HMS Sepsis Data Definitions

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The HMS Sepsis initiative is focused on patients discharged with a primary discharge ICD 10 code of sepsis (or pneumonia, respiratory failure, COVID, or influenza), who have evidence of infection (antibiotic treatment or positive viral testing), and who meet criteria for acute organ dysfunction on days 1 or 2 of the hospital encounter. Of note, the Hospital Encounter includes emergency, observation, and inpatient time in the hospital.

Data collection for the HMS Sepsis initiative will involve the abstraction of patient data for a random sample of eligible cases every 2 weeks. The HMS Coordinating Center may notify abstractors periodically of exceptions to this case requirement if the data registry is unavailable.

ICD 10 Codes for Sepsis Initiative

The following are the qualifying primary and secondary ICD 10 discharge codes that should be utilized to pull eligible cases on to the sites Eligibility/Discharge list for case selection and sampling.

Sepsis Cases:

- Must have a primary ICD 10 discharge code of one of the following: A02.1, A20.7, A22.7, A26.7, A32.7, A39.1, A40.0, A40.1, A40.3, A40.8, A40.9, A41.01, A41.02, A41.1, A41.2, A41.3, A41.4, A41.50, A41.51, A41.52, A41.53, A41.59, A41.81, A41.89, A41.9, A42.7, A54.86, B37.7, R65.20, R65.21

Pneumonia Cases:

- Must have a primary ICD 10 discharge code of one of the following: J12* (EXCEPT J12.82, which should be included but considered a COVID code), J13*, J14*, J15*, J16*, J17*, J18*, A48.1, J85*
- AND a secondary ICD 10 discharge code of one of the following: D65, D69.59, D69.6, F05, G93.40, G93.41, G93.49, I46.8, I46.9, I95.1, I95.89, I95.9, J80, J96.00, J96.01, J96.02, J96.90, J96.91, J96.92, K72.00, K72.01, K72.90, K72.91, K76.2, K76.3, N17.0, N17.1, N17.2, N17.8, N17.9, R03.1, R06.03, R09.2, R40.20, R40.0, R40.1, R57.0, R57.1, R57.8, R57.9, R65.20, R65.21

Respiratory Failure Cases:

- Must have a primary ICD 10 discharge code of one of the following: J80*, J96.0*, J96.9*
- AND a secondary ICD 10 discharge code of one of the following: J09*, J10*, J11*, J12* (EXCEPT J12.82, which should be included but considered a COVID code), J13*, J14*, J15*, J16*, J17*, J18*, A48.1, J85*

COVID Cases:

- Must have a primary ICD 10 discharge code of one of the following: J12.82 or U07.1
- AND a secondary ICD 10 discharge code of one of the following: D65, D69.59, D69.6, F05, G93.40, G93.41, G93.49, I46.8, I46.9, I95.1, I95.89, I95.9, J80, J96.00, J96.01, J96.02, J96.90, J96.91, J96.92, K72.00, K72.01, K72.90, K72.91, K76.2, K76.3, N17.0, N17.1, N17.2, N17.8, N17.9, R03.1, R06.03, R09.2, R40.20, R40.0, R40.1, R57.0, R57.1, R57.8, R57.9, R65.20, R65.21

Influenza Cases:

- Must have a primary ICD 10 discharge code of one of the following: J09*, J10*, J11*
- AND a secondary ICD 10 discharge code of one of the following: D65, D69.59, D69.6, F05, G93.40, G93.41, G93.49, I46.8, I46.9, I95.1, I95.89, I95.9, J80, J96.00, J96.01, J96.02, J96.90, J96.91, J96.92, K72.00, K72.01, K72.90, K72.91, K76.2, K76.3, N17.0, N17.1, N17.2, N17.8, N17.9, R03.1, R06.03, R09.2, R40.20, R40.0, R40.1, R57.0, R57.1, R57.8, R57.9, R65.20, R65.21

Sepsis Case Sampling Strategy

A specific sampling process will be employed for the project to prevent case selection bias. The process uses a 14-Day cycle that works as follows. The clinical data abstractor will abstract data on eligible cases from discharge dates covered by a 2-week period. To minimize sampling bias, abstractors are expected to select cases from every day of the cycle being abstracted if possible.

1. This process involves first selecting eligible cases from each day of a cycle, if eligible cases are available.
2. For each day with eligible cases, review the discharge date timestamp [hh:mm] from the hospital encounter.
3. From the timestamp [hh:mm] review, select the first eligible case with the smallest minute value.
    - For example, if a site has 4 eligible Sepsis cases discharged on the same day at these times: 9:17, 10:27, 12:16 & 21:01, the patient discharged at 21:01 qualifies as the first case for full abstraction for this day, as :01 is the smallest minute value from the list of discharge times of eligible cases on this day. Repeat this same process for selecting the second, third, and subsequent cases for this day. The goal is to have a least one case from each day of the week, if available.

Example for selecting a patient sample:

Discharge Day:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Initial Cases	Patient 1: Discharged at 20:07	Patient 2: Discharged at 17:03	Patient 3: Discharged at 09:01	Patient 4: Discharged at 14:10	Patient 5: Discharged at 09:02	Patient 6: Discharged at 11:13	Patient 7: Discharged at 10:25
Additional Cases (if available)	Patient 8: Discharged at 13:14		Patient 9: Discharged at 08:25	Patient 10: Discharged at 14:45		Patient 11: Discharged at 09:55	

NOTE 1: Hospital encounter includes emergency, observation, and/or inpatient time in the hospital.

NOTE 2: Hospital discharge includes patients discharged alive from inpatient or observation, and patients discharged due to death.

NOTE 3: If the smallest minute value on more than one case is the same, select the case where the patient is discharged later in the day. (For example, if discharge timestamps of 12:10 and 13:10 are both part of the sample, select the case where the patient was discharged at 13:10).

Sepsis Case Inclusion Criteria

Eligible cases will include the following:

- Patients admitted to a qualifying service listed on the Sepsis Service List (including ICUs), who did not incur a surgical procedure (billed operating room time) within 48 hours of the beginning of the hospital encounter.
  - **Note:** Patients who went to Interventional Radiology (IR) or a routine Cardiac Procedural Unit (CPU) within 48 hours of the hospital encounter are eligible for inclusion if all other criteria are met, regardless of whether the procedure is considered "billed operating room time" at a participating hospital. Patients who undergo a surgical procedure in the operating room within 48 hours of the hospital encounter are excluded.
  - See list provided in future section for Qualifying Hospital Services.
- A primary ICD-10 discharge diagnosis code of sepsis, pneumonia, respiratory failure, influenza, or COVID-19 (see codes listed above).
  - **Sepsis Eligibility (must have ALL of the following):**
    - Objective evidence of infection:
      - Received a qualifying antibiotic/antiviral/antifungal (see list below for qualifying anti-infectives) that is not for chronic/prophylactic use or demonstrate confirmed COVID or Influenza A/B positivity within the 3 days prior through the first 2 days of the hospital encounter
    - Clinical evidence of acute organ dysfunction:
      - Had one or more organ dysfunction on days 1 or 2 of the hospital encounter (described below in step 4)

- **Pneumonia Eligibility (must have ALL of the following):**
  - A secondary ICD 10 discharge code associated with an organ dysfunction (see list in section above)
  - Received a qualifying antibiotic/antiviral/antifungal (see list below for qualifying anti-infectives) that is not for chronic/prophylactic use or demonstrate confirmed COVID or Influenza A/B positivity within the 3 days prior through the first 2 days of the hospital encounter
  - Clinical evidence of acute respiratory dysfunction on days 1-2 of the hospital encounter (described below in step 4)
- **Respiratory Failure Eligibility (must have ALL of the following):**
  - A secondary ICD 10 discharge code associated with Pneumonia or Influenza (see list in section above)
  - Received a qualifying antibiotic/antiviral/antifungal (see list below for qualifying anti-infectives) that is not for chronic/prophylactic use or demonstrate confirmed COVID or Influenza A/B positivity within the 3 days prior through the first 2 days of the hospital encounter
  - Clinical evidence of acute respiratory dysfunction on days 1-2 of the hospital encounter (described below in step 4)
- **COVID/Influenza Eligibility (must have ALL of the following):**
  - A secondary ICD 10 discharge code associated with an organ dysfunction (see list in section above)
  - Confirmed COVID or Influenza A/B positivity within the 3 days prior through the first 2 days of the hospital encounter
  - Clinical evidence of acute respiratory dysfunction on days 1-2 of the hospital encounter (described below in step 4)

Sepsis Case Exclusion Criteria

Exclusions will be reviewed in a stepped approach:

- **Step 1:** The following patient populations will be **excluded via the automated data pull** that occurs at the site-level. See the Discharge List Report Specifics section for details.
  - Patient is pregnant upon presentation to the hospital encounter
  - Patient under the age of 18
  - Patient transferred from another hospital (inpatient [including inpatient rehab and psychiatric hospitals], observation unit, direct admit, and ED to ED transfers)
    - **Note 1:** Please exclude patients that were discharged from an inpatient hospitalization within 24 hours prior to presenting for the index admission. This does not include ER visits that do not result in an observation or inpatient admission.
    - **Note 2:** Please exclude cases where the patient starts in a procedural suite and is then admitted to an inpatient or observation setting without first presenting to the ED.
    - **Note 3:** If a patient is directly admitted to the hospital from home or from their primary care provider's clinic, they may be included in abstraction. Our goal is to capture the early diagnosis and treatment of sepsis; thus, we exclude direct admits from other facilities as we cannot capture the patient's initial care at those facilities.

- **Step 2:** Log the number of cases that were **excluded due to surgery (billed OR time) occurring within 48 hours of the hospital encounte**r in the Cycle Data Tab in the HMS Sepsis registry in the Surgical Exclusions column.
  - Surgical cases will be logged to help determine the frequency at which community acquired sepsis is treated surgically at the beginning of the hospital stay.
  - Do NOT exclude cases in this step who incur an Interventional Radiology (IR) procedure or a routine intervention in a Cardiac Procedure Unit (CPU) within 48 hours of the hospital encounter.
  - **EXCLUDE** cases where there is evidence that the patient is in the Pre-Op area by the 48-hour cut off.
- **Step 3: Review additional exclusions:**
  - Patient has an order for comfort care/hospice within 3 hours of the beginning of the hospital encounter (inclusive of time spent in ED).
  - Patient left against medical advice (AMA) or refused their first dose of the antibiotics.
    - **Note 1:** Patients who have left AMA during previous hospital encounters remain eligible for abstraction.
    - **Note 2:** Patients that refuse IV fluids (i.e. boluses, blood products, or maintenance fluids) are eligible for abstraction.
  - Patient's length of stay for the index hospitalization was greater than 120 days.
  - Patient received intravenous (IV), intramuscular (IM), or intra-peritoneal (IP) antibiotics in the 24 hours prior to the hospital encounter.
    - **Note:** ANY IV, IM, or IP antibiotics in the 24 hours prior to the hospital encounter would cause the case to be excluded (including IV, IM, and IP prophylactic antibiotics), regardless of location given.
  - Patient discharge falls within the 60-day window of a hospital encounter that was abstracted for the HMS Sepsis Initiative.
    - **Note:** These cases are excluded because we would already be capturing the information for the encounter in the 60-Day Follow Up Window of the previously abstracted admission.
- **Step 4: Acute Organ Function Assessment**

After all exclusion/inclusion criteria above are applied, the organ function assessment is to be completed. The organ function assessment will evaluate for clinical evidence of acute organ dysfunction on days 1-2 of the hospital encounter to determine if the patient is eligible for abstraction. To complete this assessment, the abstractor will input clinical variables into an organ function calculator in the HMS Sepsis database. The organ function calculator determines eligibility by reviewing for the following organ dysfunctions:

- **Acute organ dysfunction is identified as any one of the following:**
  - **Increased Respiratory Support**
    - Respiratory support > 4L or > 31% FiO2 for > 2 hours (does not need to be consecutive) during days 1-2 of the hospital encounter OR administration of mechanical ventilation, non-invasive positive pressure ventilation (NIPPV), and/or increased CPAP/BiPAP settings > 2 hours (does not need to be consecutive) during days 1-2 of the hospital encounter AND NO ICD-10 code for chronic respiratory failure with hypoxemia (J96.11 or J96.21) coded on admission, required home oxygen at baseline, or on a home ventilator at baseline.
  - **Serum Creatinine** > 1.2 mg/dL or > 106.8 mmol/L AND > 50% increase from patient's baseline (lowest value during hospitalization) AND no ICD-10 for end-stage renal dysfunction (N18.6) coded

on admission, no diagnosis of Stage 5 Chronic Kidney Disease on admission, and no dialysis in the 30 days prior to the hospital encounter

- **Platelet count** < 100 cells/μL AND > 50% decline in platelets from patient's baseline (highest value during hospitalization).
- **Total bilirubin** ≥ 2.0 mg/dL or > 34.2 μmol/L AND at least doubling of total bilirubin from patient's baseline (lowest value during hospitalization).
- **Lactate** > 2.0 mmol/L
- **Treatment with any of the following intravenous vasopressors** (at any dose): Angiotensin II, Dopamine, Epinephrine, Norepinephrine, Phenylephrine, or Vasopressin, outside of operating room during days 1-2 of the hospital encounter.
- **Presentation of altered mental status** (defined as a deviation from the patient's baseline cognitive status) during days 1-2 of the hospital encounter.
  - **INCLUDE:** Altered mentation, confusion, disorientation, delirium, encephalopathy, report that the patient is acting out of usual character (change from usual behavior/baseline mental status or statement that the patient is "not acting like themself"), lethargy, somnolence, obtundation, comatose state, unresponsiveness, delirium tremens. Must be documented by physician or APP, not just found in nursing documentation.

Patients that meet any exclusion criteria noted above or are deemed ineligible using the Organ Function Calculator should not be fully abstracted. This process of filtering out non-eligible cases may happen electronically or manually. If the process is manual and done by the clinical data abstractor via a review of the patient's medical record, the abstractor must document why the patient was excluded on their local patient identification/discharge list. The patient identification/discharge list used for each cycle must be available for review by the HMS Coordinating Center staff as these may be audited to ensure the correct process is utilized.

Qualifying Hospital Services

The following are the qualifying hospital services for inclusion in the Sepsis initiative:

- Bone Marrow
- Bone Marrow Critical Care/ICU
- Cardiac Critical Care/ICU
- Cardiology/Coronary
- Chemotherapy
- Endocrinology
- Family Medicine
- General Medicine
- Gastroenterology/Liver
- Gastrointestinal Surgery
- Geriatrics/Acute Care Elderly
- Hematology

- Infectious Diseases
- Internal Medicine
- Medical Critical Care/ICU
- Neuro Critical Care/ICU
- Neurology
- Nephrology
- Non-Trauma Emergency
- Oncology
- Observation
- Pulmonology/Pulmonary (including Vents)
- Surgery
- Surgical Critical Care/ICU
- Transplant/Heart Failure

Qualifying Anti-Infectives

Medication Name	Route	Medication Name	Route	Medication Name	Route
acyclovir	IV	cephalexin	PO	micafungin	IV
amikacin	IV	cephalothin	IV	minocycline	IV, PO
amoxicillin	PO	cephapirin	IV	mipenem	IV
amoxicillin/clavulanate	PO	cephradine	PO	moxifloxacin	IV, PO
amphotericin B	IV	chloramphenicol	IV, PO	nafcillin	IV
ampicillin	IV, PO	cidofovir	IV	nitrofurantoin	PO
ampicillin/sulbactam	IV	cinoxacin	PO	norfloxacin	PO
anidulafungin	IV	ciprofloxacin	IV, PO	ofloxacin	PO
azithromycin	IV, PO	clarithromycin	PO	oritavancin	IV
aztreonam	IV	clindamycin	IV, PO	oseltamivir	IV, PO
Azulfidine/sulfazine	PO	cloxacillin	IV, PO	oxacillin	IV
caspofungin	IV	colistin	IV	penicillin	IV, PO
cefaclor	PO	dalbavancin	IV	permamivir	IV
cefadroxil	PO	daptomycin	IV	piperacillin	IV
cefamandole	IV	dicloxacillin	PO	piperacillin/tazobactam	IV
cefazolin	IV	doripenem	IV	pivampicillin	PO
cefdinir	PO	doxycycline	IV, PO	polymyxin B	IV
cefditoren	PO	ertapenem	IV	posaconazole	IV, PO
cefepime	IV	fidaxomicin	PO	quinupristin/dalfopristin	IV

cefixime	PO	fluconazole	IV, PO	rifampin	PO
cefmetazole	IV	foscarnet	IV	Remdesivir	IV
cefonicid	IV	fosfomycin	PO	streptomycin	IV
cefoperazone	IV	ganciclovir	IV	sulfadiazine	PO
cefotaxime	IV	gatifloxacin	IV, PO	sulfadizine-trimethoprim	PO
cefotetan	IV	gentamicin	IV	sulfamethoxazole	PO
cefoxin	IV	isavuconazonium	IV, PO	Tedizolid	IV, PO
cefpodoxime	PO	itraconazole	IV, PO	Telavancin	IV
cefprozil	PO	kanamycin	IV	telithromycin	PO
ceftaroline	IV	levofloxacin	IV, PO	Ticarcillin	IV
ceftazidime	IV	lincomycin	IV, PO	ticarcillin/clavulanate	IV
ceftazidime/avibactam	IV	linezolid	IV, PO	Tigecycline	IV
ceftibuten	PO	meropenem	IV	Tobramycin	IV
ceftizoxime	IV	meropenem/vaborbactam	IV	trimethoprim	PO
ceftolozane/tazobactam	IV	methicillin	IV	trimethoprim/sulfamethoxazole	IV, PO
ceftriaxone	IV	metronidazole	IV, PO	vancomycin	IV, PO
cefuroxime	IV, PO	mezlocillin	IV	voriconazole	IV, PO

Abstraction Process

Once a case has been deemed eligible, it will then be routed for full abstraction of detailed clinical data. Each case will capture data from 90 days prior to the hospital admission through 60 days following the hospital discharge. Some forms are required for all cases, while some forms are used in a subset of cases as applicable (e.g., cases with an ICU-to-floor transfer). After all the applicable forms are completed, a 60-Day Phone Call for patients who are alive and eligible for a phone call must be completed.

Forms/Sections Required for All Sepsis Cases:

- Baseline
- Hospital Encounter
- Discharge
- Daily Entry (Days 1-4, as applicable)
- All required Patient Reported Outcomes attempts (if eligible)

Forms Required on Some Sepsis Cases, as Applicable:

- 60-Day Follow Up
- ICU to Floor Transfer
- Intravascular Devices

- Intravenous Fluids in the First 48 Hours
- Culture
- Labs (Non-Culture)
- Discharge Medications
- Daily Entry (Days 5-14)

Free Cases

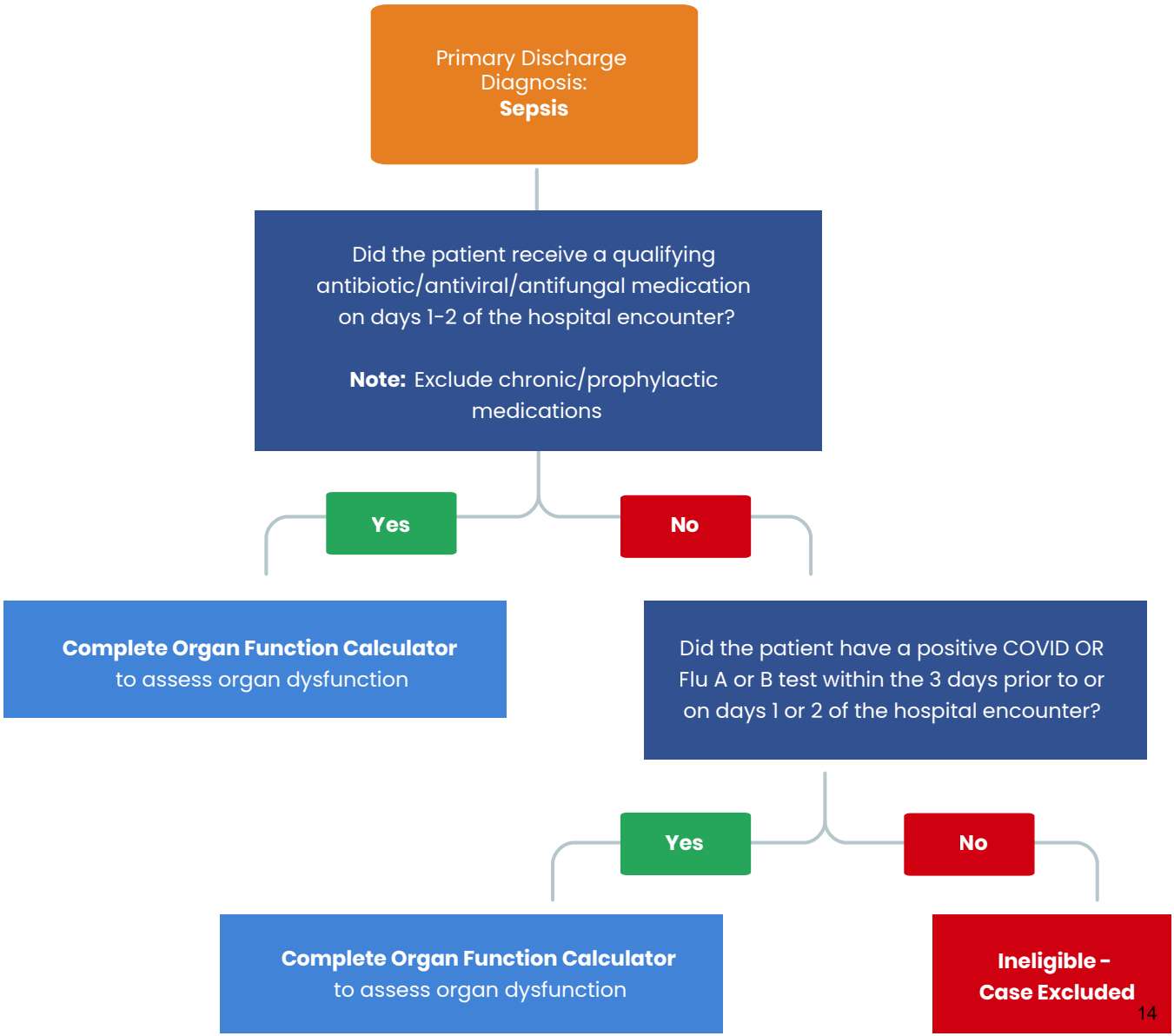
To account for time not spent abstracting, "free" cases are allowed per calendar year for this initiative. These free cases allow for personal time-off and non-data abstraction activities including, but not limited to, meeting attendance, conference calls, training, etc. It will be up to each participating hospital and the clinical data abstractor at that hospital to decide when these "free" cases are used.

The goal for abstraction is to have all case data entered during the specific 14-day cycle. On occasion, it may not be possible to collect all the information during the cycle, thus the HMS Coordinating Center will allow an extra 7 days beyond the end of the cycle for the completion of data collection.

Eligibility Flow Sheets

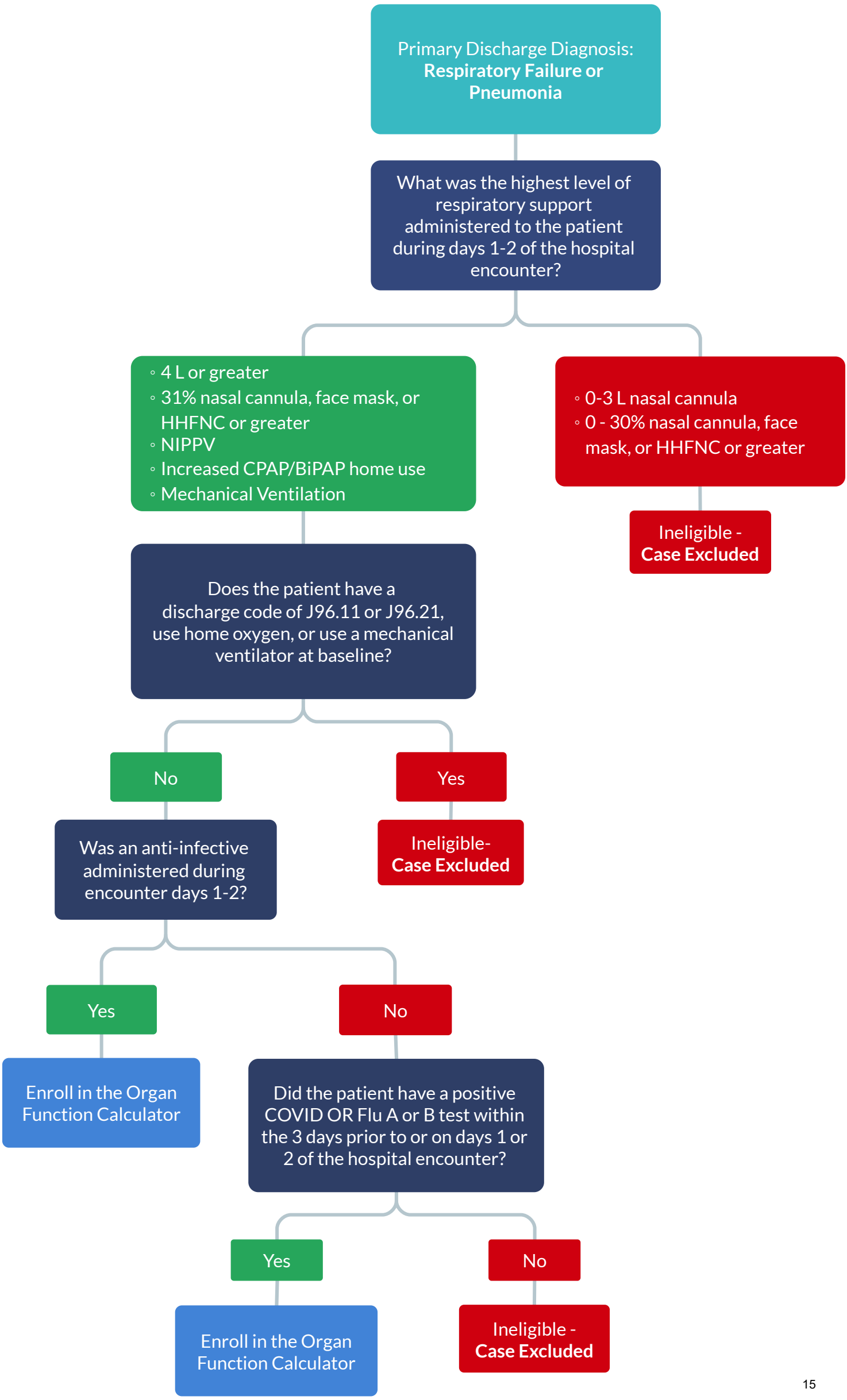
Sepsis Eligibility Flow Sheet

Review the inclusion and exclusion criteria listed on the sepsis eligibility form. If the patient passes all other inclusion and exclusion criteria, please review the following to determine whether a Sepsis patient can be excluded prior to entering the OFC:



