, incontinent.<br>6 - Dead. |
| **134.** | CPC at 60 days post-ROSC | Select one:<br>*0, 1 – Good cerebral performance (normal life)*<br>*1, 2 – Moderate cerebral disability (disabled but independent)*<br>*2, 3 – Severe cerebral disability (conscious but disabled and dependent)*<br>*3, 4 – Coma or vegetative stat (unconscious)*<br>*4, 5 – Brain death*<br>*5, Unable to determine baseline CPC score* | Please select the option that best fits the patient's Cerebral Performance Category (CPC) at 60 days.<br><br>Please review notes in the chart and provide the best estimate of CPC score.<br><br>1 – Good cerebral performance (normal life): Conscious, alert, able to work and lead a normal life. May have minor psychological or neurological deficits.<br>2 – Moderate cerebral disability (disabled but independent): Conscious. Sufficient cerebral function for part-time work in sheltered environment or independent activities of daily life (dressing, travel by public transport, food preparation). May have hemiplegia, seizures, dysarthria, dysphasia, permanent memory changes.<br>3 – Severe cerebral disability (conscious but disabled and dependent): Conscious. Dependent on others for daily support (in an institution or at home with |

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| | | | exceptional caregiver effort). Has at least limited cognition. This category includes a wide range of cerebral abnormalities, from patients who are ambulatory but have severe memory disturbances or dementia precluding independent existence, to those who are paralyzed and can communicate only with their eyes.<br>4 – Coma or vegetative state (unconscious): Unconscious. Unaware of surroundings. No cognition. No verbal or psychologic interaction with environment.<br>5 – Brain death: Certified brain dead or dead by traditional criteria. |
| **135.** | New organ support at 60 days post-ROSC | Select all that apply:<br>*0, No new organ support at discharge*<br>*1, New hemodialysis*<br>*2, New mechanical ventilation*<br>*3, New mechanical circulatory support*<br>*4, Other* | Please select any organ support that were present at 60 days, but that the patient was not requiring prior to arrival to the hospital. |
| **136.** | Other new organ support at 60 days post-ROSC | Text: | If Other was selected for New organ support at 60 days, please describe the new organ support that was not present prior to admission. |
| **137.** | Organ donation | Select one:<br>*0, No organs donated*<br>*1, Solid organs donated* | Select the choice(s) that indicate what organs the patient was able to donate if any.<br><br>Only select options if the patient died during the admission that the arrest occurred.<br><br>Solid organs for donation would be considered kidney, liver, lung, heart, pancreas, intestine. |

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| | | | Donations of cornea or skin should not be considered as solid organ transplant donation. |