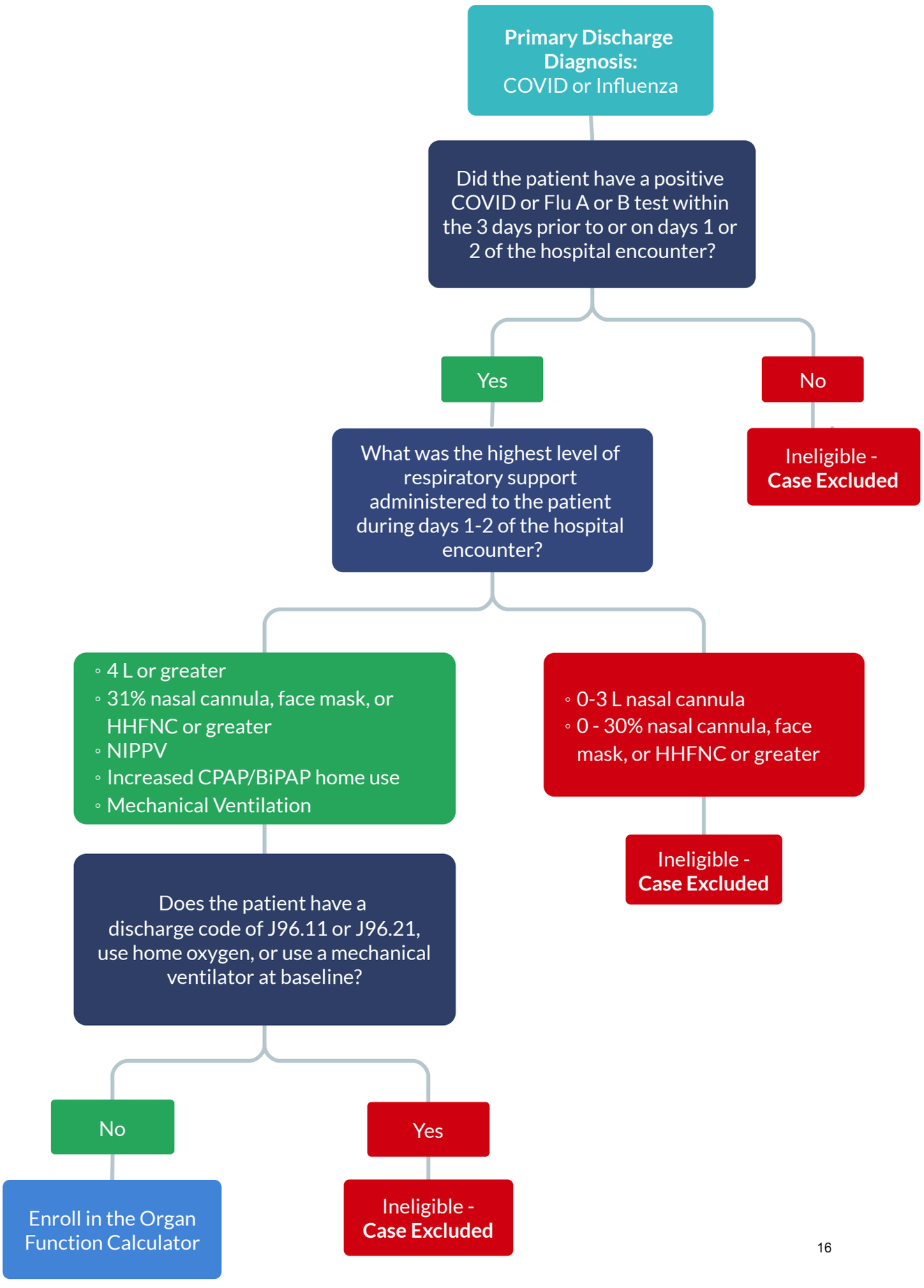
Respiratory Failure and Pneumonia Eligibility Flow Sheet

Review the inclusion and exclusion criteria listed on the sepsis eligibility form. If the patient passes all other inclusion and exclusion criteria, please review the following to determine whether a Respiratory Failure or Pneumonia patient can be excluded prior to entering the OFC:



COVID and Flu Eligibility Flow Sheet

Review the inclusion and exclusion criteria listed on the sepsis eligibility form. If the patient passes all other inclusion and exclusion criteria, please review the following to determine whether a COVID or Flu patient can be excluded prior to entering the OFC:



Enrollment

1. **HOSPITAL DETERMINED PATIENT ID**

Instructions: This ID is determined by each hospital to track patient data.

Note 1: Entries into this field are not visible to the HMS Coordinating Center; however, the database administrator may be able to view this information to maintain the database. Abstractors can search this field in addition to the HMS ID # to locate patient records. Please do NOT enter letters in this field. DO NOT enter MRNs, FINs, CSNs, hospital record numbers, or other patient identifiers in this field. This should be a field that is created by the hospital for searching patients. An example of the structure of this field could be Year-Cycle-Case Number (e.g., 2025-2222-01).

Note 2: This is a required field, and the form cannot be submitted without an entry in this field.

2. ELIGIBILITY STATUS

Instructions: The patient status indicates whether the case being abstracted is eligible or ineligible at the time of enrollment (i.e. the time at which the baseline medical record review begins). The patient status should be set as eligible (given that your sampling strategy and case list should lead you to eligible cases); however, there may be an instance when you find information during abstraction that indicates the case should really be ineligible. If a case if found to be ineligible once you have already started to abstract data, simply return to this section and mark the case as ineligible.

Note: This is a required field, and the form cannot be submitted without an entry in this field.

Note 2: Please utilize the "Unable to Finish Abstraction" selection when you would like to move an eligible case from "Active" to "Completed" but you were unable to finish abstracting the case. This will prevent the case from being included in data analysis.

3. INSURANCE PAYOR

Instructions: Review the medical record to determine the patient's primary insurance. The patient may have multiple insurers, so be sure to select only the primary insurance.

Select one of the following:

- "BCBSM Michigan"
- "BCN Michigan"
- "Commercial-HMO"
- "Medicaid-HMO"

Note: *Medicaid-HMO is a managed care plan.*

- "Medicaid-Straight"

Note: *Medicaid straight is a traditional Medicaid plan.*

- "Medicare-All"
- "Medicare Advantage-BCBSM"
- "Medicare Advantage-BCN"
- "No Insurance/Self Pay"
- "Other Payer-Government"

- "Other Payer-Michigan and Outstate"

Please utilize the following table to determine which Insurance to select. If you have an insurance provider that is not listed below, please reach out to the Coordinating Center.

BCBSM Michigan			
BC BCBSM FEP or Trust	BCBSM Out of Area	Blue Cross Blue Shield Traditional	Blue Cross Trinity Foreign with a Detroit address
BC Trust or PPO B15/Blue Cross	BCBSM PPO	Blue Cross Insurance Out of State PPO	BSBS
Blue Cross Blue Shield (BCBS)	BCBSM PPO Teamsters	Blue Cross IP or OP	Community Blue
BCBS - Blue Preferred PPO	BCBSM- Traditional	Blue Cross MI Trust	Federal Blue Cross with a Detroit address
BCBS IP, PPO, Out of Area or Traditional	BCBSM Trust	Blue Cross Other, Blue Cross PPO	Healthy Blue Outcomes
BCBS- Messa	Blue Cross Blue Shield Insurance PPO	Blue Cross PPO or Trust	Preferred PPO Blue Cross
BCBSM Co-Ded/Care	Blue Cross Blue Shield Insurance Trust PPO	Blue Cross Preferred Plus Blue Cross	Preferred PPO Blue Cross, BCBS Other - Medicare
BCBSM- Custom Community Blue	Blue Cross Blue Shield of Michigan (BCBSM)	Blue Cross Traditional - Michigan Blue Cross	Simply Blue HAS or HRA
BCBSM Fed. Emp.	Blue Cross Blue Shield OOA or PPO	Blue Cross Trinity Domestic with a Michigan address	

BCN Michigan			
BCBSM BCN	BCN M Premier	Blue Cross Complete	Healthy Blue HMO HRA
BCBSM BCN IP	BCN/BCN Medicaid/BC Complete	Blue Cross HMO (BCN Michigan)	Healthy Blue Living
Blue Care Network (BCN)	Blue Care Network - BCBS HMO	Blue Elect Plus	U of M Premier Care
BCN - BCN HMO Non-Beaumont Network	Blue Care Network Blue Cross	Blue Essentials	
BCN Genesys PHO	Blue Care Network HMO HRA	E- BCN/BCN Medicaid BC Complete UM PCP	

BCN HMO	Blue Care Network, Medicaid	E- BCN/BCN Premier Care non- UM PCP	

Commercial - HMO			
Alliance Health/HAP	HAP Senior Plus	Midwest Health Plan IP (Subsidiary of HAP)	Healthscope Benefits (United Healthcare)
Health Alliance Plan (HAP)	HAP unassigned DS HMO	Priority Health HMO	
HAP - Preferred Cigna Open Access Plus	Health Plus HMS PAR (with Flint address)	United Healthcare	
HAP DMC Assigned	ME McLaren Health Plan	United Healthcare-HMO/Managed Care	

Medicaid - HMO			
Coventry Cares	McLaren HMO	Meridian Health Plan of Michigan (Public Aid HMO)	Paramount Medicaid
Great Lakes Health Plan	McLaren Health Plan Medicaid	Molina Healthcare of MI OP	ProCare Health Plan
HAP Caresource	Medicaid HMO	Molina Medicaid or MMCD	United Health Care Community Plan - Medicaid
Harbor Health Plan	Medicaid United Healthcare	Molina Medicaid HMO	
Healthplus Medicaid	Medicaid UPHP HMP	Omnicare Coventry	

Medicaid - Straight			
Buckeye Health Plan/Medicaid	MDCD ESO	Medicaid IP	MIChild
Healthy Michigan Plan (no mention of Meridian)	ME HMP Medicaid ESO Only	Medicaid IP OP	Pace of Southeastern MI
Huron Valley PACE	Medicaid	Medicaid PRH Healthy M	Pace of Southwest Michigan
Life Circles Pace	Medicaid HMP Blue Cross	Medicaid Priority or OOS	Total Health Caid

Medicare - All			
Aetna Better Health Premier Medicare Dual Eligible/MI Health Link Medicare Dual Eligible	HAP Senior Plan / Medicare Advantage / MMCR	Medicare App/Buy IP	Molina MIHealth Link / MCare Advantage / Senior Plan
Aetna Medicare Advantage	Health Plus MedicarePlus Advantage PPO / Seniors HMO	Medicare Covenant Advantage/Medicare Covenant Advantage Plus HMO	NGS
Align Senior Care	Humana Gold CHC PFFS PTA /Medicare HMO	Medicare HMO Cigna Health Spring	PHP Medicare UM Health St. Joe's Advantage
Blue Cross Other-Medicare A	Humana Medicare Advantage (MA) / Senior Plan	Medicare Hospital Insurance	Priority Health Medicare / Medicare Advantage
Care Improvement Plus Medicare	MA Health Plus Medicare	Medicare Meridian / Meridian Advantage	Priority Medicare Part A and/or Part B
Center of Senior Independence/MCare Adv IP	MA United Healthcare Advantage	Medicare of Michigan	United Health Care Community Plan Medicare
Erikson Advantage	MCare Adv IP/BC = Medicare Advantage	Medicare Railroad Insurance	United Health Care Medicare / Medicare Advantage / Dual
Fedelis/Mcare Advantage	MCare B Only IP MCaid (Dual Medicare/Medicaid)	Medicare Traditional Part A & Part B	Upper Penninsula Health Plan Medicare-All
GLHP/Mcare Advantage	McLaren Health Plan Medicare Advantage	Medicare Blue Cross Blue Shield (not Michigan)	WellCare Medicare Health Plan
HAP Empowered MI Health Link Dual	Medicare / Medicare Advantage	Medicare United Health Care	
HAP Medicare Open SYS PCPC	Medicare / Medicare Advantage Part A	Michigan Complete Health MMCR	

Medicare Advantage - BCBSM			
Assure	BCBS Medicare Advantage PPO IP	Medicare Plus Blue IP (Plus Blue Insurance Policy)	Prescription Blue PDP
BCBS Medicare Advantage	Legacy Medigap	Medicare Plus Blue PPO: Essential	Signature or Vitality

Medicare Advantage - BCN			
BCN Advantage HMO-POS	Blue Care Network/ MCare Advantage	Blue Care Network (BCN) Advantage Part A & Part B	MA BCN Medicare advantage
BCN Blue ADV-PHO	Group options: The UAW Retiree Medical Benefits Trust- URMBT Hourly Retirees: Chrysler, Ford, GM; Michigan Public School Employees Retirement System	HMO-POS options: Elements, Basic, Classic, Prestige, Focus (Wayne County Only)	My Blue Medigap plan

No Insurance/Self-Pay		
Benefit Administrative Systems	Medicaid pending and free care; Advomas	Public aid
Medicaid Emergency Services Only (ESO)	Patient Self-Pay	Self Pay/No Insurance

Other Payer - Government			
Bay Health Plan	Federal Blue Cross	Saginaw Health Plan	CHAMPVA (Civilian Health and Medical Program of the Department of Veterans Affairs)
BCBS Government	Genesee Health Plan	Tricare	
Commercial Campus Tri-Care Standard	Indian Health Services (IHS)	TriCare East Humana	
Community Care Associates/HealthChoice of Michigan	MeridianCare Elite (HMO)	VA (Veteran's Affairs) Health Care Benefits	
COVID-19 HRSA Uninsured Program	Prisoner	Washtenaw Health Plan	

Other Payer – Michigan and Out State			
Aetna Healthcare	Connect Care Key Benefits	LifeTrac - LifeTrac Transplant	Sisco
Aetna PPO	Consolidated Healthplans Group: HCCUA	Magellan	Smart Health (Ascension)
Amerihealth Caritas VIP Care Plus	DMC Care	McLaren Health Plan	Sparrow Profession Health Network (SPHN)
Anthem Blue Cross Blue Shield	E- HAP/Alliance HLT Life EPA EPO	McLaren Health Advantage	Thrivent Financial for Lutherans
Any BCBS plan that does not say Michigan or Blue Care Network	Frontpath Insurance	Medassist	Total Healthcare
Ascension Complete	Gateway	Medi-bill Inc	Transamerica
ASR Insurance / COM - ASR	General Commercial	Meridian/Ambetter from Meridian	Trustmark and Starmark
Auto (State Farm, GEICO, Allstate)	Global Care Insurance	Meritain Health	United Medical Resources (UMR)
BCBS – Out of State Traditional and PPO	Golden Rule Insurance	Misc Ins 1-T99- the Financial Class is T Commercial	United Healthcare (without mention of HMO)
BCBS Transplant	Grange Auto Insurance	Molina Healthcare APC	United Healthcare PPO
Blue Cross NASCO	HAP PPO or Preferred	NGS Coresource County Health Insurance	United Healthcare Shared
Blue Cross PPO (without mention of Michigan)	Health Plus (no additional information)	NHI Out of State	United Healthcare-Choice Plus (without mention of HMO)
Blue Cross Trinity Domestic	Health Plus of Michigan	Northern Group Service - Cofinity	Upper Peninsula Health Plan
Blue Cross Trust insurance (Unknown if Michigan or out of state)	Health Plus PPO	OptumHealth - OptumHealth Transplant	Varipro
Blue Preferred PPO (If a non-Michigan or unknown state plan)	Healthplus Partners	Paramount Elite	Workers Comp

Cigna	Healthplus-Genesys PHO	Physician's Health Plan (PHP) / UM Health Plan	WPS
Cigna HAP PPO/POS	Humana	PPOM Cofinity	
Cofinity	Humana Choice PPO Part A	Priority Health (not a Medicare product)	
Commercial Health Plus	Humana X Connect - 160	Priority Health (without mention of HMO)	
Commercial Workers' compensation	IHC Solutions /St.Paul Minnesota	Priority Health Full Funded	
Connect Care	Interlink - Interlink Transplant	Priority Health PPO	

4. ABSTRACTION STATUS

Instructions: Indicate the status of the case being abstracted. This question refers to the status of the HMS record and not the status of the patient.

Note: This is a required field, and the form cannot be submitted without an entry in this field.

Select one of the following:

- "Active" if you are actively entering information from the hospitalization into the patient's HMS record.
- "Complete" if the patient's hospitalization data abstraction is complete, including the hospitalization and the 60 day follow up.

5. HOSPITAL ENCOUNTER DATE (ER, OBSERVATION, INPATIENT)

Instructions: Review the medical record to determine the date the patient first entered the hospital system (or the date the patient made first contact with the hospital). Indicate the date in the MM/DD/YYYY format.

Note: This is a required field, and the form cannot be submitted without an entry in this field.

6. DISCHARGE DATE (IF NO ADMISSION, ENTER THE OBSERVATION DISCHARGE DATE)

Instructions: Review the medical record to determine the date the patient was discharged from an inpatient hospital unit, the observation unit (if observation only stay), or the date of death (if death occurs while hospitalized). Indicate the date in the MM/DD/YYYY format.

Note: This is a required field, and the form cannot be submitted without an entry in this field.

7. CHANGE LOG MESSAGE

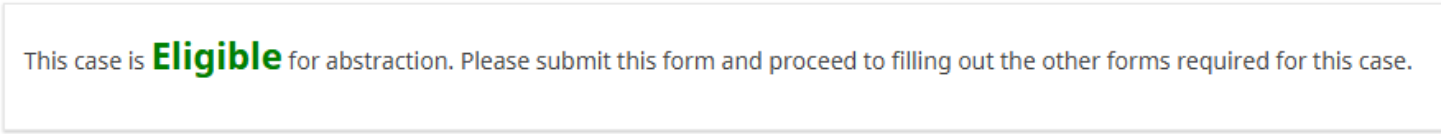
Instructions: Whenever a change is made to an HMS patient record after it has been created and saved, provide a written explanation of the change in the available text box.

Note: A written explanation is required to save any changes made to the record when making edits to this page. This field is *NOT* required when a case is first created.

Organ Function Calculator

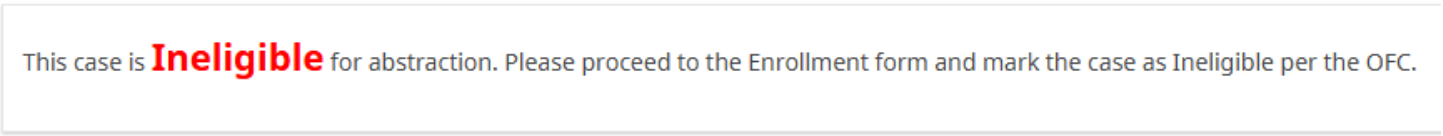
Note: Upon enrolling a new subject, the Organ Function Calculator is the FIRST form that should be completed for data entry. As you are entering data into the Organ Function Calculator, it will be working to determine eligibility of the case.
Note1: All questions are required to be answered prior to submitting the form.

If the case is ELIGIBLE, you will see the following note at the bottom of the last section completed in this form for this case:



If the case is ELIGIBLE, please proceed to completing the other forms for the case.

If the case is INELIGIBLE, you will see the following note at the bottom of the last section completed in this form for this case:



If the case is INELIGIBLE, please return to the Enrollment form and mark the case as Ineligible per the OFC and Complete the case.

1. Select the primary discharge diagnosis
Instructions: Review the billing summary to determine which category the primary discharge diagnosis code belongs.

- "*Sepsis*"
  Include: A02.1, A20.7, A22.7, A26.7, A32.7, A39.1, A40.0, A40.1, A40.3, A40.8, A40.9, A41.01, A41.02, A41.1, A41.2, A41.3, A41.4, A41.50, A41.51, A41.52, A41.53, A41.59, A41.81, A41.89, A41.9, A42.7, A54.86, B37.7, R65.20, R65.21
- "*Pneumonia*"
  Include: J12* (EXCEPT J12.82, which should be included but considered a COVID code), J13*, J14*, J15*, J16*, J17*, J18*, A48.1, J85*
- "*Influenza*"
  Include: J09*, J10*, J11*
- "*COVID*"
  Include: J12.82 & U07.1
- "*Respiratory Failure*
  Include: J80*, J96.0*, J96.9*

2. What is the ICD-10 code that corresponds with the primary discharge diagnosis?
Instructions: Review the medical record to determine the primary discharge diagnosis code and free text the number into the box.

Note 1: Please make sure the letters of the code are capitalized.
Note 2: The entry box will only accept valid ICD-10 codes.

3. Did the patient test positive for COVID or Influenza A or B on days 1-2 of the hospital encounter or in the 3 days prior?
Instructions: Review the medical record to determine if the patient had a positive COVID-19 or Influenza A or B test on days 1-2 of the index hospital encounter or within the 3 days prior to the hospital encounter.
Note: This question is required.
Include: Patient-reported positive COVID tests from a medical facility (i.e. OSH, urgent care, doctor's office, drive-thru clinic, pharmacy, etc), SARS-COV2 results, COVID testing done in-hospital.
Exclude: Patient-reported positive COVID-19 Home Tests.

- *"Yes"*
- *"No"*
- *"Unknown"*

4. Did the patient receive a qualifying antibiotic/antiviral/antifungal medication on days 1-2 of the hospital encounter?
Instructions: Review the medical record to determine if the patient received a qualifying antibiotic, antiviral, or antifungal medication on days 1-2 of the hospital encounter.
Note: This question is required.
Note 1: A list of medications that qualify for this question can be found in Appendix A of the Data Definitions.
Note 2: This question does not populate if the primary discharge diagnosis code is "COVID" or "Influenza".

- *"Yes"*
  Exclude: Medications ordered but not given, or the patient refused. Medications ordered for prophylaxis or chronic therapy ONLY.
- *"No"*

5. What was the highest level of respiratory support administered to the patient during days 1-2 of the hospital encounter?
Instructions: Review days 1-2 of the hospital encounter to determine the highest level of respiratory support the patient required during this time frame.
Note 1: Day 1 of the hospital encounter is the day that the patient first encounters the health system (i.e. - do NOT count the first day as day "zero").
Note 2: Do not take the highest level of respiratory support from the EMS Documentation if the support was administered in the ambulance only.
Note 3: Exclude oxygen supplementation given during a procedure only.
Note 4: Capture the highest respiratory support required for >2 hours during the first 2 calendar days.
Respiratory Support (highest to lowest) tiers are:

1	Mechanical Ventilation
2	NIPPV & Increased Home CPAP & BiPAP use
3	Oxygen masks & all nasal cannulas

Note 5: If a patient is on a trach collar for oxygen delivery, capture the FiO2 of oxygen delivered, not the number of liters.

Note 6: If needed, to convert oxygen LPM on a facemask use the following table to help make the correct selection:

Liters Per Minute	**FIO2**
None (Room Air)	21%
1	24%
2	28%
3	32%
4	36%
5	40%
6	44%
7	48%
8	52%
9	55%
10	60%
11	65%
12	70%
13	80%
14	90%
15	100%

- *"No change from home/baseline respiratory support (Same Home Oxygen Level, baseline CPAP/BiPAP settings & administration)"*
  Include: An individual who does not require any respiratory support at home or during days 1-2 of the encounter.
  Exclude: An individual who requires increased support on their usual CPAP/BiPAP regimen.
  Note: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.
- *"0-3 Liters nasal cannula, oxygen mask or HHFNC"*
  Include: Optiflow as HHFNC, Nasal Pendant as nasal cannula

- *"4 Liters or greater nasal cannula, oxygen mask or HHFNC"*
  Answer question 3.1
  Include: Optiflow as HHFNC, Nasal Pendant as nasal cannula
- *"0-30% nasal cannula, oxygen mask or HHFNC"*
  Include: Optiflow as HHFNC, Nasal Pendant as nasal cannula
- *"31% or greater nasal cannula, oxygen mask or HHFNC"*
  Answer question 3.1
  Include: Optiflow as HHFNC
- *"Non-invasive positive pressure ventilation"*
  Answer question 3.1
  Include: AVAPS, CPAP, BiPAP, Facemask ambu-bag
- *"Increased home CPAP/BiPAP use (using in daytime in addition to night with higher settings or higher FI02)"* if during days 1-2 of the hospital encounter the patient's highest respiratory support is an increase in home CPAP/BiPAP use.
  Answer question 3.1
  Note: This is defined as use during the daytime, when the patient's normal use of CPAP/BiPAP is for sleep only, and may also include an increase in settings or FiO2.
  Include: Orders for continuous CPAP/BiPAP use
  Exclude: A change from home CPAP/BiPAP settings or addition of oxygen that is used for sleep only. For example, if a patient usually receives 2L of oxygen through their CPAP at night, but receives 3L at night while in the hospital, but has no daytime use, this should not be included as increased home CPAP/BiPAP use. For cases in which the patient is on CPAP or BiPAP only at night, please capture the highest level of oxygen support that the patient received during the day.
- *"Mechanical ventilation"*
  Answer question 3.1
  Include: Mechanical ventilation with ANY level of oxygen support

3.1. Was the patient diagnosed with the following ICD-10 Codes: J96.11 (Chronic Respiratory Failure with Hypoxemia) OR J96.21 (Chronic Respiratory Failure with Hypoxia) as a discharge diagnosis code for the hospitalization of interest, required any amount of home oxygen at baseline, or was the patient on a home ventilator at baseline?
Instructions: Review the medical record to determine if the code J96.11 OR J96.21 was billed for the index hospital encounter, the patient was on any amount of home oxygen, or a home ventilator as their baseline status.

- *"Yes"*
  Include: Trilogy home ventilators, nightly CPAP or BIPAP with oxygen, nightly oxygen use, active prescription for home oxygen (even if patient reports not using it), patients with tracheostomy on a ventilator, PRN home oxygen
- *"No"*

Sepsis Eligibility

This section WILL NOT appear if the case has a discharge diagnosis of Pneumonia, COVID, Influenza, or Respiratory Failure. This section also WILL NOT appear if a Sepsis case does not have a positive COVID or Influenza A/B test in the 3 days prior to the hospital encounter or on days 1-2 of the hospital encounter AND also does not have an administration of a qualifying anti-infective on days 1-2 of the hospital encounter.

1. Did the patient have ICD10 code: N18.6 (end-stage renal dysfunction) or Stage 5 Chronic Kidney Disease on the Admission H&P for the hospitalization of interest, or have dialysis in the 30 days prior to the encounter
Instructions: Review the medical record to determine if End Stage Renal Dysfunction (N18.6) or Stage 5 Chronic Kidney Disease is noted in the Admission H&P for the index hospital encounter, or if the patient had dialysis in the 30 days prior to the index hospital encounter.

- *"Yes"*
  If Yes is selected to this question, you will not be asked to report Creatinine lab values in the questions below.
- *"No"*

2. Was altered mental status, defined as a deviation from the patient's baseline cognitive function, diagnosed on days 1-2 of the hospital encounter?
Instructions: Review the medical record to determine if altered mental status was diagnosed or noted during days 1-2 of the hospital encounter. Examples of altered mental status include, but are not limited to: Altered mentation, confusion, disorientation, delirium, encephalopathy, report that the patient is acting out of usual character (change from usual behavior/baseline mental status or statement that the patient is "not acting like themself"), lethargy, somnolence, obtundation, comatose state, unresponsiveness, delirium tremens.
Note: Must be documented by physician or APP, not just found in nursing documentation.

- *"Yes"*
  Include: Documentation of altered mental status in relation to hypoglycemic events
  Exclude: Syncopal episode, with a loss of consciousness that is less than 1 minute, documentation of a poor historian only
- *"No"*

3. Was the patient treated with any dose of the following intravenous vasopressors (outside the Operating Room) on days 1-2 of the hospital encounter?
Instructions: Review the medical record to determine if the patient was treated with any of the following intravenous vasopressors (at any dose) outside of the operating room or a surgical event: Angiotensin II, Dopamine, Epinephrine, Norepinephrine, Phenylephrine, Vasopressin.

- *"Yes"*
  Include: If a vasopressor is started during a code and continued for greater than 30 minutes following the conclusion of the code.
  Exclude: Vasopressors given during a code only. If a vasopressor is started during a code and continued for less than 30 minutes following the conclusion of the code. Vasopressors ordered but not given.
- *"No"*

4. Were any of the following labs available on days 1-2 of the hospital encounter?
Instructions: Review the medical record to determine if any of the following labs were collected on days 1 or 2 of the hospital encounter.
Exclude: Labs collected prior to the hospital encounter, even if on the same calendar day.
Select all that apply:

- *"Lactate"*
  Answer questions 4.1 and 4.2
  Include: Lactic acid results and lactates drawn as part of an arterial blood gas (ABG) or venous blood gas (VBG).
- *"Creatinine"*
  Answer questions 4.3 through 4.8
  Include: POC Creatinine results.
- *"Total Bilirubin"*
  Answer questions 4.9 through 4.12
- *"Platelet"*
  Answer questions 4.13 and 4.14
- *"None of the above"*

4.1. Highest lactate level (days 1-2 of the hospital encounter)
Instructions: Enter the numeric value corresponding with the highest measured lactate level during days 1-2 of the hospital encounter.

4.2. Lactate unit of measure
Instructions: Select the unit of measurement the lactate level was measured in.

- *"mmol/L or mEq/L"*
- *"mg/dL"*

4.3. Highest creatinine (days 1-2 of the hospital encounter)
Instructions: Enter the numeric value corresponding with the highest measured creatinine during days 1-2 of the hospital encounter.

4.4. Creatinine unit of measure
Instructions: Select the unit of measurement the creatinine level was measured in on days 1-2 of the hospital encounter.

- *"mg/dL"*
- *"µmol/L"*

4.5. Highest creatinine (during the entire hospital encounter)
Instructions: Enter the numeric value corresponding with the highest measured creatinine during the entire hospital encounter.
Note: If the only creatinine value or the highest creatinine value for the entire hospital encounter is the value that was entered above, please re-enter that value here.

4.6. Creatinine unit of measure
Instructions: Select the unit of measurement the creatinine level was measured in.

- *"mg/dL"*
- *"µmol/L"*

4.7. Lowest creatinine (during the entire hospital encounter)
Instructions: Enter the numeric value corresponding with the lowest creatinine during the hospital encounter.
Note: If the only creatinine value or the lowest creatinine value for the entire hospital encounter is the value that was entered above, please re-enter that value here.

4.8. Creatinine unit of measure
Instructions: Select the unit of measurement the creatinine level was measured in.

- *"mg/dL"*
- *"µmol/L"*

4.9. Highest total bilirubin (days 1-2 of the hospital encounter)
Instructions: Enter the numeric value corresponding with the highest measured total bilirubin during days 1-2 of the hospital encounter.

4.10. Total bilirubin unit of measure
Instructions: Select the unit of measurement the total bilirubin level was measured in.

- *"mg/dL"*
- *"µmol/L"*

4.11. Lowest total bilirubin (during the entire hospital encounter)
Instructions: Enter the numeric value corresponding with the lowest measured total bilirubin during the entire hospital encounter.
Note: If the only total bilirubin value or the lowest total bilirubin value for the entire hospital encounter is the value that was entered above from days 1-2, please re-enter that value here.

4.12. Total bilirubin unit of measure
Instructions: Select the unit of measurement the total bilirubin level was measured in.

- *"mg/dL"*
- *"µmol/L"*

4.13. Lowest platelet level (days 1-2 of the hospital encounter)
Instructions: Enter the numeric value corresponding with the lowest measured platelet level during days 1-2 of the hospital encounter.

4.14. Highest platelet level (during the entire encounter)
Instructions: Enter the numeric value corresponding with the highest measured platelet level during the entire hospital encounter.
Note: If the only platelet value or the highest platelet value for the entire hospital encounter is the value that was entered above from days 1-2, please re-enter that value here.

The following questions regarding lab values for Creatinine, Total Bilirubin, and Platelets will only appear if there is not one of those corresponding labs noted to be available on days 1 or 2 of the hospital encounter:

5. Is a creatinine available during the hospital encounter?
Instructions: Review the medical record to determine if a creatinine level was measured any time the hospital encounter.
Note: This question WILL NOT appear if "Yes" is selected as the response to the question "Did the patient have ICD10 code: N18.6 (end-stage renal dysfunction) or Stage 5 Chronic Kidney Disease on the Admission H&P for the hospitalization of interest, or have dialysis in the 30 days prior to the encounter?".

- *"Yes"*
  Answer questions 5.1 through 5.4
- *"No"*

5.1. Highest creatinine (during the entire hospital encounter)
Instructions: Enter the numeric value corresponding with the highest measured creatinine during the entire hospital encounter.

5.2. Creatinine unit of measure
Instructions: Select the unit of measurement the creatinine level was measured in.

- *"mg/dL"*
- *"µmol/L"*

5.3. Lowest creatinine (during the entire hospital encounter)
Instructions: Enter the numeric value corresponding with the lowest creatinine during the hospital encounter.
Note: If the only creatinine value or the lowest creatinine value for the entire hospital encounter is the value that was entered above, please re-enter that value here.

5.4. Creatinine unit of measure
Instructions: Select the unit of measurement the creatinine level was measured in.

- *"mg/dL"*
- *"µmol/L"*

6. Is a total bilirubin available during the hospital encounter?
Instructions: Review the medical record to determine if a total bilirubin level was measured any time the hospital encounter.

- *"Yes"*
  Answer questions 6.1 and 6.2
- *"No"*

6.1. Lowest total bilirubin (during the entire hospital encounter)
Instructions: Enter the numeric value corresponding with the lowest measured total bilirubin during the entire hospital encounter.

6.2. Total bilirubin unit of measure
Instructions: Select the unit of measurement the total bilirubin level was measured in.

- *"mg/dL"*
- *"µmol/L"*

7. Is there a platelet level available during the hospital encounter?
Instructions: Review the medical record to determine if a platelet level was measured at any time during the hospital encounter.

- *"Yes"*
  Answer question 7.1
- *"No"*

7.1. Highest platelet level (during the entire encounter)
Instructions: Enter the numeric value corresponding with the highest measured platelet level during the entire hospital encounter.

Baseline

Instructions: For all questions in the database, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Note: Questions that contain an asterisk in the demographics form are required to be answered in order to submit the form.

Jump to sub-sections:

Demographics

1. Date of Birth (MM/YYYY)*
Instructions: Record the patient's month and year of birth in the MM/YYYY format.
Note: This question is required.

2. Sex Assigned at Birth*
Note: This question is required.

- *"Male"*
- *"Female"*
- *"Intersex"*
- *"Unknown"*

3. Gender Identity

- *"Woman"*
  Include: Female
- *"Man"*
  Include: Male
- *"Transgender Woman/Transgender Female"*
- *"Transgender Man/Transgender Male"*
- *"Non-binary/Genderqueer"*

- "*Other (e.g. gender-diverse, or gender fluid)*"
  Include: Another gender not listed above
- *"Choose not to disclose"*
- *"Unknown"*

4. Race/Ethnicity
Select all that apply:

- *"American Indian or Alaskan Native"*
  Include: Native American
- *"Asian"*
  Include: Chinese, Asian Indian, Filipino, Vietnamese, Korean, and Japanese, Another group (for example, Pakistani, Hmong, Afghan, etc.)
- *"Black or African American"*
  Include: African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, Another group (for example, Trinidadian and Tobagonian, Ghanaian, Congolese, etc.)
- *"Hispanic or Latino"*
  Include: Mexican, Puerto Rican, Salvadoran, Cuban, Dominican, Guatemalan, Another group (for example, Colombian, Honduran, Spaniard, etc.)
- *"Middle Eastern or North African"*
  Include: Lebanese, Iranian, Egyptian, Syrian, Iraqi, Israeli, Another group (for example, Moroccan, Yemeni, Kurdish, etc.)
- *"Native Hawaiian or Pacific Islander"*
  Include: Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese, Another group (for example, Chuukese, Palauan, Tahitian, etc.)
- *"White or Caucasian"*
  Include: English, German, Irish, Italian, Polish, Scottish, Another group (for example, French, Swedish, Norwegian, etc.)
- *"Other"*
- *"Unknown"*

5. Zip Code*
Instructions: Review the medical record to determine the zip code of the patient's *primary residence*. This MUST be 9 digits in length.
Note: This question is required.
Reminder: Please enter a 9-digit zip code with digits only, no dashes (-) or blank spaces.

- 9-digit zip codes can be determined using the United States Postal Service Zip Code Look up tool: https://tools.usps.com/zip-code-lookup.htm?byaddress
- If you are unable to locate a 9-digit zip code, please add four zeroes after the first 5 digits of the zip code. Example: 48109 should be entered as 481090000 if you are unable to locate the 9-digit zip code for this patient.

Note 2: If a patient is homeless, the zip code should be entered as 999990000.

6. What is the patient's preferred language for discussing health care?
Instructions: Review the medical record to determine the patient's preferred language for discussing healthcare.

- *"Albanian"*
- *"American Sign Language (ASL)"*
- *"Arabic"*
- *"Bengali"*
- *"Bosnian"*
- *"Chaldean/Aramaic"*
- *"Chinese"*
- *"English"*
- *"French"*
- *"Hindi"*
- *"Italian"*
- *"Japanese"*
- *"Korean"*
- *"Polish"*
- *"Russian"*
- *"Spanish"*
- *"Telugu"*
- *"Ukranian"*
- *"Urdu"*
- *"Vietnamese"*
- *"Other"* Please enter the other language is in the free text box provided.
- *"Unknown"*

7. What is the patient's marital status?
Instructions: Review the medical record to determine the patient's marital status at the time of the hospital encounter.

- *"Single (Never Married)"*
- *"Domestic Partnership"*
- *"Married"*
- *"Separated"*
- *"Divorced"*
- *"Widowed"*
- *"Unknown"*

8. What is the highest degree or level of schooling the patient has completed?
Instructions: Review the medical record to determine the highest degree or level of schooling the patient has completed at the time of hospitalization.

> *Note: Choose the lowest/minimum attained education level that fits what is reported in the medical record. For example, if "Associate's/Bachelor's", select "Associate degree".*

- *"Less than a high school diploma"*
- *"High school degree or equivalent (e.g., GED)"*

- *"Some college, no degree"*
- *"Associate degree (e.g., AA, AS)"*
- *"Bachelor's degree (e.g., BA, BS)"*
- *"Master's degree (e.g., MA, MS, MEd)"*
- *"Professional degree (e.g., MD, DDS, DVM)"*
- *"Doctorate (e.g., PhD, EdD, JD)"*
- *"Unknown"*

9. **What is the patient's religion?**

Instructions: Review the medical record to determine the patient's religion at the time of hospitalization.

- *"Agnosticism"*
- *"Atheism"*
- *"Buddhism"*
- *"Christianity (including Protestant, Catholic, Orthodox Christian, Mormon, Jehovah's Witness, Baptist, Lutheran, Pentecostal, etc.)"*
- **Include:** Methodist, Episcopalian/Episcopal, Non Denominational Christian, Orthodox Serbian, Unity, Roman Catholic, Seventh Day Adventist, Orthodox Greek, Apostolic, Holiness, Latter Day Saints, United Church of Christ, Congregational, Wesleyan, Unity
- *"Hinduism"*
- *"Islam (including Muslim, Sunni, Shia, Sufism, etc.)"*
  Include: Non Denominational Muslim
- *"Judaism"*
  Include: Non Denominational Judaism
- *"Non-denominational"*
  Include: Non-denominational listed as the patient's religion without further designation of religion
  Exclude: Non-denominational Muslim, Non-denominational Judaism, Non-denominational Christian
- *"Other"* Please contact the Coordinating Center prior to selecting this option unless the religion listed is provided in the inclusion criteria below.
  Include: Wiccan, Other is listed in the medical record as the religion, Sikh/Sikhism, Pagan, Unitarian Universalist, Baha'i, Jainism, Native American Spirituality
- *"No Religion/None"*
- *"Unknown"*
  Include: Spiritual, Community

Admission Detail

1. Indicate the place of residence prior to hospitalization.

Instructions: Review the medical record to determine the patient's primary residence immediately prior to the hospitalization of interest.

- *"Assisted Living"*
  Include: Assisted living, assisted living facilities (ALF), assisted living residence
  Note: Assisted living is not the same as nursing home care. Assisted living is for adults that need help with everyday tasks, but don't need full-time nursing care.

- "*Community Living*"
  Include: Dormitories, Sorority/Fraternity Houses, Hotels
- *"Correctional Facility"*
  Include: Jail, prison, penitentiary
- *"Custodial Nursing Facility"*
  Include: Memory Care Setting
- "*Group Home*"
  Include: Adult Foster Care, psychiatric group home, residential substance abuse center.
- "*Home"*
  Include: The patient's own home or family member's home, independent living, independent housing (including independent housing that is physically located at a skilled nursing facility or assisted living complex/senior apartments).
- *"Homeless Shelter"*
  Include: Homeless patients even if they do not reside in a Homeless Shelter.
- *"Long Term Acute Care Hospital (LTAC)"*
- "*Skilled Nursing Facility*"
  Include: Skilled nursing home, nursing home, skilled nursing facility (SNF), Extended Care Facility (ECF).
- *"Sub-acute Rehabilitation Facility"*
- *"Unknown"*

2. Enter the time of presentation to the Hospital Encounter (ED, Observation, Inpatient).
Instructions: Review the medical record to determine the initial timestamp at which the hospital encounter begins. Enter the time in military format (HH:MM). If the time is unknown, please enter 99:99. This question is required.
Include: Encounter timestamp.
Note: If you are seeing a discrepancy from your source of truth, such as vitals or notes entered prior to the documented time of presentation, please reach out to the Coordinating Center to determine encounter start time.

3. Was this patient admitted to the hospital encounter through the Emergency Department?
Instructions: Review the medical record to determine whether or not the patient was admitted to the index Hospital Encounter via the Emergency Department.

- *"Yes"*
- *"No"*
  Include: Direct admissions from doctor's offices or urgent cares, admissions through the Observation Unit without utilizing the Emergency Department.
- *"Unknown"*

4. Indicate the first ordered level of care (after Emergency, if applicable).
Instructions: Review the medical record to determine the first ordered level of care for the patient (after Emergency, if applicable).
Note 1: This is the level of care (from the physician order) that the patient is receiving after an Emergency level of care, not the physical location of the patient.
Note 2: If the original order is changed within 2 hours of placement, please capture the second order

placed. The purpose of this is to mitigate any situations where an ordered level of care was placed inappropriately or changed to the correct level of care after consult, etc.

- *"Observation"*
  Answer questions 4.1 through 4.4
  Include: Observation with Telemetry
- *"Floor/Ward"*
  Answer questions 4.1 through 4.3
  Include: Hospital at Home, General Inpatient, General Inpatient with Telemetry
- *"Step-down"*
  Answer questions 4.1 and 4.2
  Include: Intermediate Care and Progressive Care.
- *"Intensive/Critical Care"*
  Answer questions 4.1 and 4.2

4.1. Enter the date of the [selected level of care] order
Instructions: Review the medical record to determine the date the order for the selected level of care was placed. Record the date in (MM/DD/YYYY) format. Enter 01/01/1900 if the date is unknown.
Note 1: This should be the date that the *order* for the selected level of care was placed, not the date that the patient's physical location changed to a different location of care.
Note 2: If the original order is changed within 2 hours of placement, please capture the date/time of the second order placed.

4.2. Enter the time of the [selected level of care] order
Instructions: Review the medical record to determine the time of the order for the selected level of care was placed. Record the time in a HH:MM format. Enter 99:99 if the time is unknown.
Note: This should be the time the *order* for the selected level of care was placed, not the time that the patient's physical location changed to a different location of care.

4.3. Did the patient have an order for telemetry while under Observation / Floor/Ward status?
Instructions: Review the medical record to determine if the patient had an order for telemetry while they are under the first ordered observation or floor/ward care status.

- "*Yes*"
- "*No*"
- "*Unknown*"

4.4. Was the patient admitted to the hospital as an inpatient?
Instructions: Review the medical record to determine if the patient had an order for admission to the hospital as an inpatient *after* their order for Observation status was placed.

- *"Yes"*
  Answer questions 4.3.1 through 4.3.3
- *"No"*
  Include: Hospitalizations where the patient remained under Observation status for the entirety of the encounter
- *"Unknown"*

4.4.1. Indicate the first ordered level of care after Observation.
Instructions: Review the medical record to determine the first ordered level of care after Observation.
Note: This is the level of care (from the physician order) that the patient is receiving after an Observation level of care, not the physical location of the patient.

Note 2: If the original order post-observation is changed within 2 hours of placement, please capture the second order placed. The purpose of this is to mitigate any situations where an ordered level of care was placed inappropriately or changed to the correct level of care after consult, etc.

- *"Floor/Ward"*
  Include: Hospital at Home, General Inpatient, General Inpatient with telemetry
- *"Step-Down"*
  Include: Progressive care, intermediate care.
- *"Intensive/Critical Care"*

4.4.2. Date of order for admission to [selected level of care]
Instructions: Review the medical record to determine the date the order for the selected level of care was placed. Record the date in (MM/DD/YYYY) format. Enter 01/01/1900 if the date is unknown.
Note: This should be the date that the *order* for the selected level of care was placed, not the date that the patient's physical location changed to a different location of care.

4.3.3. Time of order for admission to [selected level of care]
Instructions: Review the medical record to determine the time of the order for the selected level of care was placed. Record the time in a HH:MM format. Enter 99:99 if the time is unknown.
Note: This should be the time the *order* for the selected level of care was placed, not the time that the patient's physical location changed to a different location of care.

4.4.4. Did the patient have an order for telemetry while under Floor/Ward status?
Instructions: Review the medical record to determine if the patient had an order for telemetry while they are under floor/ward care status.

- "*Yes*"
- "*No*"
- "*Unknown*"

5. Indicate the first physical location of care (after the Emergency Department, if applicable)
Instructions: Review the medical record to determine the first physical location of care for the patient (after the Emergency Department, if applicable).
Note 1: This is the first physical location of care for the patient after the Emergency Department (if applicable), not the first ordered level of care for the patient.
Note 2: If the patient's first physical location of care was a telemetry-capable general inpatient unit (and patient was not ordered to receive telemetry) or a Universal/Flexible bed, please reach out to the Coordinating Center for clarification on which selection to make.

- *"Remained in ED until end of hospital encounter"*
  Include: ED Boarding Units, ED Critical Care Units
- *"Observation/Short Stay Unit"*
  Answer questions 5.1 through 5.3
  Include: Observation with telemetry
- *"Hospital at Home"*
  Answer questions 5.1 and 5.2.
  Include: Patients receiving an acute level of care while physically located in their home, rather than a hospital. Hospital Care at Home.
- *"Floor/Ward"*
  Answer questions 5.1 and 5.2

Include: General inpatient units where telemetry care can be provided if needed, but the unit is not specifically equipped for this care.

- "*Telemetry Unit*"
  Include: Units that are specifically equipped for continuous cardiac and vital sign monitoring and classified by the institution as a telemetry unit where all or nearly all patients receive telemetry monitoring.
- *"Step-down"*
  Answer questions 5.1 and 5.2
  Include: Intermediate Care Unit, Progressive Care Unit.
- *"Intensive/Critical Care Unit"*
  Answer questions 5.1 and 5.2
  Include: All types of Intensive Care Units (i.e., medical, surgical, neuro, cardiac, etc.)
- "*Universal/Flexible Bed Unit*"
  Include: Acuity-adaptable units, units that can adapt to a variety of patient needs and accommodate patients with different levels of care (general inpatient to intensive care).

5.1. Enter the date on which the patient's physical location of care changed to [selected level of care]
Instructions: Review the medical record to determine the date on which the patient's physical location of care was changed to the selected physical location. Record the date in (MM/DD/YYYY) format. Enter 01/01/1900 if the date is unknown.
Note: This should be the date that the patient's physical location changed to a different location of care, not the date the order for a different level of care was placed.

5.2. Enter the time at which the patient's physical location of care changed to [selected level of care]
Instructions: Review the medical record to determine the time at which the patient's physical location of care was changed to the selected physical location. Record the time in a HH:MM format. Enter 99:99 if the time is unknown.
Note: This should be the time that the patient's physical location changed to a different location of care (i.e. the time that the patient is physically admitted to the receiving unit), not the time the order for a different level of care was placed.

5.3. Did the patient's physical location ever change from the Observation/Short Stay Unit to an inpatient unit (including Step-Down and ICU) or Hospital at Home during the hospital encounter?
Instructions: Review the medical record to determine if the patient's physical location ever changed from the Observation/Short Stay Unit to an Inpatient Unit (including Step-Down and Intensive/Critical Care Unit) or Hospital at Home during the hospital encounter.
Note: This is related to the physical location of the patient, not the ordered level of care for the patient after their stay on the Observation/Short Stay Unit.

- *"Yes"*
  Answer questions 5.3.1 through 5.3.3
- *"No"*
  Include: Hospitalizations where the patient remained in an Observation/Short Stay Unit for the entirety of the encounter
- *"Unknown"*

5.3.1. Indicate the first physical location of care after the Observation/Short Stay Unit
Instructions: Review the medical record to determine the first physical location of care for the patient after the Observation/Short Stay Unit.

Note: This is the first physical location of care for the patient after the Observation/Short Stay Unit, not the first ordered level of care for the patient.

- *"Hospital at Home"*
  Include: Patients receiving an acute level of care while physically located in their home, rather than a hospital. Hospital Care at Home.
- *"Floor/Ward"*
  Include: General inpatient units where telemetry care can be provided if needed, but the unit is not specifically equipped for this care.
- "*Telemetry Unit*"
  Include: Units that are specifically equipped for continuous cardiac and vital sign monitoring and classified by the institution as a telemetry unit where all or nearly all patients receive telemetry monitoring.
- *"Step-down"*
  Include: Intermediate Care Unit, Progressive Care Unit, Telemetry Unit
- *"Intensive/Critical Care Unit"*
  Include: All types of Intensive Care Units (i.e., medical, surgical, neuro, cardiac, etc.)
- "*Universal/Flexible Bed Unit*"
  Include: Acuity-adaptable units, units that can adapt to a variety of patient needs and accommodate patients with different levels of care (general inpatient to intensive care).

5.3.2. Enter the date on which the patient's physical location of care changed to [selected level of care]
Instructions: Review the medical record to determine the date on which the patient's physical location of care was changed to the selected physical location. Record the date in (MM/DD/YYYY) format. Enter 01/01/1900 if the date is unknown.
Note: This should be the date that the patient's physical location changed to a different location of care, not the date the order for a different level of care was placed.

5.3.3. Enter the time at which the patient's physical location of care changed to [selected level of care]]
Instructions: Review the medical record to determine the time at which the patient's physical location of care was changed to the selected physical location. Record the time in a HH:MM format. Enter 99:99 if the time is unknown.
Note: This should be the time that the patient's physical location changed to a different location of care, not the time the order for a different level of care was placed.

6. What is the ICD-10 Code that corresponds with the primary admission diagnosis?
Instructions: Review the medical record to determine the principal reason for admission. Enter only one code in the free text box.
Note: ICD 10 Code Lookup Tool: https://icd10cmtool.cdc.gov/?fy=FY2024

7. What was the classification of the admitting physician?
Instructions: Review the medical record to determine the classification of the admitting physician. Choose the option that best describes the admitting physician's practice specialty.
Note: This question **will not** appear if the patient's first ordered level of care (after Emergency, if applicable) is listed as Observation and "No" is selected as the response to the question "Was the patient admitted to the hospital as an inpatient?" above.

- *"Hospitalist"*
  Include: Each participating hospital in the HMS Consortium has one or more group(s) of hospitalists. It may be helpful to obtain a list of the physicians that participate in your hospital's hospitalist program.
- *"General Internist"*
  Include: Physicians that specialize in Adult Medicine or Internal Medicine.
- *"Infectious Disease"*
  Include: Physicians that specialize in Infection Disease (ID) or Infectious Disease Specialist.
- *"Hematologist/Oncologist"*
  Include: Physicians that specialize in hematology and/or oncology.
- *"Medicine Sub Specialist"*
  Include:: Physicians that specialize in General/Internal Medicine and have sub-specialized in another area such as Endocrinology, Cardiology, Pulmonary or Gastroenterology, as a few examples.
- *"Critical Care"*
  Include: Intensivists
- *"Family Medicine"*
  Include: Physicians that specializes in family medicine, family practice. Family physician, family doctor, etc.
- *"Surgical Services"*
  Include: Surgeons
- *"Other"*
  Include: Emergency Medicine physicians

6. Admitting Provider Details
Instructions: Review the medical record to determine the admitting provider. Determine that provider's assigned number via your own personal tracking record. Select the appropriate number that corresponds with the admitting physician (if desired) from the drop-down menu. Provider values range from 1-300.
Note: The HMS Coordinating Center does not maintain a list of these providers. The local site can use this field at their discretion and tracking is performed at the local level.

Emergency Department Detail Index

1. What is the patient's ED triage score?
Instructions: Review the medical record to determine the patient's ED triage score for the index ED visit.
Note: The ED triage (Emergency Severity or ESI) score is a standard numeral of acuity collected on every patient ED encounter document and is recorded in the nurse triage section (Standard values High acuity 1-Low Acuity 5). This may also be referred to as "Acuity Score".

- *"1"*
- *"2"*
- *"3"*
- *"4"*
- *"5"*
- *"Not available"*

2. Indicate the number of prior ED-based visits at your hospital by this patient within the last 7 days, not inclusive of the ED visit that resulted in this hospitalization or observation stay.
Instructions: Review the medical record to determine the number of prior ED-based visits to your hospital by this patient within the 7 days prior to patient's arrival for the index hospital encounter. This is not inclusive of the ED encounter in the index hospital encounter you are currently abstracting. These questions relate to PRIOR visits to the same health system, within the last 7 days, for this illness. Documentation of these visits is typically available within the patient's chart or notes sections of the electronic health record, ED encounter triage section, or physician notes. Visits that occurred outside the health system of the index visit are not to be counted or recorded in the total.
Include: Physical ED visits, drive-through ED evaluation/testing station visits outside but next to the ED, ED-based telehealth visits, ED visits in which the patient leaves before being seen.
Exclude: Urgent Care Visits, ED visits that result in hospital admission, ED Curbside visits immediately prior to the index ED encounter.

- *"0"*
- *"1"*
- *"2"*
- *"3 or more"*

3. ER Provider Details
Instructions: Review the medical record to determine the Emergency Department provider. Determine that provider's assigned number via your own personal tracking record. Select the appropriate number that corresponds with the admitting physician (if desired) from the drop-down menu. Provider values range from 1-300.
Note: The HMS Coordinating Center does not maintain a list of these providers. The local site can use this field at their discretion and tracking is performed at the local level.

Emergency Department Detail Prior

1. What is the date of the arrival to the ED-based visit closest to the index hospital encounter?
Instructions: Review the medical record to determine the arrival date of the patient's most recent ED-based visit to the index hospital encounter. These questions relate to PRIOR visits to the same health system, within the last 7 days, for this illness. Documentation of these visits is typically available within the patient's chart or notes sections of the electronic health record, ED encounter triage section, or physician notes. Visits that occurred outside the health system of the index visit are not to be counted or recorded in the total.
Include: Physical ED visits, drive-through ED evaluation/testing station visits outside but next to the ED, ED-based telehealth visits
Exclude: Urgent Care Visits, ED visits that result in hospital admission, ED Curbside visits immediately prior to the index ED encounter.
Note: Please enter the date in MM/DD/YYYY format.

2. What is the date of the departure from the ED-based visit closest to the index hospital encounter?
Instructions: Review the medical record to determine the departure date from the most recent ED visit to the index hospital encounter. Please enter the date in the MM/DD/YYYY format.

Medications

Examples of appropriate documentation for medication administration history:

- Documentation in an outpatient note from a healthcare professional that the patient received the medication (Exp: "Patient has taken prednisone for the last two days")
- Documentation of a medication as being listed as a patient's current home medication from the History & Physical, Observation or Emergency Department notes.
- For antibiotics – please capture ANY administration of an IV antibiotic, PO Fluoroquinolone, or PO Linezolid in the 30 days prior regardless of whether it is listed as a current home medication or has a corresponding outpatient script.
  Include: Include administrations at physician appointments, urgent care, ER visits, prior admissions within the 30 days.
- For immunosuppressive treatments (IV or Oral) – please capture ANY administration of an IV or oral immunosuppressive treatments in the 30 days prior regardless of whether it is listed as a current home medication or has a corresponding outpatient script.
  Include: Immunosuppressive administered at physician appointments, urgent care, ER visits, prior admissions within the 30 days.

Examples of inappropriate documentation for medication administration history:

- Documentation of medications given during an emergency room encounter or inpatient hospitalization that do not have a corresponding outpatient script.
- Medications (other than IV immunosuppressives) given in the ambulance on the way to the hospital for the index hospital encounter.

1. Did the patient receive an intravenous (IV) or oral steroid treatment in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received an intravenous or oral steroid treatment the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Exclude: Inhaled steroids, topical steroids, ophthalmic steroid suspensions.

- *"Yes"* ***Answer question 1.1***
- *"No"*
- *"Unknown"*

1.1. Select the intravenous (IV) or oral steroid(s) the patient received in the 30 days prior to the hospital encounter.
Instructions: Review the medical record to determine the name(s) of the steroid treatment(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Betamethasone"*
- *"Budesonide"*
- *"Cortisone"*
- *"Deflazacort"*
- *"Dexamethasone"*
- *"Fludrocortisone"*
- *"Hydrocortisone"*
- *"Methylprednisolone"*

- *"Prednisolone"*
- *"Prednisone"*
- *"Triamcinolone"*
- *"None of the above"*

2. Did the patient receive an intravenous (IV) or oral immunosuppressive treatment in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received an intravenous or oral immunosuppressive treatment in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Include ANY administration of an immunosuppressant in the 30 days prior regardless of whether it is listed as a current medication or has a corresponding outpatient script.
Exclude: Hormonal therapy for cancer treatment, including but not limited to:

- Anti-estrogens: fulvestrant (Faslodex®), tamoxifen, and toremifene (Fareston®)
- Aromatase inhibitors: anastrozole (Arimidex®), exemestane (Aromasin®), and letrozole (Femara®).
- Progestins: megestrol acetate (Megace®)
- Anti-androgens: bicalutamide (Casodex®), flutamide (Eulexin®), and nilutamde (Nilandron®).
- Gonadotropin-releasing hormone (GnRH), also known as luteinizing hormone-releasing hormone (LHRH) agonists or analogs: leuprolide (Lupron®) and goserelin (Zoladex®).
- Palbociclib (Ibrance)

Note: Please capture all systemic immunosuppressive treatments. If the patient received an immunosuppressive given via a different route than IV or PO, please reach out to the coordinating center for guidance on whether to include this medication.

- *"Yes"*
  Answer question 2.1
- *"No"*
- *"Unknown"*

2.1. Select the intravenous (IV) or oral immunosuppressive treatment(s) the patient received in the 30 days prior to the hospital encounter
Instructions: Review the medical record to determine the name(s) of the immunosuppressive treatment(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Abatacept"*
- *"Alefacept (Amevive)"*
- *"Anakinra (Kineret)"*
- *"Azathioprine (Imuran)"*
- *"Chlorambucil"*
- *"Cyclophosphamide (Cytoxan)"*
- *"Cyclosporine (Neoral)"*
- *"Etanercept"*
- *"Everolimus (Zortress)"*
- *"Leflunomide"*

- *"Lenalidomide (Revlimid)"*
- *"Monoclonal Antibody (see definitions for detailed list)"*
  Include: Monoclonal antibodies on the following list: https://en.wikipedia.org/wiki/List_of_therapeutic_monoclonal_antibodies
- *"Mycophenolate or mycophenolic acid (Cellcept, Myfortic)"*
- *"Methotrexate"*
- *"Systemic chemotherapy in prior 30 days for treatment of cancer"*
  Include: Hydroxyurea.
- *"Sirolimus"*
- *"Tacrolimus"*
- *"Teriflunomide (Aubagio)"*
- *"TK Inhibitor"*
  Include: Acalabrutinib (Calquence), Afatinib (Gilotrif), Alectinib (Alecensa), Avapritinib, Axitinib (Inlyta), Bosutinib (Bosulif), Cabozantinib (Cabometyx, Cometriq), Caprelsa, Crizotinib (Xalkori), Dacomitinib (Vizimpro), Dasatinib (Sprycel), Entrectinib (Rozlytrek), Erlotinib (Tarceva), Gilteritinib (Xospata), Ibrutinib (Imbruvica), Imatinib Mesylate (Gleevec), Lapatinib (Tykerb), Lenvatinib, Midostaurin (Rydapt), Neratinib (Nerlynx), Nilotinib (Tasigna), Pacritinib, Pazopanib (Votrient), Pexidartinib (Turalio), Ponatinib (Iclusig), Quizartinib, Regorafenib (Stivarga), Ruxolitinib (Jakafi), Sorafenib (Nexavar), Sunitinib (Sutent), Vandetanib, Zanubrutinib (Brukinsa), Ziv-Aflibercept (Zaltrap), Ripretinib (Qinlock), Nintedanib
- *"Other Immunosuppressive Therapy"* Please contact the Coordinating Center prior to making this selection if the medication you see in your records does not match the ones listed below for inclusion and exclusion for this question.
  Include: Nonspecific Immunomodulating agents, JAK Inhibitors (ex: Upadacitinib).
  Exclude: Intravenous Immune globulin (IVIG), Hydroxychloroquine (Plaquenil), Bicalutamide, Fulvestrant
- *"None of the above"*

3. Did the patient receive an angiotensin converting enzyme (ACE) inhibitor in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received an ACE inhibitor in the 30 days prior to the hospital encounter.
Include: Combination blood-pressure medication with an ACE Inhibitor as an active ingredient. Please log each ingredient separately.

- *"Yes"* ***Answer question 3.1***
- *"No"*
- *"Unknown"*

3.1. Select the angiotensin converting enzyme (ACE) inhibitor(s) the patient received in the 30 days prior to the hospital encounter
Instructions: Review the medical record to determine the name(s) of the ACE inhibitor(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Include: Combination blood-pressure medication with an ACE inhibitor as an active ingredient. Please log each ingredient separately.
Select all that apply:

- *"Accupril (quinapril)"*
- *"Aceon (perindopril)"*
- *"Altace (ramipril)"*
- *"Capoten (captopril)"*
- *"Enalapril (Vasotec)*
- *"Lotensin (benazepril)"*
- *"Mavik (trandolapril)"*
- *"Monopril (fosinopril)"*
- *"Prinivil"*
- *"Zestril (lisinopril)"*
- *"None of the above"*

4. Did the patient receive an angiotensin II receptor blocker (ARB) in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received an angiotensin II receptor blocker (ARB) in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Include: Combination blood-pressure medication with an ARB as an active ingredient. Please log each ingredient separately.

- *"Yes"*
  Answer question 4.1
- *"No"*
- *"Unknown"*

4.1. Select the angiotensin II receptor blockers (ARB) the patient received in the 30 days prior to the hospital encounter.
Instructions: Review the medical record to determine the name of the angiotensin II receptor blocker (ARB) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Azilsartan (Edarbi)"*
- *"Candesartan (Atacand)"*
- *"Eprosartan (Teveten)"*
- *"Irbesartan (Avapro)"*
- *"Losartan (Cozaar)"*
- *"Olmesartan (Benicar)"*
- *"Telmisartan (Micardis)"*
- *"Valsartan (Diovan, Prexxartan)"*
  Include: Entresto
- *"None of the above"*

5. Did the patient receive a statin in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received a statin in the 30 days prior to the hospital encounter.

- *"Yes"*
  Answer question 5.1

- *"No"*
- *"Unknown"*

5.1. Did the patient receive a statin in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine the name(s) of the statin(s) the patient received in the 30 days prior to the hospital encounter.
Select all that apply:

- *"Atorvastatin (Lipitor)"*
- *"Fluvastatin (Lescol, Lescol XL)"*
- *"Lovastatin (Mevacor, Altoprev)"*
- *"Pitavastatin (Livalo)"*
- *"Pravastatin (Pravachol)"*
- *"Rosuvastatin (Crestor)"*
- *"Simvastatin (Zocor)"*
- *"None of the above"*

6. Did the patient receive a beta-blocker in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received a beta-blocker in the 30 days prior to the hospital encounter.
Include: Combination blood-pressure medication with a beta-blocker as an active ingredient. Please log each ingredient separately.

- *"Yes"*
  Answer question 6.1
- *"No"*
- *"Unknown"*

6.1. Select the beta blockers(s) the patient received in the 30 days prior to the hospital encounter.
Instructions: Review the medical record to determine the name(s) of the beta-blocker(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Acebutolol (Sectral)"*
- *"Carvedilol (Coreg)"*
- *"Betaxolol (Kerlone)"*
- *"Bisoprolol (Zebeta, Ziac)"*
- *"Carteolol (Cartrol)"*
- *"Labetalol (Normodyne, Trandate)"*
- *"Metoprolol (Lopressor, Toprol-XL)"*
- *"Nadolol (Corgard)"*
- *"Nebivolol (Bystolic)"*
- *"Penbutolol (Levatol)"*
- *"Pindolol (Visken)"*
- *"Propranolol (Inderal)"*
- *"Sotalol (Betapace)"*

- *"Timolol (Blocadren)"*
- *"None of the above"*

7. Did the patient receive a diuretic in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received a diuretic in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Include: Combination blood-pressure medication with a diuretic as an active ingredient. Please log each ingredient separately.

- *"Yes"*
  Answer question 7.1
- *"No"*
- *"Unknown"*

7.1. Select the diuretic(s) the patient received in the 30 days prior to the hospital encounter
Instructions: Review the medical record to determine the name(s) of the diuretic(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Acetazolamide (Diamox)"*
- *"Amiloride"*
- *"Bumetanide (Bumex)"*
- *"Chlorothiazide (Diuril)"*
- *"Chlorthalidone"*
- *"Ethacrynic acid (Edecrin)"*
- *"Eplerenone (Inspra)"*
- *"Furosemide (Lasix)"*
- *"Hydrochlorothiazide or HCTZ"*
- *"Indapamide (Lozol)"*
- *"Metolazone (Zaroxyln)"*
- *"Spironolactone (Aldactone)"*
- *"Torsemide (Demedex)"*
- *"Triamterene (Dyrenium)"*
- *"None of the above"*

8. Did the patient receive an IV antibiotic, PO fluoroquinolone, or PO linezolid in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received an antibiotic in the 30 days prior to the hospital encounter (ER, Obs, Inpatient). Review the previous 1-30 days prior to the hospital encounter for IV antibiotic(s), PO Fluoroquinolone(s), or PO Linezolid. If identified, enter ALL antibiotics administered in the 30 days prior to the hospital encounter that meet this criteria.
Note: Fluoroquinolones= Moxifloxacin, Levofloxacin, Ciprofloxacin
Include: ANY administration of an antibiotic in the 30 days prior regardless of whether it is listed as a current medication or has a corresponding outpatient script.
Exclude: Antibiotics written only for dental procedures. Topical, optic, otic, intrabladder & irrigation antibiotics. Any antibiotic that is ordered for prophylaxis, suppression, and/or chronic therapy.

- *"Yes"*

Answer question 8.1

- *"No"*
- *"Unknown"*

8.1. Select the antibiotic(s) the patient received in the 30 days prior to the hospital encounter
Instructions: Review the medical record to determine the name(s) of the antibiotic(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Amikacin (Amikin)"*
- *"Amoxicillin (Novamox, Amoxil, Amoxicot, Dispermox, Moxatag, Moxilin, Trihydrate Trimox, Wymox)"*
- *"Amoxicillin-clavulanic acid (Augmentin, Co-Amoxiclav)"*
- *"Ampicillin (Omnipen, Principen, Totacillin)"*
- *"Ampicillin/sulbactam (Unasyn)"*
- *"Azithromycin (Zithromax, Sumamed, Zitrocin)"*
- *"Aztreonam (Azactam)"*
- *"Bactrim (Co-Trimoxazole, Sulfamethoxazole, Sulfisoxazole, Trimethoprim, Trimethoprim-Sulfamethoxazole, TMP/SMX)"*
- *"Cefaclor (Ceclor, Ceclor CD)"*
- *"Cefadroxil (Cephadroxil, Duricef)"*
- *"Cefalotin (Cephalothin)"*
- *"Cefazolin (Ancef, Kefzol, Zolicef)"*
- *"Cefdinir (Omnicef, Cefdiel)"*
- *"Cefditoren (Spectracef)"*
- *"Cefepime (Maxipime)"*
- *"Cefiderocol"*
- *"Cefixime (Suprax)"*
- *"Cefoperazone (Cefobid, Cefoperazone Sodium)"*
- *"Cefotaxime (Cephotaxime, Claforan)"*
- *"Cefotetan (Cefotan)"*
- *"Cefoxitin (Mefoxin)"*
- *"Cefpodoxime"*
- *"Cefprozil (Cefzil)"*
- *"Ceftaroline"*
- *"Ceftazidime (Ceptaz, Fortaz, Tazicef)"*
- *"Ceftazidime-avibactam (Avycaz)"*
- *"Ceftizoxime"*
- *"Ceftolozane/Tazobactam (Zerbaxa)"*
- *"Ceftibuten (Cedax)"*
- *"Ceftriaxone (Rocephin)"*
- *"Cefuroxime (Ceftin, Kefurox, Zinacef)"*
- *"Cephalexin (Cefalexin, Keflex, Keftal, Cefanox, Biocef, Panixine, Zartan)"*

- *"Ciprofloxacin (Cipro, Ciproxin, Ciprobay)"*
- *"Clarithromycin (Biaxin)"*
- *"Clindamycin (Cleocin) "*
- *"Cloxacillin (Tegopen, Coxapen)"*
- *"Colistin (Xylistin, Polymyxin E, Colistimethate)"*
- *"Dalbavancin"*
- *"Daptomycin"*
- *"Delafloxacin (Baxdela)"*
- *"Dicloxacillin (Dycill, Dynapen)"*
- *"Doripenem (Doribax)"*
- *"Doxycycline (Doxycycline hyclate, Doxy, Vibra, Vibramycin)"*
- *"Ertapenem (Invanz)"*
- *"Erythromycin (E-mycin, Ery-tab, Benzamycin)"*
- *"Eravacycline"*
- *"Fidaxomicin"*
- *"Fosfomycin (Monurol)"*
- *"Gemifloxacin"*
- *"Gentamicin (Gentamycin, Garamycin, Cidomycin, Septopal)"*
- *"Imipenem (Primaxin)"*
- *"Imipenem-Relebactam"*
  Include: Recarbrio
- *"Lefamulin"*
- *"Levofloxacin (Levaquin, Quixin)"*
- *"Linezolid (Zyvox)"*
- *"Meropenem (Merrem)"*
- *"Meropenem Vaborbactam (Vabomere)"*
- *"Metronidazole (Flagyl)"*
- *"Minocycline (Minocycline hydrochloride, Minocin, Dynacin, Myrac, Solodayn, Vectrin)"*
- *"Moxifloxacin (Avelox)"*
- *"Nitrofurantoin (Macrobid)"*
- *"Norfloxacin (Noroxin)"*
- *"Ofloxacin (Floxin)"*
- *"Omadycycline"*
- *"Oritavancin (LY333328)"*
- *"Oxacillin (Prostaphilin, Bactocil, Prostaphlin)"*
- *"Penicillin (Benzylpenicillin, Penicillin G, Bicillin C-R/L-A, Pfizerpen, Wycellin)"*
- *"Piperacillin"*
- *"Piperacillin-tazobactam (Zosyn)"*
- *"Polymixin B"*
- *"Rifampin (Rifadin)"*
- *"Solithromycin"*

- *"Streptomycin"*
- *"Sulfasalazine (Azulfidine, Sulfazine)"*
- *"Sulfonamides"*
- *"Synercid (Quinupristin/Dalfopristin)"*
- *"Tedizolid"*
- *"Telavancin (TD-6424, Vibativ)"*
- *"Tetracycline (Ala-Tet, Panmycin, Sumycin)"*
- *"Tigecycline (Tigacyl)"*
- *"Tobramycin (Tobrex, Nebcin, Kitabis Pak, Tobi TOBI)"*
- *"Vancomycin (Vancocin, Lyphocin)"*
- *"Other"*
  Exclude: Rifaximin (Xifaxan)

9. Did the patient receive an opioid in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received an opioid in the 30 days prior to the hospital encounter (ER, Obs, Inpatient).
Exclude: Topical opioids such as patches or creams.

- *"Yes"*
  Answer question 9.1
- *"No"*
- *"Unknown"*

9.1. Select the opioid(s) the patient received in the 30 days prior to the hospital encounter
Instructions: Review the medical record to determine the name(s) of the opioid(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Buprenorphine"*
  Include: Suboxone
- *"Butorphanol"*
- *"Codeine"*
- *"Dihydrocodeine"*
- *"Fentanyl"*
- *"Hydrocodone"*
- *"Hydromorphone"*
- *"Levorphanol"*
- *"Meperidine"*
- *"Methadone"*
- *"Morphine"*
- *"Nalbuphine"*
- *"Oxycodone"*
  Include: Percocet
- *"Oxymorphone"*
- *"Pentazocine"*

- *"Tapentadol"*
- *"Tramadol"*
- *"None of the above"*

10. Did the patient receive a benzodiazepine in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received a benzodiazepine in the 30 days prior to the hospital encounter (ER, Obs, Inpatient).
Exclude: Intranasal Benzodiazepines, Topical Benzodiazepines (i.e., ABHR gel - Ativan, Benadryl, Haldol, Reglan gel)

- *"Yes"*
  Answer question 10.1
  Include: As needed (PRN) dosing for seizures (all routes of administration).
- *"No"*
- *"Unknown"*

10.1. Select the benzodiazepine(s) the patient received in the 30 days prior to the hospital encounter
Instructions: Review the medical record to determine the name(s) of the benzodiazepine(s) the patient received in the 30 days prior to the hospital encounter.
Select all that apply:

- *"Alprazolam"*
- *"Chlordiazepoxide"*
- *"Clobazam"*
- *"Clonazepam"*
- *"Clorazepate"*
- *"Diazepam"*
- *"Estazolam"*
- *"Flurazepam"*
- *"Halazepam"*
- *"Lorazepam"*
- *"Midazolam"*
- *"Oxazepam"*
- *"Quazepam"*
- *"Temazepam"*
- *"Triazolam"*
- *"None of the above"*

11. Did the patient receive an antipsychotic in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient received an antipsychotic in the 30 days prior to the hospital encounter.
Exclude: Intranasal Antipsychotics, Topical Antipsychotics (i.e., ABHR gel - Ativan, Benadryl, Haldol, Reglan gel)

- *"Yes"*
  Answer question 11.1
- *"No"*

- *"Unknown"*

11.1. Select the antipsychotic(s) the patient received in the 30 days prior to the hospital encounter.
Instructions: Review the medical record to determine the name(s) of the antipsychotic(s) the patient received in the 30 days prior to the hospital encounter (ER, Obs, Inpt).
Select all that apply:

- *"Aripiprazole"*
- *"Asenapine (Saphris)"*
- *"Brexpiprazole (Rexulti)"*
- *"Cariprazine (Vraylar)"*
- *"Clozapine"*
- *"Fluphenazine (Modecate)"*
- *"Haloperidol"*
- *"Lurasidone (Latuda)"*
- *"Olanzepine"*
- *"Paliperidone (Invega)"*
- *"Quetiapine"*
- *"Risperdone"*
- *"Ziprasidone"*
- *"None of the above"*
- *"Other"* Enter the medication name in the free text field provided. Please reach out to the Coordinating Center prior to utilizing this field.

12. Did the patient receive midodrine in the 30 days prior to the hospital encounter?
Instructions: Instructions: Review the medical record to determine if the patient received the medication Midodrine in the 30 days prior to the hospital encounter.

- *"Yes"*
- *"No"*
- *"Unknown"*

Co-Morbid Conditions

1. Please include all past & current chronic conditions stated in the "Active Problem List" or "Past Medical History" noted at presentation of the hospital encounter until Day 2 of the inpatient admission.
Instructions: Review the medical record to determine if the patient has any of the following co-morbid conditions. A co-morbid condition refers to the presence of one or more disorders/diseases, in addition to the primary disease of interest. Please select all chronic conditions that are present at the onset of the hospital encounter until Day 2 of the inpatient admission or observation stay [if observation only admission]).
Note: For efficiency of abstraction, please review the primary medical team's notes (ED provider, observation provider, admitting provider) for this information. If the primary medical team states that they will be engaging a consulting service to help manage the patient's infectious process or organ dysfunction related to their infectious process, please review that consulting service's notes as well.
Include: Pre-existing/chronic conditions documented in the medical record by the provider on the day of

hospital encounter until Day 2 of the inpatient admission.
Exclude: Acute conditions present as a result of patient illness (i.e., the patient would not have otherwise had that condition if they were not ill with the current infectious process). It should be clear in the medical record that the condition noted is not a chronic or pre-existing condition in order to be included.

Examples of Timing for Comorbid Condition Capture:

Day 1 of Inpatient Admission = Date Admission Order is Placed
Note: If patient is admitted to Observation Status and does not go on to be admitted to Inpatient status, please use the Date of Observation Order as day 1 of the Observation Stay.

Example One:

Day of Hospital Encounter Presentation	**Hospital Encounter Day 2**	**Hospital Encounter Day 3**
In ED until 1200 then Admit to Inpt	Inpatient	Inpatient
Capture Comorbids	Capture Comorbids	Do not capture Comorbids

Example Two:

Day of Hospital Encounter Presentation	**Hospital Encounter Day 2**	**Hospital Encounter Day 3**	**Hospital Encounter Day 4**
In ED until 1200 then Admit to Observation	Observation until 1200 then admit to inpatient	Inpatient	Inpatient
Capture Comorbids	Capture Comorbids	Capture Comorbids	Do not capture comorbids

Example Three:

Day of Hospital Encounter Presentation	**Hospital Encounter Day 2**	**Hospital Encounter Day 3**
In ED until 1200 then admit to observation	In observation	In observation until 1500 then discharged home
Capture Comorbids	Capture Comorbids	Do not capture comorbids

Select all that apply:

- *"Acquired immune deficiency syndrome (AIDS)/ Human Immunodeficiency Virus (HIV)"*

INCLUDE	EXCLUDE
• Acquired immune deficiency syndrome (AIDS) • AIDS-related complex (ARC) • Symptomatic or asymptomatic Human Immunodeficiency Virus (HIV)	• Exposure to HIV virus • Nonspecific serologic evidence of HIV

- *"Asthma"*

INCLUDE	EXCLUDE
• Chronic/intermittent/persistent/cough-variant asthma • Exercise-induced asthma/bronchospasm • Status asthmaticus • Asthma exacerbation • Reactive airway disease	• COPD • Emphysema

- *"Atrial fibrillation"*

INCLUDE	EXCLUDE
• Chronic atrial fibrillation • Atrial flutter	• Atrial fibrillation or flutter noted to be present because of the infectious state • Acute atrial fibrillation (not noted as a chronic condition) • New-onset atrial fibrillation diagnosed during the index encounter

- "*Cardiovascular disease*"

INCLUDE	EXCLUDE

- Heart disease
- Atherosclerosis
- Cardiomegaly
- Chronic heart murmur/arrhythmias/conduction disorders
- Bradycardia
- Bundle branch/heart block
- Long QT syndrome
- Premature atrial/ventricular contractions
- Atrial/ventricular/sinus tachycardia
- Ventricular fibrillation
- Sick sinus syndrome
- Adams-Stokes Disease (morgangni)
- Wolff-Parkinson-White Syndrome
- Chronic Endocarditis
- Non-Ischemic Cardiomyopathy
- Coronary Artery Disease (CAD)
- Heterotaxy
- Implanted internal defibrillator
- Patent Foramen Ovale (PFO)
- Chronic valve Issues/stenosis/regurgitation
- Myocardial infarction (MI)/STEMI/NSTEMI
- Coronary artery thrombus/embolism/occlusion
- Infarction of the heart/myocardium/ventricle
- Previous cardiac arrest
- Permanent pacemaker or defibrillator/pacemaker in place (also capture under “Permanent Pacemaker In Place”)

- Atrial fibrillation or flutter (captured in its own selection)
- Angina pectoris
- Stable angina
- Cardiac ischemia without meeting criteria for Myocardial Infarction
- Chest pain
- Rule out (r/o) Myocardial Infarction
- Aortic calcification/stenosis (captured in its own selection)
- Implanted loop recorder in place
- Hyperlipidemia
- Acute heart murmur/arrhythmia (noted to be as a result of the infectious state OR not a chronic condition)
- Bradycardia
- Premature atrial/ventricular contractions
- Atrial/ventricular/sinus tachycardia
- Ventricular fibrillation
- Acute endocarditis
- Acute myocardial infarction (MI)/STEMI/NSTEMI

- *"Cerebrovascular disease"*

INCLUDE	EXCLUDE
• History of Cerebrovascular accident (CVA) • History of Stroke • History of Transient ischemic attack (TIA) • History of Intracranial/intraparenchymal/ subarachnoid hemorrhage • History of Hemorrhage of the cerebrum • Non-ruptured cerebral aneurysm • Carotid stenosis/atherosclerosis • Subclavian steal syndrome • Pseudotumor cerebri (idiopathic intracranial hypertension)	• Cerebellar ataxia • Seizure disorder/epilepsy • Acute stroke/TIA during index hospitalization

- *"Chronic obstructive pulmonary disease (COPD)"*

INCLUDE	EXCLUDE
• Chronic obstructive airway disease (COAD) • Chronic obstructive lung disease (COLD) • Chronic bronchitis/tracheobronchitis • Chronic airflow limitation (CAL) • Chronic obstructive respiratory disease (CORD) • Emphysema	• Chronic pulmonary disorders such as bronchiectasis, asthma if not listed with COPD

- *"Chronic Pulmonary Disease (other than asthma or COPD)"*

INCLUDE	EXCLUDE
• Cor Pulmonale (pulmonary heart disease)	• Pneumonia

• Pulmonary hypertension • Bronchiectasis • Pneumoconiosis (black lung disease, asbestosis, or due to the inhalation of silica/talc/dust) • Pulmonary fibrosis • Chronic respiratory conditions due to radiation or the inhalation of gas, chemicals, or fumes • Chronic drug-induced interstitial lung disorders • Interstitial lung disease • Pulmonary sarcoidosis • Cystic Fibrosis	• Influenza • Asthma • Acute bronchitis • COPD • Pulmonary nodules • Emphysema • Chronic bronchitis/tracheobronchitis

- *"Congenital Immunohumoral or Cellular Immune Deficiency State"*

INCLUDE	EXCLUDE
• Common variable immunodeficiency (CVID) • Agammaglobulinaemia • Severe combined immunodeficiency (SCID) • Chronic Granulomatous Disease • IgA deficiency • IgG deficiency • Functional antibody deficiency • Hyper IgE syndrome • Wiskott Aldrich syndrome • Chronic Mucocutaneous Candidiasis (CMCC) • DiGeorge syndrome • Ataxia Telangiectasia • Leukocyte adhesion defect • Complement deficiencies	• Only documentation is the patient is "immunocompromised" without any qualifying conditions noted

• C1 esterase inhibitor deficiency • Kostmann's syndrome	

- *"Congestive heart failure (CHF)/Cardiomyopathy"*

INCLUDE	EXCLUDE
• Ischemic/dilated/hypertrophic cardiomyopathy • History of Takotsubo/stress cardiomyopathy (Broken Heart Syndrome) • Heart failure with preserved ejection fraction (HFPEF)	• Acute heart failure/cardiomyopathy • Acute Takotsubo/stress cardiomyopathy (Broken Heart Syndrome)

- *"Dementia"*
  Note: Only select if patient has long-term cognitive dysfunction. For example, some patients with Alzheimer's or Parkinson's have long-term cognitive dysfunction related to the disease and, in this case, it would be appropriate to select this field. However, some patients have Alzheimer's and Parkinson's without dementia, and in that scenario, it would not be appropriate to select this field.

INCLUDE	EXCLUDE
• Alzehimer's disease with long-term congnitive dysfunction • Vascular dementia • Lewy body dementia • Clinical documentation of a dementia diagnosis • Parkinson's disease with long-term cognitive dysfunction	• Temporary loss of cognitive function • Acute delirium • Drug- or alcohol-related delirium/withdrawal • Developmental delay/cognitive impairment • Cognitive impairment resulting from: traumatic brain injury, stroke, ruptured aneurysm, cerebral anoxia, Parkinson's disease, Vitamin B12 Deficiency, CO2 position, hypothyroidism

- *"Diabetes - Complicated"*

INCLUDE	EXCLUDE
• Diabetes type 1 or 2 with any of the following impairments noted: • Renal (nephropathy) • Ophthalmic (retinopathy) • Neurologic (neuropathy) • Circulatory (cardiac, cerebral, peripheral vascular) • Diabetic gastroparesis	• Diabetes without note of complication • Prediabetes • Brittle diabetes • History of Diabetic ketoacidosis (with or without coma) • History of Hyperosmolar Hyperglycemic State (HHS) with or without coma • Diabetic hypoglycemic coma • Insulin coma

- *"Diabetes - Uncomplicated"*

INCLUDE	EXCLUDE
• Diabetes type 1 or 2 WITHOUT any noted complications • Patient can be controlled with insulin, oral medications, or diet	• Diabetes with note of complication • Prediabetes

- "*Hemiplegia or Paraplegia*"

INCLUDE	EXCLUDE
• Quadriplegia • Tetraplegia • Spastic quadriplegic/paraplegic cerebral palsy	• Functional quadriplegia

- *"Hypertension"*

INCLUDE	EXCLUDE

• Essential primary hypertension • Hypertensive heart disease with or without heart failure • Hypertension secondary to chronic renal/endocrine disorders • Secondary hypertension	• Pulmonary hypertension (include in Chronic Pulmonary Disease) • Acute hypertension

- *"Inflammatory Bowel Disease (i.e. Crohn's or Ulcerative Colitis)"*

INCLUDE	**EXCLUDE**
• Crohn's disease (regional enteritis) • Microscopic colitis • Ulcerative colitis/proctocolitis	• Celiac disease • Diverticulitis/diverticulosis • Colitis • Spastic colitis • C. Diff colitis • Ischemic/lymphocytic/infectious colitis without note of ulcerative colitis or Crohn's disease • Collagenous colitis • Irritable bowel disease/syndrome (IBS) • Stercoral colitis

- *"Leukemia"*

INCLUDE
• Acute Lymphocytic Leukemia (ALL) • Acute Myelogenous Leukemia (AML) • Chronic Lymphocytic Leukemia (CLL) • Chronic Leukemia • Hairy cell leukemia • Myelodysplastic syndrome • Myeloproliferative disorder

- Polycythemia Vera
- Multiple myeloma
- Cancer that was successfully treated and is now in remission

- *"Lymphoma"*

INCLUDE
• Hodgkin's/Non-Hodgkin's Lymphoma • Small/Large B-Cell Lymphoma • Burkitt's Lymphoma • T-Cell Lymphoma • Follicular Lymphoma • Cutaneous Lymphoma • Mantle Cell Lymphoma • Cancer that was successfully treated and is now in remission

- *"Any Malignancy without Metastasis"*

INCLUDE
• Primary neoplasms • Carcinoma • Cancer that was successfully treated and is now in remission

- *"Metastatic Solid Tumor"*

INCLUDE	EXCLUDE
• Malignant neoplasms • Stage IV solid tumor cancer • Cancer that was successfully treated and is now in remission	• Benign tumors

- *"Mild Liver Disease"*

INCLUDE	EXCLUDE
• Alcoholic cirrhosis of liver • Non-alcoholic cirrhosis of liver • NOS • Cryptogenic • Macronodular • Micronodular • Post-hepatic • Post-necrotic • Laennec's cirrhosis • Chronic unspecified/persistent hepatitis • Autoimmune hepatitis • Healed yellow atrophy (liver) • Portal cirrhosis • Biliary/cholestatic cirrhosis • Chronic nonsuppurative destructive cholangitis • Hepatitis A, B, C, D, or G without mention of end-stage liver disease • Lesions on liver from sarcoidosis • Fatty liver (hepatic steatosis) • Liver cyst/hemangioma • Cholangitis • Non-alcoholic fatty liver disease • Liver disease without any further explanation • Gilbert's disease	• Hepatitis A, B, C, D, or G with mention of end-stage liver disease • Transaminitis • Elevated liver enzymes without mention of liver disease • Acute liver failure • Shock liver (ischemic hepatitis) • Any condition listed as an inclusion for moderate/severe liver disease • Acute yellow atrophy of liver • History of liver transplant without failure or continued complication (include in Transplant selection) • History of liver transplant with failure or continued complication (include in Transplant and Moderate/Severe Liver Disease selections)

- *"Moderate or Severe Kidney Disease"*
  Answer question 1.1

INCLUDE	EXCLUDE
• Chronic renal failure (CRF) • Chronic kidney disease (CKD) • End-stage renal disease (ESRD) • Chronic renal insufficiency stage 3 or greater • Chronic irreversible failure of both kidneys, as a result of which either regular renal dialysis or renal transplant process is initiated • History of renal transplant with failure or continued complication	• Cardiorenal syndrome with no classification of the severity of the patient's renal disease • Acute renal injury/failure • History of renal transplant without failure or continued complication (include in Transplant selection)

- *"Moderate or Severe Liver Disease"*

INCLUDE	EXCLUDE
• Esophageal varices with or without mention of bleeding • Hepatocerebral intoxication • Porto-systemic encephalopathy • Portal hypertension • Hepatorenal syndrome • End-stage liver disease • Hepatitis A, B, C, D, or G <u>with</u> mention of end-stage liver disease • Non-alcoholic steatohepatitis (NASH) • History of liver transplant with failure or continued complication	• Hepatitis A, B, C, D, or G <u>without</u> mention of end-stage liver disease • Elevated liver enzymes without mention of liver disease • Acute liver failure • Shock liver (ischemic hepatitis) • Transaminitis • Any condition listed as an inclusion for mild liver disease • History of liver transplant without failure or continued complication (include in Transplant selection) • Hepatic coma • Hepatic encephalopathy

- *"Other Neurological Disorders"*

INCLUDE	EXCLUDE
• Amyotrophic Lateral Sclerosis (ALS)/Lou Gehrig's Disease • Parkinson's Disease/Parkinsonism • Multiple Sclerosis • Huntington's Disease • Seizure disorders/epilepsy • Stiff-Person Syndrome • Arnold-Chiari Malformation • Spina Bifida • Progressive Multifocal Leukoencephalopathy • Hydrocephalus/Normal Pressure Hydrocephalus (NPH) with or without VP shunt • History of Traumatic brain injury (TBI)	• Acute disseminated encephalomyelitis • Myasthenia Gravis

- *"Peptic Ulcer Disease"*

INCLUDE	EXCLUDE
• Active gastric/esophageal/duodenal ulcer • Gastritis/esophagitis • Esophagitis • Barrett's esophagus • Duodenitis • History of bleeding gastric/esophageal/duodenal ulcer	• Gastroesophageal reflux disease (GERD) • Acid reflux

- *"Permanent Pacemaker (present)"*

INCLUDE	EXCLUDE
• Permanent defibrillator/pacemaker present	• Implanted loop recorder

- *"Peripheral Vascular Disorders"*

INCLUDE	EXCLUDE
• Amputation as a result of a peripheral vascular disorder (PVD) • Aortoiliac/femoral/axillary occlusive disease • Atherosclerosis of the abdominal aorta • Claudication • Peripheral vascular occlusive disease (PVOD) • Prior vascular surgeries related to PVD (e.g., femoral-popliteal bypass) • Peripheral arterial disease (PAD) with or without ulcerations • Venous stasis/insufficiency • Dermatitis stasis • Thoracic aneurysm • Superior Mesenteric Artery (SMA) syndrome • Sickle Cell Disease • Aortic abdominal aneurysm (AAA) with or without repair • Chronic aortic dissection	• Esophageal varices (capture under Moderate/Severe Liver Disease) • Lymphedema • Raynaud's disease

- "*Rheumatoid Arthritis or Related Arthropathy/Connective Tissue Disease*"

INCLUDE	EXCLUDE
• Rheumatologic disorders • Systemic Lupus Erythematous (SLE) • Scleroderma • CREST Syndrome • Dermatomyositis • Polymyositis • Polymyalgia rheumatica (PMR) • Sjogren's syndrome • Polyarthritis nodosa (PAN) • Antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis • Microscopic polyangiitis/polyarteritis • Wegener's granulomatosis • Midline granulomatosis • Granulomatosis with polyangiitis (GPA) • Behcet's disease • Buerger's disease (thromboangiitis obliterans) • Churg-Strauss syndrome (eosinophilic granulomatosis with polyangiitis or EGPA) • Cryoglobulinemic/hypersensitivity vasculitis • Giant Cell/Temporal/Cranial arteritis • Henoch-Schonlein Purpura (HSP)/IgA vasculitis • Rheumatoid vasculitis • Takayasu's arteritis • Polychondritis • Antisynthetase syndrome • Akylosing spondylitis • Seronegative arthritis • Psoriatic arthritis • Kawasaki disease	• Osteoarthritis • Gout • Fibromyalgia • Reflex sympathetic dystrophy • Sarcoidosis • Neuropathic arthropathy • Psoriasis without documentation of psoriatic arthritis • Raynaud's disease • Urticarial vasculitis • Charcot Marie Tooth syndrome • Pyogenic arthritis • Paget's disease

• Diffuse systemic sclerosis • Ehler's Danlos • Marfan's Syndrome	

- *"Transplant"*

INCLUDE	EXCLUDE
• Heart Transplant • Liver Transplant • Lung Transplant • Kidney Transplant • Pancreas Transplant • Bone Marrow/Stem Cell Transplant	• Hair transplant

- *"Venous Thromboembolism (DVT/PE)"*

INCLUDE	EXCLUDE
• History of Pulmonary Embolism (PE) • Any documentation of a history of thrombosis or clot (DVT) in a deep vein of the arm or leg • History of Thrombus/Clot in the following Deep Veins: • Subclavian Vein • Axillary Vein • Brachial Vein • Radial Vein • Ulnar Vein • Common Iliac Vein • Internal Iliac Vein • External Iliac Vein • Femoral Vein	• Acute PE during index hospitalization • Acute DVT during index hospitalization • Clots in the following veins: • Cephalic Vein • Median Cephalic Vein • Basilic Vein • Medial Cubital Vein • Median Antebrachial Vein (Forearm Vein) • Greater Saphenous Vein • Lesser Saphenous Vein • Internal/External Jugular Vein • Central Venous Catheter Clots (e.g. pericatheter thrombus)

• Deep Femoral Vein • Common Femoral Vein • Popliteal Vein • Gastrocnemius Vein • Anterior Tibial Vein • Posterior Tibial Vein • Soleal (Soleus) Vein • Peroneal Vein	• Hepatic thrombosis • Renal thrombosis • Splenic thrombosis • Mesenteric thrombosis • Fat emboli • Septic pulmonary emboli

- *"None of the above"*

1.1. Is the stage of Chronic Kidney Disease documented?
Instructions: Review the medical record to determine if the patient's stage of chronic kidney disease is documented.

- *"Yes"*
  Answer question 1.1.1
- *"No"*
- *"No Chronic Kidney Disease"*
  Note: The HMS Coordinating Center is aware this selection no longer applies since we are not including Acute Kidney Injury in Co-Morbids and is working on updating the database. Do not use this selection.
- *"Unknown"*

1.1.1. What is the stage of the Chronic Kidney Disease?
Instructions: Review the medical record to determine the stage of chronic kidney disease.

- *"Stage 2"*
- *"Stage 3"*
- *"Stage 4"*
- *"Stage 5"*
  Include: Patients with ESRD on hemodialysis.
- *"None of the Above"*

Physical Findings & Symptoms

1. Is there documentation of the patient's height during the hospital encounter?
Instructions: Review the medical record to determine if the patient's height is documented. Use height documented closest to the inpatient admission (or admission to observation if observation-only stay).

- *"Yes"*
  Answer questions 1.1 and 1.2
  Include: A documented height from any day during the hospital encounter
- *"No"*
- *"Unknown"*

1.1. Height (To 2 decimal points)
Instructions: Indicate the patient's height (numeric only) to two decimal points.

1.2. Select unit of height measurement
Instructions: Indicate the unit of measurement for the patient's height.

- "*Inches*"
- "*Centimeters*"

2. Is there documentation of the patient's weight on day 1 or day 2 of the hospital encounter?
Instructions: Review the medical record to determine if the patient's weight is documented on Day 1 or Day 2 of the hospital encounter. See below definition (2.1) for instructions regarding which weight to enter.
Exclude: Dosing weights used for determining medication dosing.

- *"Yes"*
  Answer questions 2.1 and 2.2
- *"No"*
  Answer question 2.3
- *"Unknown"*

2.1. Enter in patient's weight (to 2 decimal points)
Instructions: Indicate the patient's weight (numeric only) to two decimal points.
Enter the first actual (measured) weight documented during days 1 or 2 of the hospital encounter. This is the weight entered closest to the patient's arrival to the hospital.

> *Please refer to the following hierarchy to determine which weight documented during days 1 or 2 to enter:*
>
> 1. *Enter the first standing weight documented during days 1 or 2, if available.*
> 2. *If a standing weight is not available, enter the first bed weight documented during days 1 or 2.*
> 3. *If no measured weight (standing or bed weight) is available during days 1 or 2, you may enter a stated weight.*

2.2. Unit of weight
Instructions: Indicate the unit of measurement for the patient's weight.

- "*Pounds*"
- "*Kilograms*"

2.3. Is there documentation of the patient's weight in the 30 days prior to the hospital encounter?
Instructions: Review the medical record to determine if the patient's weight is documented in the 30 days prior to the hospital encounter.
Exclude: Dosing weights used for determining medication dosing.

- *"Yes"*
  Answer questions 2.3.1 and 2.3.2
- *"No"*
- *"Unknown"*

2.3.1. Enter in Patient's Weight (to 2 Decimal Points)
Instructions: Indicate the patient's weight (numeric only) to two decimal points.

Enter the patient's weight from the 30 days prior to the hospital encounter that is CLOSEST to the patient's arrival to the hospital.

> *Please refer to the following hierarchy to determine which weight documented in the 30 days prior to enter:*
>
> 1. *Standing weight*
> 2. *Bed weight*
> 3. *Stated weight*

2.3.2. Unit of Weight
Instructions: Indicate the unit of measurement for the patient's weight.

- "*Pounds*"
- "*Kilograms*"

3. BMI
Instructions: The patient's body mass index (BMI) will be generated by the computer system from height and weight information. Review the system generated value to see if it corresponds to the patient scenario.

4. Did the patient have any of the following signs/symptoms noted in the medical record on day 1 or day 2 of the hospital encounter? Select symptoms that are new or worsening from the patient's baseline.
Instructions: Review the medical record to determine if any of the following symptoms or elements (new or worsening from the patient's baseline) are noted on days 1-2 of the hospital encounter.
Note 1: This information should be pulled from medical team's notes on Days 1 and 2 of the hospital encounter (i.e. ED Documentation, Progress Notes, Consult Notes, H&P, etc). Only utilize Physician/Advanced Practice Professional's documentation to answer this question.
*Note 2***:** For efficiency of abstraction, please review the primary medical team's notes (ED provider, observation provider, admitting provider) for this information. If the primary medical team states that they will be engaging a consulting service to help manage the patient's infectious process or organ dysfunction related to their infectious process, please review that consulting service's notes as well.
Exclude: Vital Signs documented in a flowsheet
Select all that apply:

- *"Abdominal pain/Nausea/Vomiting/Diarrhea"*
- *"Autonomic Dysreflexia/Increased Spasticity"*
  Include: Autonomic dysreflexia/reflexia documented in patients with a spinal cord injury, cerebral palsy or spina bifida
- *"Back pain"*
- *"Chills/Rigors"*
- *"Fall/Functional Decline"*
  Include: Documentation by the medical provider that the patient fell on the specified day. Documentation of decline from the patient's baseline level of activity, such as new onset weakness, decreased activity, inability to take care of themselves, inability to get out of bed.
  Exclude: Only documentation that the patient was *at risk* for falls
- *"Fatigue/Malaise/Myalgias/Headache/Weakness"*
- *"Fever (Subjective, no documented temperature)"*

- *"Fever 99.0 – 100.4 F (37.2 to 38 Celsius)"*
  Note: Please choose only if provider explicitly states the temperature in their narrative. Do not take this information from the vitals flowsheet. If no temperature is stated in the note, please choose "Fever (Subjective, no documented temperature)."
- *"Fever > 100.4 F (> 38 Celsius)"*
  Note: Please choose only if provider explicitly states the temperature in their narrative. Do not take this information from the vitals flowsheet. If no temperature is stated in the note, please choose "Fever (Subjective, no documented temperature)."
- *"Hypotension"*
- *"Loss of taste/ Loss of smell"*
  Include: Anosmia, ageusia, dysguesia
- *"None of the above"*
- *"Other"* Please reach out to the Coordinating Center prior to utilizing this field.

5. Did the patient have any mental status changes noted in the medical record on day 1 or day 2 of the hospital encounter? Select symptoms that are new or worsening from the patient's baseline.
Instructions: Review the medical record to determine if any mental status changes (new or worsening from the patient's baseline) are noted on days 1-2 of the hospital encounter.
Note 1: This information should be pulled from medical team's notes on days 1 and 2 of the hospital encounter (i.e. ED Documentation, Progress Notes, Consult Notes, H&P, etc). Only utilize Physician/Advanced Practice Professional's documentation to answer this question.
Note 2: For efficiency of abstraction, please review the primary medical team's notes (ED provider, observation provider, admitting provider) for this information. If the primary medical team states that they will be engaging a consulting service to help manage the patient's infectious process or organ dysfunction related to their infectious process, please review that consulting service's notes as well.
Exclude: Hallucinations, Syncopal episode, with a loss of consciousness that is less than 1 minute
Select all that apply:

- *"Altered mental status"*
  Include: Documentation of altered mental status in relation to hypoglycemic events
- *"Confusion/Disorientation"*
- *"Delirium/Encephalopathy/Not acting like themselves"*
- *"Lethargy/Somnolence"*
- *"Obtundation/Coma"*
  Include: Documentation that the patient had a reduced level of consciousness, reduced awareness, comatose, unresponsive, etc.
- *"Delirium Tremens"*
- *"None of the Above"*
- *"Other"* Please reach out to the Coordinating Center prior to utilizing this field.

6. Did the patient have any urinary signs/symptoms noted in the medical record on day 1 or day 2 of the hospital encounter? Select symptoms that are new or worsening from the patient's baseline.
Instructions: Review the medical record to determine if any urinary signs/symptoms (new or worsening from the patient's baseline) are noted on days 1-2 of the hospital encounter.
Note: This information should be pulled from medical team's notes on days 1 and 2 of the hospital encounter (i.e. ED Documentation, Progress Notes, Consult Notes, H&P, etc). Only utilize Physician/Advanced

Practice Professional's documentation to answer this question.
Note 2: For efficiency of abstraction, please review the primary medical team's notes (ED provider, observation provider, admitting provider) for this information. If the primary medical team states that they will be engaging a consulting service to help manage the patient's infectious process or organ dysfunction related to their infectious process, please review that consulting service's notes as well.
Exclude: Findings only noted in a lab result
Select all that apply:

- *"Change in color or smell/Cloudy/Dirty/Sediment"*
- *"CVA pain or tenderness/Suprapubic Tenderness/Flank Pain"*
  Include: Suprapubic pain, Hypogastric pain/tenderness
- *"Dysuria/Frequency/Polyuria"*
  Include: Burning with urination
  Exclude: "Difficulty urinating"
- *"Hematuria"*
  Include: Documentation of "gross" or "visible" blood in the urine
  Exclude: Documentation of "red-tinged" urine only, Blood in UA
- *"Hesitancy"*
- *"Incontinence"*
  Include: "urine dribbling"
  Exclude: Only documentation is the use of a condom catheter, external female catheter, or briefs
- *"Retention/PVR > 200cc"*
- *"Urgency"*
- *"None of the above"*
- *"Other"* if a urinary symptom other than above is noted. Please reach out to the Coordinating Center prior to utilizing this field.

7. Did the patient have any respiratory signs/symptoms noted in the medical record on day 1 or day 2 of the hospital encounter? Select symptoms that are new or worsening from the patient's baseline.
Instructions: Review the medical record to determine if any respiratory signs/symptoms (new or worsening from the patient's baseline) are noted on days 1-2 of the hospital encounter.
Note: This information should be pulled from medical team's notes on Days 1 and 2 of the hospital encounter (i.e. ED Documentation, Progress Notes, Consult Notes, H&P, etc). Only utilize Physician/Advanced Practice Professional's documentation to answer this question.
Note 2: For efficiency of abstraction, please review the primary medical team's notes (ED provider, observation provider, admitting provider) for this information. If the primary medical team states that they will be engaging a consulting service to help manage the patient's infectious process or organ dysfunction related to their infectious process, please review that consulting service's notes as well.
Exclude: Vital Signs documented in a flowsheet
Select all that apply:

- *"Accessory muscle use/Retractions/Increased Work of Breathing/Tachypnea"*
- *"Cough/Chest congestion/Sputum Production"*
  Include: Productive Cough
- *"Chest pain"*
  Include: Pleuritic pain, chest heaviness, chest pressure
- *"Chest tightness/Wheezing"*

- *"Crackles/Rales"*
  Include: Crepitations heard on auscultation
- *"Dullness to Percussion/Egophony"*
- *"Dyspnea/Shortness of Breath/Hypoxia/New or Worsening FiO2 Requirement"*
  Include: Difficulty breathing, labored breathing, shortness of breath, and documentation of "respiratory distress"
- *"Rhinorrhea"*
  Include: Runny nose
- *"Rhonchi"*
- *"None of the above"*
- *"Other"* if a respiratory symptom other than above is noted. Please reach out to the Coordinating Center prior to utilizing this field.
  Exclude: decreased/diminished breath sounds

8. For the symptoms entered above, what is the date of the patient's first symptom onset?
Instructions: Review the medical record to determine the date of first symptom onset of the symptoms noted above. Enter date in MM/DD/YYYY format.
Note: If the date of first onset is Unknown or the patient did not have any of the above symptoms, please enter 01/01/1900. If multiple onsets are noted, use the "most acute" option (i.e. if the documentation refers to the symptom onset as being 3 days, 1 week, and 3 weeks ago please record symptom onset as the date that corresponds with 3 weeks ago).

Social History

1. Does the patient have a history of chronic alcohol abuse?
Instructions: Review the medical record to determine if the patient has a history of alcohol abuse.
Include: Any documentation of the following: alcoholism, alcohol withdrawal, admission for acute intoxication, alcohol abuse, alcohol dependence, hazardous drinking, alcohol use disorder, binge drinking, alcoholic cirrhosis, history of DTs, and alcohol overuse. Patients placed on CIWA or MAWs protocols
Exclude: Social drinking, occasional alcohol use

- "*Current*"
  Include: patient was admitted for acute intoxication and/or alcohol withdrawal or alcoholism
- "*Former*" if the medical record indicates that the patient has a
  Include; history of alcohol abuse, patient is a recovering alcoholic, Alcoholism is not a current problem.
- "*Never*"
  Include: no evidence of alcohol abuse or patient denies history of alcohol abuse
- "*Unknown*"
  Include: no social assessment present

2. Does the patient have a history of intravenous (IV) drug abuse?
Instructions: Review the medical record to determine if the patient has a history of intravenous (IV) drug abuse (i.e. heroin, cocaine, etc.).
Include: Intravenous injection of any drug not medically prescribed (i.e. heroin, cocaine, etc.), any documentation of IV drug abuse
Note: If there is no documentation as to the route in which a drug is consumed, capture this as oral drug

abuse.
Exclude: IV therapy prescribed for medical reasons

- "*Current*"
- **Include**: patient is receiving treatment for acute IV drug overdose or IV drug withdrawal is a problem during the current admission. Also include documentation that states there is a current problem with IV drug abuse.
- "*Former*"
- **Include**: the patient has a history of IV drug abuse but it is not a current problem
- "*Never*"
- **Include**: documentation of no IV drug use or patient denies history of IV drug use
- "*Unknown*"

3. Does the patient have a history of oral drug abuse?
Instructions: Review the medical record to determine if the patient has a history of oral drug abuse (i.e. prescription pills such as opioids, antipsychotics, benzodiazepines).
Include: Documentation of abuse or overuse of prescription medications such as opioids, benzodiazepines, antipsychotics, etc. regardless of whether the medication is prescribed to the patient or not. Documented use of GHB, PCP, Ecstasy, MDMA, Hallucinogens, Methamphetamine, Stimulants, Psilocybin, Rohypnol, and abuse of over the counter medications.
Note: If there is no documentation as to the ROUTE in which one of the drugs noted above is consumed, capture this as oral drug abuse.
Exclude: Confirmed/suspected accidental overdose of a prescribed medication, Cannabis (all forms).

- "*Current*"
  Include: patient is currently receiving treatment for oral drug overdose or if oral drug withdrawal is a problem during the current admission. Also include documentation that states there is a current problem with oral drug abuse.
- "*Former*"
  Include: patient has a history of oral drug abuse but it is not a current problem
- "*Never*"
  Include: no oral drug use, or patient denies history of oral drug use.
- "*Unknown*"

4. Does the patient have a history of smoking?
Instruction: Review the medical record to determine if the patient has a history of smoking at the time of inpatient admission. If this was an observation only stay, please use information available at the time of admission to the Observation Unit.
Include: Smoking cigarettes, cigars, or hookah. To be considered a "former" smoker, there must be documentation that states the patient quit smoking prior to the admission of interest.
Exclude: Second-hand smoking, chewing tobacco, snuffing, dipping tobacco, vaping/e-cigarettes, vaping THC, Cannabis**.**

- *"Current"*
- *"Former"*

- *"Never"*
  Include: no smoking, or patient denies history of smoking
- *"Unknown"*

Other History

1. Does the patient have a left ventricular ejection fraction documented prior to the hospital encounter? Note: This value can be found in a transthoracic echocardiogram (TTE), multigated acquisition scan (MUGA) or stress echo.
Instructions: Review the medical record to determine if that patient had an ejection fraction documented prior to the hospital encounter. Please only review the one year prior to admission to the hospital encounter for this information.
Note 1: Please only review echocardiograms completed within 1 year of the hospital encounter. Echocardiograms performed more than a year before the index encounter are unlikely to provide an accurate picture of the patient's heart function at the time of arrival, since heart function can change significantly over such a period.
Note 2: If an ejection fraction result is not differentiated between "Right" or "Left", it is permissible to assume that it is the left ventricle function being described.

- *"Yes"*
  Answer question 1.1
- *"No"*
- "*Unknown*"

1.1. Enter the most recent ejection fraction documented prior to the hospital encounter
Instructions: Review the medical record to determine the ejection fraction.

- *"> 70%"*
- *"55-70%"*
- *"40-54%"*
- *"35-39%"*
- *"Less than 35%"*
- *"Unknown"*

2. Does the Patient have a History of Aortic Stenosis?
Instructions: Review the medical record to determine if that patient has a history of aortic stenosis documented prior to the hospital encounter.

- *"Yes"*
  Answer question 2.1
  Include: A history of Aortic Stenosis that has been addressed by an aortic valve repair.
  Exclude: Aortic Calcification
- *"No"*
- "Unknown"

2.1. What severity of aortic stenosis is documented?
Instructions: Review the medical record to determine what severity of aortic stenosis is documented prior to the hospital encounter.

- *"None"*
  Include: no severity of Aortic Stenosis due to a history of an aortic valve repair.
- *"Mild"*
- *"Moderate"*
- *"Severe"*
- *"Critical"*
- *"Other"*
- *"Undocumented"*

3. Does the patient have treatment limitations at time of presentation for the hospital encounter?
Instructions: Review the medical record to determine if the patient had any treatment limitations at the time of presentation for the hospital encounter or that the patient or patient family members' wishes include treatment limitations at the time of presentation for the hospital encounter.
Include: Treatment limitations documented in the chart at the time of patient arrival. The intent of this question is to know which treatment limitations the hospital team was aware of when the patient arrived to the hospital and began treating the patient.

- *"Yes"*
  Answer question 3.1
  Include: There is a note upon arrival that the patient has treatment limitations of no CPR, intubation or mechanical ventilation, NIPPV, central line, or other intervention.
- *"No"*
  Include: There is NO note upon arrival of any code status or treatment limitations, patient is noted to be a full code upon arrival, or there is an order upon arrival of Full Code. Patient was DNR/DNI at baseline but the EMS and hospital teams were unaware at the time of patient arrival/treatment initiation (ordered as Full Code or received intubation/CPR). If there is documentation later in the encounter that the patient's baseline code status was discovered and updated accordingly, please enter that code status as an added treatment limitation during hospitalization in Hospital Encounter - Ever Events.
- *"Unknown"*

3.1. Select which limitations
Instructions: Review the medical record to determine what treatment limitations the patient or patient family members' wishes included at the time of presentation for the hospital encounter.
Select all that apply:

- *"No Cardiopulmonary Resuscitation (CPR)"*
  Include: Pre-existing DNR (Do Not Resuscitate) paperwork (that is general and doesn't specify any further which interventions they would/would not like to have administered)
- *"No Intubation or Mechanical Ventilation"*
- *"No Non-Invasive Positive Pressure Ventilation (NIPPV)"*
- *"No Central Line"*
- *"Other"*
  Include: refusal of blood products due to religious reasons

4. Has the patient had an inpatient hospitalization for any reason in the 90 days prior to the hospital encounter?
Instructions: Review the medical to determine if the patient had an inpatient hospital encounter in the 90 days prior to the index hospitalization.
Include: Hospital encounters (Obs, Inpt).

- *"Yes"*
  Answer question 4.1
- *"No"*
- *"Unknown"*

4.1. Did any inpatient hospitalization in the 90 days prior to the hospital encounter occur within another institution/system?
Instructions: Review the medical record to determine if any inpatient hospitalization in the 90 days prior to the hospital encounter occurred within another institution/system.
Include: Observation admissions/hospitalizations.

- *"Yes"*
  Answer questions 4.1.1 and 4.1.2
- *"No"*
- *"Unknown"*

4.1.1. Is there documentation within the medical record that the patient received any antibiotics during this/any of these hospitalization(s)?
Instructions: Review the medical record to determine if the patient received any antibiotics during any of the inpatient hospitalizations that occurred within another institution/system.
Exclude: Antibiotics given as prophylaxis / surgical prophylaxis.

- *"Yes"*
- *"No"*
- *"Unknown"*

4.1.2. Based on your review of the medical record, did the discharge diagnosis or reason for hospitalization for this/any of these hospitalization(s) include an infection diagnosis?
Instructions: Review the medical record to determine if the discharge diagnosis or reason for hospitalization for any of the inpatient hospitalization(s) in the prior 90 days that occurred within another institution/system included an infection diagnosis.

- *"Yes"*
- *"No"*
- *"Unknown"*

5. In the year prior to the hospital encounter, did the patient have a respiratory, blood, or urine culture or nares swab that was positive for MRSA?
Instructions: Review the medical record to determine if the patient had a respiratory, blood, or urine culture or nares swab that was positive for MRSA (Methicillin (Oxacillin)-Resistant Staph Aureus) in the year prior to the hospital encounter.
Include: Lab reports from other hospitals
Note: Oxacillin-Resistant Staph Aureus is considered MRSA and should be included.

- *"Yes"*

- *"No"*
- *"Unknown"*

6. In the year prior to the hospital encounter, did the patient have a respiratory, blood, or urine culture that was positive for Pseudomonas or another gram-negative organism?
Instructions: Review the medical record to determine if the patient had a respiratory, blood, or urine culture that was positive for pseudomonas or another Gram-negative organism in the year prior to the hospital encounter.
Note: Review the medical record for the following Gram-negative organisms: Citrobacter, Morganella, Enterobacter (including Klebsiella aerogenes), Achromobacter, Serratia, & Acinetobacter.
Include: Lab reports from other hospitals.

- *"Yes"*
- *"No"*
- *"Unknown"*

7. Is the patient's baseline cognitive status normal or abnormal? (Select normal if there is no mention of a pre-existing cognitive impairment)
Instructions: Review the medical record to determine if the patient's baseline cognitive status prior to the hospital encounter.

- *"Normal"*
  Include: No mention of a pre-existing cognitive impairment
  Note: Memory loss alone does not qualify as baseline cognitive impairment.
- *"Abnormal"*
  Include: Confusion, dementia, autism
- *"Unknown"*

8. Is the patient on home oxygen?
Instructions: Review the medical record to determine if the patient is on home oxygen as their baseline respiratory status.
Note: Patients who have a primary discharge diagnosis code of Pneumonia, COVID, Respiratory Failure, or Influenza who are on home oxygen should not pass the Organ Function Calculator. This response should be consistent with the answer to the question, "Was the patient diagnosed with the following ICD-10 code: J96.11 (chronic respiratory failure with hypoxemia) or J96.21 (acute on chronic respiratory failure with hypoxemia) as a discharge diagnosis code for the hospitalization of interest, required any amount of home oxygen at baseline, or was the patient on a home ventilator at baseline?"

- *"Yes"*
  Answer question 8.1
  Include: PRN home oxygen, nightly oxygen, nightly CPAP/BIPAP with oxygen
- *"No"*
- *"Unknown"*

8.1. Liters
Instructions: Review the medical record to determine how many liters of oxygen the patient uses as their baseline respiratory status.
Note 1: If the liters are reported as a range, select the high end of the range (example: for documentation of

4-6 liters of home oxygen, select "6").
Note 2: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.

- *"1 L (22-26% FM)"*
- *"2 L (27-30% FM)"*
- *"3 L (31-34% FM)"*
- *"4 L (35-38% FM)"*
- *"5 L (39-42% FM)"*
- *"6 L (43-49% FM)"*
- *"7-10 L or 50-90% Face Mask"*
- *"11 L or more or 91-100% Face Mask"*
- *"Not available"*

ADLs Assessment

The following questions can be answered based on Nursing ADL assessment on admission or from an OT/PT evaluation (including AM-PAC 6 Clicks Assessments) that details the patient's baseline or pre-hospital functionality. Qualifying documentation would also include a PT/OT Assessment completed later in the hospital that specifically documents the patient's baseline or pre-hospital function. Other clinician documentation can be included in the event that a Nursing or PT Assessment was not completed (i.e. Care Manger, etc.).
Note 1: For all ADLs, if is it noted that patient completes the task using an assistive device but is not dependent on another person to assist them, use the selection, "Fully independent" to describe their baseline functioning on that task.
Note 2: Documentation of "Contact Guard" and "Within Functional Limits" can be captured as "Fully Independent".
Note 3: If you are abstracting an AM-PAC 6 Clicks Assessment from your EMR, this documentation needs to reflect the patient's baseline/pre-hospital function and can be captured in the following manner:

1. Unable = Partially or Fully Dependent
2. A lot = Partially or Fully Dependent
3. A little = Fully Independent
4. None = Fully Independent

1. Was an assessment of baseline/pre-hospital function (i.e., independent in ADLs/IADLs) completed during hospitalization?
Instructions: Review the medical record to determine if an assessment of baseline/pre-hospital function of Activities of Daily Living (ADL) or Independent Activities of Daily Living (IADLs) Assessment was completed during the hospitalization.

- *"Yes"*
  Answer question 1.1
- *"No"*

- *"Unknown"*

1.1. What is documented as the patient's level baseline level of function for the following activities?
For all of the following activities, select one of the following in the table provided:

- *"Partially or fully dependent"*
- *"Fully independent"*
- *"Not available"*

Bathing:
Instructions: Review the medical record to determine the patient's level of function at discharge for bathing.
Include: Documentation of the patient's ability to perform their own hygiene. AM-PAC 6-Clicks: "Help from another person bathing"
Select one of the following:

Dressing:
Instructions: Review the medical record to determine the patient's level of function at discharge for dressing.
Include: AM-PAC 6-Clicks: "Help from another person to put on/take off upper body clothing" or "Help from another person to put on/take off lower body clothing".
If there are two AM-PAC 6 Clicks scores demonstrating variable abilities for upper vs. lower extremity dressing, use the more acute/worse score of the two.

Toileting:
Instructions: Review the medical record to determine the patient's level of function at discharge for toileting.
Include: Documentation of the patient's ability to perform their own hygiene. AM-PAC 6-Clicks "Help from another person toileting".

Transferring from Bed to Chair (and back):
Instructions: Review the medical record to determine the patient's level of function at discharge for transferring from bed to chair (and back).
Include: AM-PAC 6-Clicks "Help from another person moving to and from bed to chair"

Walking:
Instructions: Review the medical record to determine the patient's level of function at discharge for walking.
Include: AM-PAC 6-Clicks "Help from another person to walk in hospital room"

Managing Medications:
Instructions: Review the medical record to determine the patient's level of function at discharge for managing medications.

Abstractor Notes

1. **Do you have any notes?**

Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer questions 1.1
- *"No"* if you do not have notes that you would like to include and you do not want to exclude this form.

1.1. Abstractor Notes
Instructions: Use free text to input your notes.
IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

Hospital Encounter

Instructions: For all questions in the database, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Jump to sub-sections:

Ever Events

1. During the hospital encounter, did the patient ever have a consult for any of the following services?
Instructions: Review the medical record to determine if any of the following services were ever consulted for the patient during the hospital encounter.
Select all that apply:

- *"Physical therapy"*
  Answer questions 1.1 and 1.2
  Exclude: Physical Therapy involvement for the purposes of wound care only.
- *"Occupational therapy"*
  Answer questions 1.3 and 1.4
- *"Infectious Diseases"*
  Answer question 1.5
- *"Nephrology"*
  Answer question 1.6
- *"Palliative Care"*
  Answer question 1.7
  Include: Consult to Hospice Care
- *"None of the above"*

1.1. What date was the PT consult ordered?
Instructions: Review the medical record to determine the date of the first physical therapy consult order during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

1.2. Did the patient participate in PT during the hospital encounter?
Instructions: Review the medical record to determine if the patient ever participated in PT during the hospital encounter.

- *"Yes"*
  Answer questions 1.2.1 and 1.2.2

Include: Participation in PT can include PT performing Range of Motion (ROM) on a patient who is intubated/sedated.

- *"No"*
- *"Unknown"*

1.2.1. What was the first date the patient participated in PT during the hospital encounter?
Instructions: Review the medical record to determine the date the patient first participated in physical therapy during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".
Include: Participation in PT can include PT performing Range of Motion (ROM) on a patient who is intubated/sedated.

1.3. What date was the OT consult ordered?
Instructions: Review the medical record to determine the date of the first occupational therapy consult order during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

1.4. Did the patient participate in OT during the hospital encounter?
Instructions: Review the medical record to determine if the patient ever participated in OT during the hospital encounter.

- *"Yes"*
  Answer questions 1.4.1 and 1.4.2
- *"No"*
- *"Unknown"*

1.4.1. What was the first date the patient participated in OT during the hospital encounter?
Instructions: Review the medical record to determine the date the patient first participated in occupational therapy during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

1.5. What date was the ID consult ordered?
Instructions: Review the medical record to determine the date of the first infectious diseases consult order during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

1.6. What date was the Nephrology consult ordered?
Instructions: Review the medical record to determine the date of the first nephrology consult order during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

1.7. What date was the Palliative Care consult ordered?
Instructions: Review the medical record to determine the date of the first palliative care consult order during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

2. Did any of the following occur during the hospitalization?
Instructions: Review the medical record to determine if any of the following items ever occurred during the hospital encounter.
Select all that apply:

- *"Goals of care conversation documented between care team and patient/family"*
  Answer question 2.1

Include: This should be a conversation about the patient's overall focus of care (curative/life prolonging vs. comfort focused).

- *"New treatment limitations initiated (initiation of DNR/DNI status, etc.)"*
  Answer question 2.2
  Include: Treatment limitations added during the encounter that were later revoked (for example, if a patient chooses to change their code status to DNR, but later in the admission changes back to full code).
  Exclude: Situations where a pre-established treatment limitation is revoked. For example, if a patient comes into the hospital as a DNAR but then decides they would be okay with being intubated.
- *"Invasive mechanical ventilation (do not include intubation for procedure/surgery only)"*
  Answer questions 2.3 to 2.8
  Note: Regarding intubation for procedure/surgery, select "No" if the intubation was for procedure only AND the patient was extubated within 4 hours of the procedure ending. If the patient was intubated for procedure only, but remained on invasive mechanical ventilation for >4 hours after the procedure was completed, then select "Yes".
  Include: Patients that are intubated by EMS prior to hospital presentation. Patients who have a trach collar as their baseline status, and has to be connected via trach to a ventilator.
  Exclude: Patients who are mechanically ventilated at baseline.
- *"New tracheostomy"*
  Include: A "re-do" tracheostomy.
  Exclude: A tracheostomy that is present on admission.
- *"Admission to ICU"*
  Answer question 2.9
  Exclude: Admission to the ICU bay of the Emergency Department.
- *"Dialysis"*
  Answer question 2.10
  Include: Intermittent Hemodialysis, Peritoneal dialysis, Continuous Renal Replacement Therapy (CRRT).
- *"Red blood cell transfusion"*
  Answer question 2.11
- *"Diagnosis of acute deep vein thrombosis (DVT)"*
  Answer questions 2.12. and 2.13
  Exclude: Portal Vein Thrombus.
- *"Diagnosis of acute pulmonary embolism (PE)"*
  Answer question 2.14
  Exclude: Septic emboli
- *"Administration of CPR"*
  Answer question 2.15
  Include: Patients that received CPR by EMS.
- *"Hospital at Home Status"*
  Answer question 2.16
  Include: Patients receiving an acute level of care while physically located in their home, rather than a hospital. Hospital Care at Home.

2.1. Date of conversation

Instructions: Review the medical record to determine the date of first conversation regarding "goals of care"

between the care team and the patient or patient's family members. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

2.2. Which treatment limitations were initiated during the hospital encounter?
Instructions: Review the medical record to determine the new treatment limitations that were initiated during the hospital encounter.
Note: These are treatment limitations that *were not* present on admission to the hospital encounter.
Include: Treatment limitations added during the encounter that were later revoked (for example, if a patient chooses to change their code status to DNR, but later in the admission changes back to full code).
Select all that apply:

- *"Comfort care only/Hospice"*
- *"No Cardiopulmonary Resuscitation (CPR)/Defibrillation/Cardioversion"*
- *"No Intubation/Mechanical Ventilation/Tracheostomy"*
- *"No Non-Invasive Positive Pressure Ventilation (NIPPV)"*
- *"No Central Line/No Vasopressors"*
- *"Other"* if other treatment limitations, not indicated above were initiated during the hospital encounter. Please use the text box to detail the "other" treatment limitation. Please contact the HMS Coordinating Center prior to making this selection.

2.3. Date of first intubation
Instructions: Review the medical record to determine the date of first intubation for invasive mechanical ventilation (not intubation for procedure/surgery only). Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".
Note 1: Utilize the date/time documented on the flowsheet, if no corresponding documentation, then utilize the procedure note.
Note 2: If the patient was intubated by EMS, please enter the date that corresponds with presentation to the hospital as the date of first intubation.
Note 3: A supraglottic airway (LMA/igel) is a non-invasive device. If the patient presents with a supraglottic airway in place (LMA/igel), please capture this as non-invasive ventilation. If the supraglottic airway is then removed and the patient is intubated for invasive mechanical ventilation, you may capture that intubation.
Note 4: Regarding intubation for procedure/surgery, do not include if the intubation was for procedure only AND the patient was extubated within 4 hours of the procedure ending. If the patient was intubated for procedure only, but remained on invasive mechanical ventilation for >4 hours after the procedure was completed, then please include.

2.4. Time of first intubation
Instructions: Review the medical record to determine the time of first intubation for invasive mechanical ventilation (not intubation for procedure/surgery only). Record this time in HH:MM format (military time). If the time is unknown, please enter "00:00".
Note 1: Utilize the date/time documented on the flowsheet, if no corresponding documentation, then utilize the procedure note.
Note 2: If the patient was intubated by EMS, please enter the time of presentation to the hospital as the time of first intubation.

Below is an example of a spreadsheet that shows how the mechanical ventilation elements may be charted:

	0630	0645	0650	0656	0700	07
SETTINGS						
Medical Gas						
Vent Device	V500					
Vent Mode	VC+/AC					
VT set (mL)	400	400	400	400	400	
VTe-mand (mL)	355	380	381	377	384	
VTe-spon (mL)						
Resp Rate, set (BPM)	16	16	16	16	16	
Resp Rate, total (BPM)	10	16	16	16	16	
VE (L/min)	3.33	6.37	6.38	6.38	6.37	
VTe / kg (mL/kg)	5.19	5.56	5.57	5.51	5.61	
VTe-spon / kg (mL/kg)						
FiO2%, set	100	80	80	80	80	
Peak Flow, set (L/min)						
PPeak (cmH2O)	19					
Pplat (cmH2O)	21					
Pmean (cmH2O)	8.2					
PEEP, set (cmH2O)	5	5	5	5	5	
PEEP-total (cmH2O)	6					
PEEP-intrinsic (cmH2O)	1					
P-high [PIP], set (cm H2O)						
Insp. Pressure (delta P), set (cmH2O)						
Driving Pressure (cm H2O)	15					
Cstat (mL/cm H2O)	23.67					
Cdyn (mL/cm H2O)	44.1					
Press Support, set (cmH2O)						
PSV Flow cycle, set (%)						
Slope / Rise,set	0.2					
Tube Comp, set (%)						
I:E, actual	1:3.2					
Ti, set (sec)	0.9					
I:E, set	1:3.2					
Trigger-flow, set	2					
Trigger-pressure, set						
Vti (mL)	426	421	420	420	419	

2.5. What was the initial ventilator mode setting?
Instructions: Review the medical record to determine the initial ventilator mode setting.
Note: If no settings are documented as having been administered (via a flowsheet), it is okay to use the settings documented in the order. Utilize the first vent settings listed in the flowsheet, even if there is a delay between intubation time and first vent settings documented.

- *"Volume Control Mode (AC/VC; Assist Control/Volume Control)"*
- *"Volume-Targeted Pressure Control Mode (AC/VC+; AC/VC plus; AC/VC-Autoflow; pressure regulated volume control (PRVC); adaptive pressure ventilation"*
- *"Pure Pressure Control Mode (AC/PC (Assist Control/Pressure Control; PC-CMVs)"*
- *"Pressure Support (PS, CPAP, spontaneous)"*
- *"Other: SIMV, ARPV (Airway Pressure Release Ventilation); BiLevel"*
- *"Unknown"*

2.6. What was the initial tidal volume? (enter 9999 if not available)
Instructions: Review the medical record to determine the initial tidal volume in milliliters (mL). If the initial tidal volume is not known, please enter 9999.

2.7. What was the initial PEEP setting?
Instructions: Review the medical record to determine the initial PEEP setting.

- *"5 or less"*

- *"6-10"*
- *"11-15"*
- *"16-20"*
- *"21-25"*
- *"26-30"*
- *">30"*

2.8. What was the initial plateau pressure?
Instructions: Review the medical record to determine the initial plateau pressure.

- *"15 or less"*
- *"16-20"*
- *"21-25"*
- *"26-30"*
- *"31-35"*
- *">35"*

2.9. Date of first ICU admission
Instructions: Review the medical record to determine the date of first ICU admission during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

2.10. First date of dialysis
Instructions: Review the medical record to determine the first date of dialysis during the hospital encounter. This should reflect the date that the patient started their dialysis treatment. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

2.11. Date of first red blood cell transfusion
Instructions: Review the medical record to determine the date of the first red blood cell transfusion during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

2.12. Date of the first confirmed DVT
Instructions: Review the medical record to determine the date of the first diagnosed acute DVT during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

2.13. Location of the first acute DVT
Instructions: Review the medical record to determine the location of the first diagnosed acute DVT during the hospital encounter.
Select all that apply:

- *"Right lower extremity"*
- *"Left lower extremity"*
- *"Right upper extremity"*
- *"Left upper extremity"*
- *"Unknown"*

2.14. Date of the first PE
Instructions: Review the medical record to determine the date of the first diagnosed acute PE during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

2.15. Date of first CPR
Instructions: Review the medical record to determine the date the patient first received CPR during the hospital encounter. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".
Note: For patients who received CPR by EMS, please use the hospital presentation date as the date of first CPR.

2.16. Date of transition to Hospital at Home status
Instructions: Review the medical record to determine the date the patient first transition to Hospital at Home status. Record this date in MM/DD/YYYY format. If the date is unknown, please enter "01/01/1900".

Early Management - Vital Signs

Exclude: Vital signs and recorded during a procedure & pre-encounter vital signs.

1. In the first hour of the hospital encounter, what was the patient's highest recorded temperature?
Instructions: Review the medical record to determine the patient's highest recorded temperature during the first 60 minutes of the hospital encounter. Enter the numeric value that represents the highest temperature within the first 60 minutes of the hospital encounter using the free text data entry box.
Note 1: Enter "999" if a temperature is not reported within the specified timeframe.
Note 2: If only one temperature is recorded in the specified timeframe, please enter it as both the highest and the lowest temperature.

2. In the first hour of the hospital encounter, what was the patient's lowest recorded temperature?
Instructions: Review the medical record to determine the patient's lowest recorded temperature during the first 60 minutes of the hospital encounter. Enter the numeric value that represents the lowest temperature within the first 60 minutes of the hospital encounter using the free text data entry box.
Note 1: Enter "999" if a temperature is not reported within the specified timeframe.
Note 2: If only one temperature is recorded in the specified timeframe, please enter it as both the highest and the lowest temperature.

3. In the first hour of the hospital encounter, what was the patient's highest recorded heart rate?
Instructions: Review the medical record to determine the patient's highest recorded heart rate during the first 60 minutes of the hospital encounter. If a heart rate is not reported in this timeframe, please select "Not available". The default response for this question is "60-89 BPM".

- *"Less than 60 BPM"*
- *"60-89 BPM"*
- *"90-100 BPM"*
- *"101-124 BPM"*
- *"Greater than 124 BPM"*
- *"Not available"*

4. In the first hour of the hospital encounter, what was the patient's highest recorded respiratory rate?
Instructions: Review the medical record to determine the patient's highest recorded respiratory rate during the first 60 minutes of the hospital encounter. If a respiratory rate is not reported in this timeframe, please select "Not available". The default response for this question is "Normal (less than 20)".

- *"Normal (less than 20)"*
- *"Abnormal (20)"*
- *"Abnormal (21)"*
- *"Abnormal (22-24)"*
- *"Abnormal (25-30)"*
- *"Abnormal (greater than 30)"*
- *"Not available"*

5. In the first hour of the hospital encounter, what was the patient's lowest recorded pulse oximetry?
Instructions: Review the medical record to determine the patient's lowest recorded pulse oximetry (SpO2) during the first 60 minutes of the hospital encounter. If a pulse oximetry is not reported in this timeframe, please select "Not available".

- *"70% or less"*
- *"71-80%"*
- *"81-90%"*
- *"91-95%"*
- *"96-100%"*
- *"Not available"*

6. Was the patient on supplemental oxygen at the time of the lowest pulse oximetry reading during the first hour of the hospital encounter?
Instructions: Review the medical record to determine the if the patient was on supplemental oxygen at the time of the lowest recorded pulse oximetry reading during the first hour of the hospital encounter. If information on supplemental oxygen is not reported in this timeframe, capture the most recently documented amount of oxygen support. If there is no previous documentation of oxygen support, then select, "Unknown".
Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.

- *"Yes"*
  Answer questions 6.1 and 6.2
- *"No"*
- *"Unknown"*

6.1. Select the route which supplemental oxygen was delivered.
Instructions: Review the medical record to determine the route with which the supplemental oxygen was delivered at the time that of the pulse oximetry reading (SpO2) that was recorded during the first hour of the hospital encounter.
Note: If there is more than one recording with the same lowest pulse oximetry reading during this time frame, utilize the reading with the highest level of respiratory support.

Tiering System	
1	Intubated on Ventilator
2	NIPPV (Non-invasive ventilation)
3	Heated High Flow Nasal Cannula
4	Low Flow Oxygen System (nasal cannula or oxygen mask)

- *"Heated high-flow nasal cannula"*
  Include: Optiflow
- *"Intubated on ventilator"*
- *"Nasal cannula"*
  Include: Nasal Pendant
- *"Non-invasive ventilation (CPAP, BiPAP)"*
  Include: AVAPS, Face-mask ambu-bag, igel/LMA/supraglottic airway device
  Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.
- *"Oxygen mask (i.e. nonrebreather, Venturi)*
  Include: Trach mask, T-piece
- *"Other"*

6.2. Was the supplemental oxygen reported in liters or percent FiO2?
Instructions: Review the medical record to determine if the supplemental oxygen that was delivered at the time of the pulse oximetry reading (SpO2) that was recorded during the first hour of the hospital encounter was given in liters or percent.
Note: If a patient is on a trach collar for oxygen delivery, capture the FiO2 of oxygen delivered, not the number of liters.

- *"Liters"*

  6.2.1. AMOUNT OF OXYGEN ADMINISTERED (IN LITERS)
  Instructions: Review the medical record to determine the amount of oxygen (in liters) that the patient was on at the time of the pulse oximetry reading (SpO2) that was recorded during the first hour of the hospital encounter.
  Note: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.

  - *"< 1L"*
  - *"1-15L"*
  - *">15L"*
  - *"Not available"*
- *"Percent"*

  6.2.2. AMOUNT OF OXYGEN ADMINISTERED (IN PERCENT)
  Instructions: Review the medical record to determine the amount of oxygen (in percent) that the patient

was on at the time of the pulse oximetry reading (SpO2) that was recorded during the first hour of the hospital encounter.

- *"21% (Room Air)"*
- *"22-30%"*
- *"31-40%"*
- *"41-50%"*
- *"51-60%"*
- *"61-70%"*
- *"71-80%"*
- *"81-90%"*
- *"91-100%"*
- *"Not available"*

7. In the first hour of the hospital encounter, what was the patient's lowest recorded systolic blood pressure?
Instructions: Review the medical record to determine the patient's lowest recorded systolic blood pressure during the first 60 minutes of the hospital encounter. Enter the numeric value that represents the lowest systolic blood pressure in mmHg for the timeframe provided using the free text data entry box.
Include: Blood pressure reporting on a patient with a Left Ventricular Assist Device (LVAD) that is entered as a systolic pressure/zero. For example: enter the reading "80/0" as "80".
Note: Enter "999" *if a systolic blood pressure is not reported in the specified timeframe.*
Exclude: Blood pressure readings where the SBP = DBP.

8. In the first hour of the hospital encounter, what was the diastolic blood pressure that corresponded with the lowest recorded systolic blood pressure?
Instructions: Review the medical record to determine the diastolic blood pressure that corresponds with the lowest systolic pressure during the first 60 minutes of the hospital encounter. Enter the numeric value that represents the lowest diastolic blood pressure in mmHg for the timeframe provided using the free text data entry box.
Note 1: If the blood pressure reading is for a patient with a Left Ventricular Assist Device (LVAD) reported as a systolic pressure/zero ("80/0"), enter "999" for the diastolic entry.
Note 2: Enter "999" if a diastolic blood pressure is not reported in the specified timeframe.
Note 3: If the EMR shows multiple instances where the lowest systolic is the same value, with differing diastolics, use the lowest diastolic.
Exclude: Blood pressure readings where the SBP = DBP.

These questions will repeat for the second and third hours of the hospital encounter.

9. Did the patient experience a systolic blood pressure less than 90 mmHg within >3 hours to <=6 hours of the hospital encounter?
Instructions: Review the medical record to determine if a systolic blood pressure less than 90 mmHg is recorded greater than 3 hours into the hospital encounter but less than or equal to 6 hours into the hospital encounter.

- "*Yes*"
  Answer question 9.1

- *"No"*
- *"Unknown"*

9.1. During which hour(s) did the patient experience a systolic blood pressure less than 90mmHg?
Instructions: Review the medical record to determine during which timeframe systolic blood pressure(s) less than 90 mmHg occurred.
Select all that apply:

- *"> 3 hours to ≤ 4 hours of the hospital encounter"*
- *" > 4 hours to ≤ 5 hours of the hospital encounter"*
- *" > 5 hours to ≤ 6 hours of the hospital encounter"*

Early Management - Antibiotics

1. Was an antibiotic ordered for the patient during the hospital encounter?
Instructions: Review the medical record to determine if an antibiotic was ordered for the patient during the hospital encounter.
Note: Capture antibiotics in the order in which they are administered.
Example:
MAR States:

- Zosyn is ordered at 0700 and administered at 1130.
- Cefepime is ordered at 0730 and administered at 1000

Enter:

- Cefepime as the first antibiotic ordered and administered.
- Zosyn as the second antibiotic ordered and administered.

Exclude: Antibiotics ordered but not administered. Ophthalmic, and otic antibiotics. Any antibiotic that is ordered for prophylaxis, suppression, and/or chronic therapy.

- *"Yes"*
  Answer questions 1.1 and 1.2
- *"No"*
- *"Unknown"*

1.1. What is the date on which the first antibiotic order was placed?
Instructions: Review the medical record to determine the date on which the first antibiotic order was placed. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.
Note: Please capture the antibiotics (first, second, third) by the order in which they were administered.

1.2. What is the time at which the first antibiotic order was placed?
Instructions: Review the medical record to determine the time at which the first antibiotic order was placed. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.
Note: Please capture the antibiotics (first, second, third) by the order in which they were administered.

2. Was an antibiotic administered to the patient during the hospital encounter?
Instructions: Review the medical record to determine if an antibiotic was administered for the patient during the hospital encounter.
Exclude: Antibiotics that were ordered but not administered, ophthalmic, otic, and irrigation antibiotics.

- *"Yes"*
  Answer questions 2.1 through 2.4
- *"No"*
- *"Unknown"*

2.1. What is the date on which the first antibiotic was administered to the patient?
Instructions: Review the medical record to determine the date on which the first antibiotic was administered to the patient. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.
Note: Please capture the antibiotics (first, second, third) by the order in which they were administered.

2.2. What is the time at which the first antibiotic was administered to the patient?
Instructions: Review the medical record to determine the time at which the first antibiotic was administered to the patient. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.
Note: Please capture the antibiotics (first, second, third) by the order in which they were administered.

2.3. What was the name of the first antibiotic administered to the patient?
Instructions: Review the medical record to determine the name of the first antibiotic that was administered to the patient during the hospital encounter.

- *"Amikacin (Amikin)"*
- *"Amoxicillin (Novamox, Amoxil, Amoxicot, Dispermox, Moxatag, Moxilin, Trihydrate Trimox, Wymox)"*
- *"Amoxicillin-clavulanic acid (Augmentin, Co-Amoxiclav)"*
- *"Ampicillin (Omnipen, Principen, Totacillin)"*
- *"Ampicillin/Sulbactam (Unasyn)"*
- *"Azithromycin (Zithromax, Sumamed, Zitrocin)"*
- *"Aztreonam (Azactam)"*
- *"Bactrim (Co-Trimoxazole, Sulfamethoxazole, Sulfisoxazole, Trimethoprim, Trimethoprim-Sulfamethoxazole, TMP-SMX)"*
- *"Cefaclor (Ceclor, Ceclor CD)"*
- *"Cefadroxil (Cephadroxil, Duricef)"*
- *"Cefalotin (Cephalothin)"*
- *"Cefazolin (Ancef, Kefzol, Zolicef)"*
- *"Cefdinir (Omnicef, Cefdiel)"*
- *"Cefditoren (Spectracef)"*
- *"Cefepime (Maxipime)"*
- *"Cefiderocol"*
- *"Cefixime (Suprax)"*
- *"Cefoperazone (Cefobid, Sodium)"*
- *"Cefotaxime (Cephotaxime, Claforan)"*
- *"Cefotetan (Cefotan)"*
- *"Cefoxitin (Mefoxin)"*
- *"Cefpodoxime"*
- *"Cefprozil (Cefzil)"*
- *"Ceftaroline"*
- *"Ceftazidime (Ceptaz, Fortaz, Tazicef)"*
- *"Ceftazidime-avibactam (Avycaz)"*

- *"Ceftizoxime"*
- *"Ceftolozane/Tazobactam (Zerbaxa)"*
- *"Ceftibuten (Cedax)"*
- *"Ceftriaxone (Rocephin)"*
- *"Cefuroxime (Ceftin, Kefurox, Zinacef)"*
- *"Cephalexin (Cefalexin, Keflex, Keftal, Cefanox, Biocef, Panixine, Zartan)"*
- *"Ciprofloxacin (Cipro, Ciproxin, Ciprobay)"*
- *"Clarithromycin (Biaxin)"*
- *"Clindamycin (Cleocin)"*
- *"Cloxacillin (Tegopen, Coxapen)"*
- *"Colistin (Xylistin, Polymyxin E, Colistimethate)"*
- *"Dalbavancin"*
- *"Daptomycin"*
- *"Delafloxacin (Baxdela)"*
- *"Dicloxacillin (Dycill, Dynapen)"*
- *"Doripenem (Doribax)"*
- *"Doxycycline (Doxycycline hyclate, Doxy, Vibra, Vibramycin)"*
- *"Eravacycline"*
- *"Ertapenem (Invanz)"*
- *"Erythromycin (E-mycin, Ery-tab, Benzamycin)"*
- *"Fidaxomicin (Dificid)"*
- *"Fosfomycin (Monurol)"*
- *"Gemifloxacin"*
- *"Gentamicin (Gentamycin, Garamycin, Cidomycin, Septopal, Gentamycin Synergy)"*
- *"Imipenem (Primaxin)"*
- *"Imipenem-Relebactam"*
  Include: *Recarbrio*
- *"Lefamulin"*
- *"Levofloxacin (Levaquin, Quixin)"*
- *"Linezolid (Zyvox)"*
- *"Meropenem (Merrem)"*
- *"Meropenem Vaborbactam (Vabomere)"*
- *"Metronidazole (Flagyl)"*
- *"Minocycline (Minocycline hydrochloride, Minocin, Dynacin, Myrac, Solodayn, Vectrin)"*
- *"Moxifloxacin (Avelox)"*
- *"Nafcillin (Unipen, Nafcil, Nallpen)"*
- *"Nitrofurantoin (Macrobid)"*
- *"Norfloxacin (Noroxin)"*
- *"Ofloxacin (Floxin)"*
- *"Omadycycline"*
- *"Oritavancin (LY333328)"*

- *"Oxacillin (Prostaphilin, Bactocil, Prostaphlin)"*
- *"Penicillin (Benzylpenicillin, Penicillin G, Bicillin C-R/L-A, Pfizerpen, Wycellin)"*
- *"Piperacillin"*
- *"Piperacillin-tazobactam (Zosyn)"*
- *"Polymixin B"*
- *"Rifampin (Rifadin)"*
- *"Streptomycin"*
- *"Sulfasalazine (Azulfidine, Sulfazine)"*
- *"Sulfonamides"*
- *"Synercid (Quinupristin/Dalfopristin)"*
- *"Tedizolid"*
- *"Telavancin (TD-6424, Vibativ)"*
- *"Tetracycline (Ala-Tet, Panmycin, Sumycin)"*
- *"Tigecycline (Tigacyl)"*
- *"Tobramycin (Tobrex, Nebcin, Kitabis Pak, Tobi TOBI)"*
- *"Vancomycin (Vancocin, Lyphocin)"*
- *"Other"*
  Exclude: Rifaximin (Xifaxan)
- *"Unknown"*

2.4. Was another antibiotic administered to the patient within the first 12 hours after the initial antibiotic administration?
Instructions: Review the medical record to determine if another antibiotic was administered to the patient within the first 12 hours after the initial antibiotic administration.
Note: This should be a unique antibiotic (not previously entered) in order to include. Do not include subsequent doses of the same antibiotic.

- *"Yes"*
  Note: If "Yes" is selected, questions 1.1, 1.2, 2-2.4 will populate one additional time to allow for a second antibiotic's order and administration time to be entered. The option to enter the name of a third antibiotic administered will also populate.
- *"No"*
- *"Unknown"*

Early Management - Labs

1. Was a lactate level measured for this patient during the hospital encounter?
Instructions: Review the medical record to determine if a lactate level was measured during the index hospital encounter.
Include: Lactate Acid measurements.

- "*Yes*"
  Answer questions 1.1 through 1.7
- "*No*"
- "*Unknown*"

1.1. What was the date the first lactate measurement was collected (i.e. the date assocated with the draw time)?
Instructions: Review the medical record to determine the date the first lactate collection/lab draw during the hospital encounter. Enter the date in MM/DD/YYYY format.

1.2. What was the time the first lactate measurement was collected (i.e. the draw time)?
Instructions: Review the medical record to determine the time of the first lactate collection/lab draw during the hospital encounter. Enter the time in HH:MM format (military time).

1.3. What was the date the first lactate measurement resulted?
Instructions: Review the medical record to determine the date the first lactate measurement resulted during the hospital encounter. Enter the date in MM/DD/YYYY format.

1.4. What was the time the first lactate measurement resulted?
Instructions: Review the medical record to determine the time the first lactate measurement resulted during the hospital encounter. Enter the time in HH:MM format (military time).

1.5. What was the first lactate result?
Instructions: Review the medical record to determine the first lactate result. Please enter the numerical value of that result in the free text box provided.

1.6. What was the lactate level unit of measurement?
Instructions: Review the medical record to determine the unit of measurement for the first lactate result provided in the previous question.

- *"mmol/L"*
- *"mg/dL"*
- *"mEq/L"*
- *"Not Available"*

1.7. Was an additional lactate level measured for this patient during the hospital encounter?
Instructions: Review the medical record if a subsequent lactate measurement event occurred during the index hospital encounter.

- "*Yes*"
  Questions 1.1-1.6 will populate again to allow detailed data entry for the additional lactate measurement.
- "*No*"
- "*Unknown*"

2. Was a blood culture ordered for the patient?
Instructions: Review the medical record to determine if a blood culture was ever ordered for the patient during the hospital encounter.

- *"Yes"*
  Answer questions 2.1 and 2.2
- *"No"*
- *"Unknown"*

2.1. Date of first blood culture order
Instructions: Review the medical record to determine the date of the first blood culture order during the hospital encounter. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

2.2. Time of first blood culture order
Instructions: Review the medical record to determine the date of the first blood culture order during the hospital encounter. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

3. Was a blood culture collected from the patient?
Instructions: Review the medical record to determine if a blood culture was ever collected for the patient during the hospital encounter.

- *"Yes"*
  Answer questions 3.1 and 3.2
- *"No"*
- *"Unknown"*

3.1. Date of first blood culture collection
Instructions: Review the medical record to determine the date of the first blood culture collection during the hospital encounter. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

3.2. Time of first blood culture collection
Instructions: Review the medical record to determine the time of the first blood culture collection during the hospital encounter. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.

Early Management - Vasopressors

1. Was a vasopressor ordered for the patient during the hospital encounter?
Instructions: Review the medical record to determine if a vasopressor was ordered for the patient during the hospital encounter.
Note: Capture vasopressors in the order in which they are administered.

Example:
MAR States:

- Norepinephrine is ordered at 0730 and administered at 1000
- Vasopressin is ordered at 0800 and administered at 0900.

Enter:

- Vasopressin as the first vasopressor ordered and administered
- Norepinephrine as the second vasopressor ordered and administered.

Include: Vasopressors ordered and administered during a code or procedure that continue to be administered in the unit AFTER the conclusion of the code or the procedure.
Exclude: Vasopressors given during a code, procedures, or in an Operating Room without continuation after these incidences. Intramuscular Epinephrine given for anaphylaxis/allergic reactions.

- *"Yes"*
  Answer questions 1.1 and 1.2
- *"No"*
- *"Unknown"*

1.1. Date of first vasopressor order
Instructions: Review the medical record to determine the date on which the first vasopressor order was

placed. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.
Note: If the vasopressor was started during a code or procedure and continued to be administered AFTER the conclusion of the code or procedure, please use the date the order was first placed during the code/procedure.

1.2. Time of first vasopressor order

Instructions: Review the medical record to determine the time at which the first vasopressor order was placed. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.
Note: If the vasopressor was started during a code or procedure and continued to be administered AFTER the conclusion of the code or procedure, please use the time the order was first placed during the code/procedure.

2. Was a vasopressor administered to the patient during the hospital encounter?

Instructions: Review the medical record to determine if a vasopressor was administered for the patient during the hospital encounter.
Exclude: Vasopressors given during a code, procedures, or in an Operating Room without continuation after these incidences. Intramuscular Epinephrine given for anaphylaxis/allergic reactions.

- *"Yes"*
  Answer questions 2.1 through 2.4
  Exclude: Medications given during a code or procedure that are not continued after the code or procedure..
- *"No"*
- *"Unknown"*

2.1. Date of first vasopressor administration

Instructions: Review the medical record to determine the date on which the first vasopressor was administered to the patient. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

2.2. Time of first vasopressor administration

Instructions: Review the medical record to determine the time at which the first vasopressor was administered to the patient. Enter the time in HH:MM format (military time). If the time is unknown, please enter 00:00.

2.3. What was the name of the first vasopressor administered to the patient?

Instructions: Review the medical record to determine the name of the first vasopressor that was administered to the patient during the hospital encounter.

- *"Angiotensin II"*
- *"Dopamine"*
- *"Epinephrine"*
- *"Midodrine"*
- *"Norepinephrine"*
- *"Phenylephrine"*
- *"Vasopressin"*
- *"None of the above"*

2.4. What route was used to administer the first vasopressor to the patient?

Instructions: Review the medical record to determine the route that was utilized to administer the first vasopressor to the patient during the hospital encounter.

Note 1: If only one type of vascular access is available at the time of vasopressor administration, please assume that is the route of administration.
Note 2: If multiple types of vascular access are available at the time of vasopressor administration, please use the following hierarchy to enter the route of administration: Central Line, PICC, Port, Midline, Peripheral IV, PO.

- *"Central Line"*
- *"PICC"*
- *"Port"*
- *"Midline"*
- *"Peripheral IV"*
  Answer question 2.4.1
- *"PO"*
- *"Intraosseous (IO)"*
- *"Other"*
- *"Unknown"*

2.4.1. Was there documentation that tissue ischemia/necrosis occurred during the hospitalization related to the peripheral IV used for vasopressor administration?
Instructions: Review the medical record to determine if ischemia or necrosis is documented related to the peripheral IV through which the first vasopressor was administered.

- "*Yes*"
- "*No*"
- "*Unknown*"

2.5. Was a second vasopressor administered to the patient during the hospital encounter?
Instructions: Review the medical record to determine if an additional vasopressor was administered for the patient during the hospital encounter.
Exclude: Vasopressors given during a code, procedures, or in an Operating Room without continuation after these incidences. Intramuscular Epinephrine given for anaphylaxis/allergic reactions.

- *"Yes"*
  Answer questions 2.5.1 through 2.5.4
  Exclude: Subsequent orders and administrations of the same vasopressor previously entered.
- *"No"*
- *"Unknown"*

2.5.1. Date of second vasopressor administration
Instructions: Review the medical record to determine the date on which the second vasopressor was administered to the patient. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

2.5.2. Time of second vasopressor administration
Instructions: Review the medical record to determine the time at which the second vasopressor was administered to the patient. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.

2.5.3. What was the name of the second vasopressor administered to the patient?
Instructions: Review the medical record to determine the name of the second vasopressor that was administered to the patient during the hospital encounter.

- *"Angiotensin II"*
- *"Dopamine"*
- *"Epinephrine"*
- *"Midodrine"*
- *"Norepinephrine"*
- *"Phenylephrine"*
- *"Vasopressin"*
- *"None of the above"*

2.6. What route was used to administer the second vasopressor to the patient?
Instructions: Review the medical record to determine the route that was utilized to administer the second vasopressor to the patient during the hospital encounter.
Note 1: If only one type of vascular access is available at the time of vasopressor administration, please assume that is the route of administration.
Note 2: If multiple types of vascular access are available at the time of vasopressor administration, please use the following hierarchy to enter the route of administration: Central Line, PICC, Port, Midline, Peripheral IV, PO.

- *"Central Line"*
- *"PICC"*
- *"Port"*
- *"Midline"*
- *"Peripheral IV"* ***Answer question 2.6.1***
- *"PO"*
- *"Intraosseous (IO)"*
- *"Other"*
- *"Unknown"*

2.6.1. Was there documentation that tissue ischemia/necrosis occurred during the hospitalization related to the peripheral IV used for vasopressor administration?
Instructions: Review the medical record to determine if ischemia or necrosis is documented related to the peripheral IV through which the second vasopressor was administered.

- "*Yes*"
- "*No*"
- "*Unknown*"

Abstractor Notes

1. **Do you have any notes?**

Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer question 1.1
- *"No"* if you do not have notes that you would like to include and you do not want to exclude this form.

1.1. Abstractor Notes

Instructions: Use free text to input your notes.

IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

Discharge

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Jump to sub-sections:

1. Indicate the status of the patient at the end of abstraction (discharge, transfer, death).
Instructions: Review the medical record to determine the patient's status at the end of the hospital encounter.
Note: This question is required.
Select one of the following:

- "*Transfer to another hospital*"
  Answer Questions 1.1 and 1.2
  Exclude: Inpatient rehab, inpatient psychiatric, inpatient hospice
- "*Death*"
  Answer Questions 1.1 and 1.2
  Include: Discharge to Gift of Life for organ donation
- "*Discharged*"
  Answer Questions 1.1–1.3
  Include: Inpatient rehab, inpatient psych, inpatient hospice, Swing bed

1.1. Date of Transfer/Death/Discharge
Note: This question is required.
Instructions: Review the medical record to determine the date the patient was transferred to another hospital/deceased/discharged. If the date is unknown, please enter 01/01/1900.

> *Note: For patients who expire during the hospital encounter, if there is a discrepancy in the record between date of death and date of discharge, please use patient's date of death.*

1.2. Time of Transfer/Death/Discharge
Note: This question is required.
Instructions: Review the medical record to determine the time the patient was transferred to another hospital/deceased/discharged. If the date is unknown, please enter 99:99.

1.3. Specify the appropriate discharge disposition*
Instructions: Review the medical record to determine the appropriate discharge disposition for the index hospital encounter.
Note: This question is required.
Select one of the following:

- "*Discharged home*"
  Answer questions 1.3.1 through 1.3.3
  Include: Discharge to patient's own home, friend's home, or a family member's home WITHOUT home care services. Patients that are discharged to an adult foster care center/group home. Patients discharged to a psychiatric group home, residential substance abuse center.
- "*Discharged home with home health services*"
  Answer questions 1.3.1 through 1.3.3
  Include: Discharged to group home with home health services. Discharged home with palliative care services (NOT hospice) who are regularly being seen by a palliative care provider in their home.
  Exclude: Physical Therapy, Occupational Therapy, infusion services
- "*Discharged to an assisted living facility*"
  Answer questions 1.3.1 through 1.3.3
  Include: Assisted living residence WITHOUT home health services
- "*Discharged to an assisted living facility with home health services*"
  Answer questions 1.3.1 through 1.3.3
  Include: Discharge to assisted living residence/facilities (ALF) with home health nursing services.
  Exclude: Discharged to assisted living residence/facilities (ALF) with Physical Therapy, Occupational Therapy, or infusion services
- "*Discharged to a custodial nursing home*"
  Answer questions 1.3.1 through 1.3.3
  Include: Memory Care Setting or custodial nursing home WITHOUT home health nursing services
- "*Discharged to a custodial nursing home with home health services*"
  Answer questions 1.3.1 through 1.3.3
  Include: Discharged to custodial nursing home, nursing home, or memory care facility with home health services.
  Exclude: Discharged to custodial nursing home, nursing home, or memory care facility with Physical Therapy, Occupational Therapy, or infusion services
- "*Discharged to a skilled nursing facility*"
  Include: Skilled nursing home, nursing home, Swing Bed
- "*Discharged to a sub-acute rehab facility*"
  Include: Post-acute rehabilitation center, psychiatric center that is not considered to be an inpatient setting
- "*Discharged to a long-term acute care hospital (LTAC)*"
- "*Discharged to a temporary shelter (hotel, dorm, etc.)*"
  Answer questions 1.3.1 through 1.3.3
  Include: Homeless shelter, hotel, dormitory, or a community living setting. Discharged to Detox Center/Sober Living. Patient is homeless and is not discharged to a shelter or other location.
- "*Discharged to inpatient hospice*"
- "*Discharged to home hospice*"
  Include: Discharged home for hospice care, comfort measures only, or comfort care.
  Exclude: Discharged home with palliative care services for symptom management ONLY.
- "*Discharged to a healthcare facility with hospice care*"
  Include: Discharged to LTACH, memory care facility, sub-acute rehab, skilled nursing facility, custodial nursing home, assisted living facility, or dedicated disaster alternative care site with hospice care, comfort care, or comfort measures only.

- "*Discharged to correctional facility*"
  Include: Jail, prison, penitentiary
- "*Discharged to inpatient rehab*"
  Include: Acute rehabilitation center, acute rehabilitation services, acute rehab, inpatient rehabilitation facility (IRF), inpatient rehab. Discharge from current unit with readmission to an inpatient rehabilitation unit in the same hospital.
- "*Discharged to inpatient psychiatric facility*"
  Include: Inpatient psychiatric, inpatient psychiatry, inpatient mental health care. Discharge from current unit with readmission to an inpatient psychiatric unit in the same hospital.
- "*Dedicated Disaster Alternative Care Site*"
  Include: Discharge to a temporary care facility established in response to the COVID-19 pandemic
- "*Other, please specify*"
  Answer questions 1.3.1 through 1.3.3
  Enter in the "other" discharge location in the free text box provided. ***Before selecting other, please reach out to the HMS Coordinating Center.***

1.3.1. Indicate whether a follow-up outpatient visit was scheduled and documented in the discharge paperwork.
Note: This question is required.
Instructions: Review the discharge paperwork (any paperwork sent home with the patient) to determine if a follow-up appointment was both **scheduled** for the patient and **documented** in the discharge paperwork.
Include: Primary care provider (physician or advanced practice professional) or specialty care provider (physician or advanced practice provider from specialty practice such as oncology, cardiology, nephrology, etc.).
Select one of the following:

- *"Yes"*
  Answer question 1.3.1.1
- *"No"*
- *"Unknown"*

1.3.1.1. Enter the date of the soonest appointment scheduled after discharge.
Instructions: Review the medical record to determine the date of the scheduled follow up appointment with a primary care or specialty provider. If there is more than one appointment scheduled for follow-up after discharge, enter the date of the appointment that is scheduled soonest after discharge from the hospital.

1.3.2. Who was the patient instructed to contact prior to their follow-up appointment should they have issues or questions?
Note: This question is required.
Instructions: Review the discharge paperwork (Discharge Summary, After Visit Summary, Hospital Summary, any paperwork sent home with the patient) to determine if there is documentation about who the patient should contact in between their hospital discharge and their follow up appointment should they have any issues or have questions during this time period. Issues may include questions related to medications, difficulty understanding discharge instructions, etc.

This question will only accept a single response. If multiple contacts are given, please make a selection based on the following hierarchy:

1. The Hospital they are discharged from - #1
2. Outpatient Care Team - #2
3. 911 - #3
4. Unknown - #4

The following are the requirements for this question:

> - *In order to select "Outpatient Care Team", that care team needs to have been involved in the patient's care while in the hospital and assume the patient's care post-discharge.*
> - *For "Outpatient Care Team" and "The Hospital they are discharged from", the phone number and provider name or team should be provided. This phone number should be one that is manned 24/7, either by a clinician team or call center/operator that is able to connect the patient with the appropriate provider at any time of day. We want to know that the patient can get in touch with their hospital provider team if they have a problem at any time post-discharge.*

Select one of the following:

- "*911*"
- "*The Hospital they are discharged from*"
- "*Outpatient Care team (i.e., PCP, specialist, outpatient RN)*"
- "*Unknown/Not Documented*"

1.3.3. What was the last Readmission Risk Score that your site assigned to this patient for this hospital encounter prior to discharge?
Note: This question is required.
Instructions: Review the medical record to determine the LAST documented Readmission Risk Score assigned by your site to this patient for this hospital encounter prior to discharge.
Note 1: If your site tracks readmission risk score outside of the EMR (such as in an excel file or other software), you may refer to this documentation to determine readmission risk score as long as you can confirm that the information provided reflects the last documented readmission risk score prior to discharge.
Note 2: If your site uses the LACE Index (without modifications) to determine risk for readmission, please capture a score of 10 or more as "High Risk."
Select one of the following:

- *"Low"*
- *"Medium"*
- *"High"*
- *"No Risk Score Assigned"*

2. What was the classification of the discharging physician?
Instructions: Review the medical record to determine the classification of the discharging physician. Choose the option that best describes the discharging physician's practice specialty.
Select one of the following:

- *"Hospitalist"*
  Include: Each participating hospital in the HMS Consortium has one or more group(s) of hospitalists. It

may be helpful to obtain a list of the physicians that participate in your hospital's hospitalist program.

- *"General Internist"*
  Include: Physicians that specialize in Adult Medicine or Internal Medicine.
- *"Infectious Disease"*
  Include: Physicians that specialize in Infection Disease (ID) or Infectious Disease Specialist.
- *"Hematologist/Oncologist"*
  Include: Physicians that specialize in hematology and/or oncology.
- *"Medicine Sub Specialist"*
  Include: Physicians that specialize in General/ Internal Medicine and have sub-specialized in another area such as Endocrinology, Cardiology, Pulmonary or Gastroenterology, as a few examples.
- *"Critical Care"*
- *"Family Medicine"*
  Include: Physicians that specializes in family medicine, family practice. Family physician, family doctor, etc.
- *"Surgical Services"*
- *"Other"* if the medical record indicates that the discharging physician was of a specialty not listed above.

3. Discharging Provider Details
Instructions: Review the medical record to determine the discharging provider. Determine that provider's assigned number via your own personal tracking record. Select the appropriate number that corresponds with the discharging physician (if desired) from the drop-down menu. Provider values range from 1-300.
Note: The HMS Coordinating Center does not maintain a list of these providers. The local site can use this field at their discretion and tracking is performed at the local level.

4. What were all of the ICD-10 codes billed for this hospital encounter on discharge?
Note: This question is required.
Instructions: Review the medical record to determine *ALL* of the ICD-10 codes that were billed for this patient at the time of transfer to another hospital, death, or discharge.
Note 1: These are all of the ICD-10 codes that were billed for the patient's hospitalization at the time of transfer to another hospital, death, or discharge. Please make sure all individual ICD-10 codes are separated by a comma and a space, with a semicolon added after the final code (i.e., J96.11, X03.2, B27.3;). Do not hit enter while inputting ICD-10 codes into the box.

5. At the 60th day post-discharge, was this hospital encounter ultimately billed as an Observation Stay or Inpatient Stay?
Instructions: Review the medical/billing record to determine the billed status of this hospital encounter as of the 60th day post-discharge.
Select one of the following:

- *"Observation"*
- *"Inpatient"*
- *"Other"* - If selected, please specify in the free text box provided.
- *"Unknown"*

Discharge/Transfer - Vitals and Labs

> *This section will only appear if the status at the end of the hospital encounter was Discharge or Transfer, not Death.*

1. What is the patient's last recorded temperature before discharge/transfer?
Instructions: Review the medical record to determine the patient's last recorded temperature prior to discharge/transfer in degrees Celsius (C). Enter the numeric value that represents the last temperature recorded before discharge/transfer using the free text data entry box.
Note: Enter "999" if no temperature is recorded.

2. What is the patient's last recorded heart rate before discharge/transfer?
Instructions: Review the medical record to determine the patient's last recorded heart rate prior to discharge/transfer. The default response for this question is "60-89 BPM".
Select one of the following:

- *"Less than 60 BPM"*
- *"60-89 BPM"*
- *"90-100 BPM"*
- *"101-124 BPM"*
- *"Greater than 124 BPM"*
- *"Not available"*

3. What is the patient's last recorded respiratory rate before discharge/transfer?
Instructions: Review the medical record to determine the patient's last recorded respiratory rate prior to discharge/transfer. The default response for this question is "Normal (less than 20)".
Select one of the following:

- *"Normal (less than 20)"*
- *"Abnormal (20)"*
- *"Abnormal (21)"*
- *"Abnormal (22-24)"*
- *"Abnormal (25-30)"*
- *"Abnormal (greater than 30)"*
- *"Not available"*

4. What is the patient's last recorded pulse oximetry before discharge/transfer?
Instructions: Review the medical record to determine what the patient's last recorded pulse oximetry reading was prior to discharge/transfer.
Select one of the following:

- *"70% or less"*
- *"71-80%"*
- *"81-90%"*
- *"91-95%"*
- *"96-100%"*

- *"Not available"*

5. Was the patient on supplemental oxygen at the time of the last pulse oximetry reading?
Instructions: Review the medical record to determine if the patient was on supplemental oxygen at the time of the patient's last recorded pulse oximetry (SpO2) prior to discharge/transfer. If information on supplemental oxygen is not reported in this timeframe, capture the most recently documented amount of oxygen support. If there is no previous documentation of oxygen support, then select, "Unknown".
Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.
Select one of the following:

- *"Yes"*
  Answer questions 5.1 and 5.2
- *"No"*
- *"Unknown"*

5.1. Select the route which supplemental oxygen was delivered.
Instructions: Review the medical record to determine the route with which the supplemental oxygen was delivered at the time that the last pulse oximetry reading (SpO2) was recorded during the hospital encounter.

Tiering System	
1	Intubated on Ventilator
2	NIPPV (Non-invasive ventilation)
3	Heated High Flow Nasal Cannula
4	Low Flow Oxygen System (nasal cannula or oxygen mask)

Select one of the following:

- *"Heated high-flow nasal cannula"*
  Include: Optiflow
- *"Intubated on ventilator"*
  Include: Tracheostomy on ventilator.
- *"Nasal cannula"*
- *"Non-invasive ventilation (CPAP, BiPAP)"*
  Include: AVAPS, Face-mask ambu-bag
  Exclude: Use of a home CPAP or BiPAP prescribed for sleep apnea that is used while sleeping.
- *"Oxygen mask (i.e. nonrebreather, Venturi)*
  Include: Trach mask, T-piece
- *"Other"*

5.2. Was the supplemental oxygen reported in liters or percent FiO2?
Instructions: Review the medical record to determine if the supplemental oxygen that was delivered at the

time that the last pulse oximetry reading (SpO2) during the hospital encounter was given in liters or percent.
Note: If a patient is on a trach collar for oxygen delivery, capture the FiO2 of oxygen delivered, not the number of liters.

28 %	6 l/min	Tracheostomy Collar

Select one of the following:

- *"Liters"*
  Answer question 5.2.1
- *"Percent"*
  Answer question 5.2.2

5.2.1. Liters of supplemental oxygen
Instructions: Review the medical record to determine the amount of oxygen (in liters) that the patient was on at the time that the last pulse oximetry reading (SpO2) was taken during the hospital encounter.
Note: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.
Select one of the following:

- *"< 1L"*
- *"1-15L"*
- *">15L"*
- *"Not available"*

5.2.2. Percent FiO2 of supplemental oxygen
Instructions: Review the medical record to determine the amount of oxygen (in percent) that the patient was on at the time that the last pulse oximetry reading (SpO2) was taken during the hospital encounter.
Select one of the following:

- *"21%"*
- *"22-30%"*
- *"31-40%"*
- *"41-50%"*
- *"51-60%"*
- *"61-70%"*
- *"71-80%"*
- *"81-90%"*
- *"91-100%"*
- *"Not available"*

6. What is the patient's last recorded systolic blood pressure before discharge/transfer?
Instructions: Review the medical record to determine the patient's last recorded systolic blood pressure prior to discharge/transfer. Enter the numeric value that represents the last recorded systolic blood pressure in mmHg prior to discharge/transfer using the free text data entry box.
Note: Enter "999" if no systolic blood pressure is recorded.
Include: Blood pressure reporting on a patient with a Left Ventricular Assist Device (LVAD) that is entered as a systolic pressure/zero. For example: enter the reading "80/0" as "80"
Exclude: Blood pressure readings where the SBP = DBP.

7. What was the patient's last recorded diastolic blood pressure before discharge/transfer?
Instructions: Review the medical record to determine the diastolic blood pressure that corresponds with the last systolic pressure recorded prior to discharge/transfer. Enter the numeric value that represents the last recorded diastolic blood pressure in mmHg prior to discharge/transfer using the free text data entry box.
Note 1: If the blood pressure reading is for a patient with a Left Ventricular Assist Device (LVAD) reported as a systolic pressure/zero ("80/0"), enter "999" for the diastolic entry.
Note 2: Enter "999" if no diastolic blood pressure is recorded.
Exclude: Blood pressure readings where the SBP = DBP.

8. Is there documentation of the patient's weight within 2 calendar days prior to discharge/transfer?
Instructions: Review the medical record to determine if there is documentation of the patient's weight within the two calendar days prior to discharge/transfer.
Example: If day of D/C is X, patient weight from days X-1 & X-2 should be included for abstraction.
Select one of the following:

- *"Yes"*
  Answer questions 8.1 and 8.2
- *"No"*
- *"Unknown"*

8.1. Last weight recorded before discharge/transfer
Instructions: Review the medical record to determine the last weight recorded within the 2 calendar days prior to the patient's discharge/transfer. Enter the numerical weight value in the free text box provided. Enter the last actual (measured) weight documented within the 2 calendar days prior to the patient's discharge.
Exclude: Dosing weights used for determining medication dosing.
The following is the hierarchy if multiple weights are captured in the 2 days prior to discharge:

1. Standing weight
2. Bed weight
3. Stated weight.

8.2. Unit of weight
Instructions: Review the medical record to determine the unit of weight that corresponds to the last weight recorded within the 2 calendar days prior to the patient's discharge.
Select one of the following:

- *"Pounds"*
- *"Kilograms"*

9. Is there documentation of the patient's creatinine level within 2 calendar days prior to discharge/transfer
Instructions: Review the medical record to determine if there is documentation of the patient's creatinine level within the two calendar days prior to discharge/transfer.
Example: If day of D/C is X, lab values from days X-1 & X-2 should be included for abstraction.
Include: POC Creatinine results.
Select one of the following:

- *"Yes"*
  Answer questions 9.1 and 9.2

- *"No"*
- *"Unknown"*

9.1. Last creatinine result recorded before discharge/transfer
Instructions: Review the medical record to determine the last creatinine level recorded within the 2 calendar days prior to the patient's discharge/transfer. Enter the numerical creatinine level in the free text box provided.

9.2. Unit of measurement
Instructions: Review the medical record to determine the unit of measurement that corresponds to the last creatinine level recorded within the 2 calendar days prior to the patient's discharge/transfer.
Select one of the following:

- *"mg/dL"*
- *"µmol/L"*

10. Is there documentation of the patient's hemoglobin within 2 calendar days prior to discharge/transfer
Instructions: Review the medical record to determine if there is documentation of the patient's hemoglobin level within the two calendar days prior to discharge/transfer.
Example: If day of D/C is X, lab values from days X-1 & X-2 should be included for abstraction.
Include: POC Hemoglobin results.
Select one of the following:

- *"Yes"*
  Answer question 10.1
- *"No"*
- *"Unknown"*

10.1. Last hemoglobin result recorded before discharge/transfer
Instructions: Review the medical record to determine the last hemoglobin level recorded within the 2 calendar days prior to the patient's discharge. Enter the numerical hemoglobin level in g/dL in the free text box provided.

11. Was an assessment of ADLs performed within 2 calendar days prior to discharge/transfer?
Instructions: Review the medical record to determine if an assessment of Activities of Daily Living (ADL) or Independent Activities of Daily Living (IADLs) Assessment was completed within 2 calendar days prior to discharge/transfer. This assessment should reflect the patient's functionality just prior to discharge/transfer.
Example: If day of D/C is X, lab values from days X-1 & X-2 should be included for abstraction.
Select one of the following:

- *"Yes"*
  Answer question 11.1
- *"No"*
- *"Unknown"*

Reminder: The following questions can be answered based on a Nursing ADL assessment, Care Manager documentation, or from an OT/PT evaluation (including AM-PAC 6 Clicks Assessments) within 2 calendar days prior to discharge.

Note 1: For all ADLs, if is it noted that patient completes the task using an assistive device but is not dependent on another person to assist them, use the selection, "Fully independent" to describe their baseline functioning on that task.
Note 2: If you are abstracting an AM-PAC 6 Clicks Assessment from your EMR, please enter these scores in the following manner

1. Unable = Partially or fully dependent
2. A lot = Partially or fully dependent
3. A little = Fully independent
4. None = Fully independent

11.1. What is documented as the patient's level of function at discharge for the following activities?
For all of the following activities, select one of the following in the table provided:

- *"Partially or fully dependent"*
- *"Fully independent"*
- *"Not available"*

Bathing:
Instructions: Review the medical record to determine the patient's level of function at discharge for bathing.
Include: Documentation of the patient's ability to perform their own hygiene. AM-PAC 6-Clicks: "Help from another person bathing"
Select one of the following:

Dressing:
Instructions: Review the medical record to determine the patient's level of function at discharge for dressing.
Include: AM-PAC 6-Clicks: "Help from another person to put on/take off upper body clothing" or "Help from another person to put on/take off lower body clothing".
If there are two AM-PAC 6 Clicks scores demonstrating variable abilities for upper vs. lower extremity dressing, use the more acute/worse score of the two.

Toileting:
Instructions: Review the medical record to determine the patient's level of function at discharge for toileting.
Include: Documentation of the patient's ability to perform their own hygiene. AM-PAC 6-Clicks "Help from another person toileting".

Transferring from Bed to Chair (and back):
Instructions: Review the medical record to determine the patient's level of function at discharge for transferring from bed to chair (and back).
Include: AM-PAC 6-Clicks "Help from another person moving to and from bed to chair"

Walking:
Instructions: Review the medical record to determine the patient's level of function at discharge for walking.
Include: AM-PAC 6-Clicks "Help from another person to walk in hospital room"

Managing Medications:
Instructions: Review the medical record to determine the patient's level of function at discharge for managing medications.

Communication of Antibiotic Plan at Discharge

> *This section will only appear if the status at the end of the hospital encounter was Discharge, not Transfer to another Acute Care Hospital or Death.*

1. In the Discharge Paperwork, was there documentation by the primary medical team of the duration, dosing, and/or choice of antibiotics for this patient?
Instructions: Review the medical record to determine if any documentation regarding antibiotic choice, dosing, or duration was documented in the Discharge Paperwork ONLY (not other notes from the day of discharge).
Include: Information regarding antibiotics the patient received during the hospital encounter and at discharged.
Exclude: Information regarding antibiotics ordered as prophylaxis only.

> *For this question ONLY: Choice and Dosing information may be taken from the auto-generated prescription list found in the After Visit Summary or the Discharge Summary (this is only the case for this discharge question and should not be applied to other questions regarding choice and dosing in the Sepsis registry).*

Select all that apply:

- *"Dosing"*
  Note: You may choose "Dosing" if any dose for an antibiotic given during the encounter or prescribed at discharge is listed in the discharge paperwork. The provider does not need to include all doses of antibiotics given during the encounter and at discharge.
- *"Duration"*
  Note: This must be specific as to the number of days of the **total intended antibiotic course** (inpatient and outpatient antibiotics), however this does not need to be validated for accuracy against the MAR.
  Exclude: Documentation that the provider is "awaiting culture results" to determine antibiotic coverage
- *"Antibiotic Choice"*
  Note: You may choose "Antibiotic Choice" if any antibiotic given during the encounter or prescribed at discharge is listed in the discharge paperwork. The provider does not need to include all antibiotics given during the encounter and at discharge.
- *"Patient did not receive antibiotics as an inpatient or outpatient"*
- *"None of the above"*

Abstractor Notes

1. Do you have any notes?
Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.
Select one of the following:

- *"Yes"* if you have notes that you would like to include or you would like to exclude this form.
  Answer questions 1.1 and 1.2
- *"No"* if you do not have notes that you would like to include and you do not want to exclude this form.

1.1. Abstractor Notes
Instructions: Use free text to input your notes. IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

60-Day Follow Up

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Note: This form should only be completed at or past the 60th day post-discharge from the hospitalization of interest. Do not complete this form prior to that time, unless you can see that the patient was deceased prior to the 60th day post-discharge from the hospitalization of interest.

Cases where this form is NOT REQUIRED to be completed:

- Patients who are transferred to another inpatient acute care hospital at the end of the index encounter
- Patients who are discharged to inpatient hospice, home hospice, a healthcare facility with hospice care, or a correctional facility at the end of the index encounter
- Patients who are deceased at the end of the hospital encounter

All other discharge or transfer locations require the 60 Day Follow Up form to be completed.

Jump to sub-sections:

60-Day Follow Up

1. Can you see any medical documentation in the 60 days following the hospital encounter?
Instructions: Review the medical record to determine if any medical documentation (i.e. outpatient notes, inpatient admission, emergency room visits, laboratory testing, follow-up phone calls, etc.) is available from the 60 days following the hospital encounter (i.e. 60 days post-discharge). This can be from your institution/system or others that you have access to in your medical record (i.e., using CareEverywhere).

- *"Yes"*
  Answer questions 1.1 through 1.4
  Include: Any medical documentation in the 60 days following the index hospital encounter.
- *"No"*

1.1. Is there documentation in the medical record that a follow-up phone call (i.e. transition of care call, care navigator call, etc.) was attempted or was the patient seen by their PCP or a specialist within 3 calendar days of discharge?
Instructions: Review the medical record to determine if a follow-up, transition of care, or post-discharge phone call was attempted by a pharmacist, provider, or nurse within 3 calendar days after discharge or if the patient was seen by their PCP or a Specialist within 3 calendar days of discharge.

> ***Requirements for follow-up phone call:***
>
> - *Needs to be a person calling the patient, not an automated or "robo" call*
> - *Needs to happen within 3 calendar days of discharge*
> - *Person calling needs to have access to the EMR and discharge summary from the hospital encounter*
> - *Phone call information/items discussed during the call must be accessible in the medical record*
> - *The person making the phone call does not have to be strictly employed by your site as long as the above criteria are met*

Note 1: We are allowing 3 calendar days on this data point, to account for weekend and holidays.
Include: Follow-up, transition of care, or post-discharge phone calls made by a nurse, care manager, care coordinators, social workers, medical assistants, APP, physician, nurse, pharmacist and primary care offices (where you can verify that a phone call was made via your EMR or CareEverywhere), in-person follow-up visits with the PCP within 3 calendar days.
Exclude: Follow-up phone calls made by schedulers, primary care offices, patient experience, or desk secretaries. Phone calls that you cannot verify via your EMR or CareEverywhere. Visits to an Emergency Department or admissions to the hospital within 3 days post-discharge. Home health visits with a nurse or non-physician/APP provider within 3 calendar days post-discharge.

- *"Yes"* ***Answer question 1.1.1***
- *"No"* if there is no medical documentation that a follow-up phone call was attempted, the call did not meet the above criteria, or the patient was not seen by a PCP or specialist within 3 calendar days after discharge.
- *"Patient was transferred to another healthcare facility at the end of the index encounter"*
  Include: Skilled nursing facility, sub acute rehab facility, long term acute care hospital (LTAC), dedicated disaster alternative care site, Swing Bed, inpatient psychiatric unit or inpatient rehab unit
- *"Patient was transferred to another hospital at the end of the index encounter"*
  Note: The HMS Coordinating Center is aware that we have updated our guidance to no longer require the completion of the 60-Day Follow Up form for patients that are transferred to another acute care inpatient hospitalization or inpatient hospice. This has been updated in the 30-day section for next year's abstraction.
- *"Patient was discharged home with hospice at the end of the index encounter"*
- **Note:** The HMS Coordinating Center is aware that we have updated our guidance to no longer require the completion of the 60-Day Follow Up form for patients that are discharged with home hospice. This has been updated in the 30-day section for next year's abstraction.
- *"Patient was discharged to a correctional facility at the end of the index encounter"*
  Note: The HMS Coordinating Center is aware that we have updated our guidance to no longer require the completion of the 60-Day Follow Up form for patients that are discharged to a correctional facility. This has been updated in the 30-day section for next year's abstraction.
- *"Unknown"*

1.1.1. Which of the following took place in the 3 calendar days post-discharge? (Select all that apply)

- "*Follow-up phone call attempted*"
  Answer question 1.1.1.1
  Include: Phone calls initiated by the patient to a provider in the 3 calendar days post-discharge

- *"Patient seen by PCP or specialist"*

1.1.1.1. Did the pharmacist, provider or nurse successfully reach the patient?
Instructions: Review the medical record to determine if the pharmacist, provider, or nurse was successfully able to reach the patient within 3 calendar days of discharge from the hospital encounter.

- *"Yes"*
- *"No"*
- *"Unknown"*

1.2. Did the patient have an inpatient hospitalization in the 60 days following the hospitalization of interest?
Instructions: Review the medical record to determine if the patient had a subsequent inpatient hospitalization in the 60 days following the index hospital encounter.
Include: Unplanned admissions/observation stays at acute care hospitals.
Exclude: Planned procedures/admissions at acute care hospitals, any admissions to inpatient rehab, inpatient hospice, LTACHs, and inpatient psych.
Note: The intent of this section is to capture all acute care hospital readmissions for sepsis patients.
Note 2: Planned procedures/admissions are those that were planned by the patient's care team to manage a chronic condition (example, exclude the following: Patient with known aortic stenosis undergoing TAVR surgery, patient with lung CA undergoing resection of tumor, planned interventional cardiology/radiology procedures to manage chronic conditions). Please reach out to the Coordinating Center with questions.

- *"Yes"*
  Answer questions 1.2.1 through 1.2.3
- *"No"*

1.2.1. Please enter the admission date for the first inpatient hospitalization in the 60 days following the hospitalization of interest.
Instructions: Review the medical record to determine the admission date of the subsequent inpatient hospitalization. Indicate the date in MM/DD/YYYY format. If the admission date is unknown, please enter 01/01/1600.

1.2.2. Is the discharge date available for the first inpatient hospitalization in the 60 days following the hospitalization of interest?
Instructions: Review the medical record to determine if the discharge date from the first inpatient hospitalization is available.

- *"Yes"*
  Answer question 1.2.2.1
- *"No"*
- *"Unknown"*

1.2.2.1. Please enter the discharge date for the first inpatient hospitalization in the 60 days following the hospitalization of interest.
Instructions: Review the medical record to determine the discharge date of the subsequent inpatient hospitalization, or date of death (if the patient expired in the subsequent hospitalization). Indicate the date in MM/DD/YYYY format.

1.2.3. Please enter the ICD-10 code associated with the primary discharge diagnosis at the time of discharge from the first inpatient hospitalization in the 60 days following the hospitalization of interest.

Instructions: Review the medical record to determine the ICD-10 code associated with the principal diagnosis at discharge/death as defined in the discharge summary and/or billing summary. Enter one code in the free text box.
Note: If there is no ICD-10 code associated with the readmission, enter "999".

1.3. Did the patient have a diagnosis of *Clostridium difficile* (C.Diff) infection in the 60 days following the hospital encounter?
Instructions: Review the medical record to determine if the patient had a diagnosis of C.Diff, not previously recorded, in the 60 days following the index hospital encounter.
Select one of the following:

- *"Yes"*
  Answer questions 1.3.1 and 1.3.2
  Exclude: C.Diff diagnosis already captured during the hospital encounter of interest.
- *"No"*
- *Unknown"*

1.3.1. Indicate the Date of Diagnosis of C.Diff
Instructions: Review the medical record to determine the date of the diagnosis of C.Diff, not previously recorded, in the 60 days following the index hospital encounter. Enter the date in (MM/DD/YYYY) format.

1.3.2. Did the patient have an official laboratory test for *Clostridium difficile* (C. Diff) that resulted as positive?
Instructions: Review the medical record to determine if the patient had an official laboratory test for C.Diff that resulted as positive during the 60 days following the hospital encounter.

- *"Yes"*
- *"No"*
- *"Unknown"*

2. At the 60th day post-discharge from the hospitalization of interest, what is the patient's location/status?
Instructions: Review the medical record to determine if the patient is in the hospital, hospice, at an extended care facility, in a correctional facility, or deceased on the 60th day post-discharge from the index hospital encounter.

> *Reminder: This should be the status of the patient on exactly the 60th day post-discharge from the hospitalization you are abstracting.*

Note: If there is information that the patient is in the hospital, inpatient hospice, ECF, prison, or deceased on the 60th day post-discharge, the collection of patient-reported outcomes is not required and the next two sections of this form will not appear.

Select one of the following:

- *"Hospital (observation or inpatient admission, including inpatient rehab and inpatient psych)"*
  Include: Inpatient rehabilitation, inpatient psychiatric facilities
- *"Inpatient Hospice"*
  Include: Inpatient hospice care, hospice inpatient facility, patients that were discharged to inpatient hospice regardless of if there is a documented location on the 60th day
- *"Home Hospice"*
  Include: patients that were discharged to home hospice regardless of if there is a documented location

on the 60th day

- *"Hospice within another healthcare facility (SNF, SAR, LTACH, disaster alternative care site, ECF, nursing home, ALF, etc.)"*
  Include: Hospice care provided in a skilled nursing home, nursing home, skilled nursing facility (SNF), sub-acute rehabilitation (rehab), sub-acute rehabilitation care, post-acute rehabilitation center
- *"Extended Care Facility"*
  Include: Skilled nursing home, nursing home, skilled nursing facility (SNF), Sub-acute rehabilitation (rehab), sub-acute rehabilitation care, post-acute rehabilitation center, LTAC/LTACH

  Note: In order to make this selection, there must be evidence in the medical record that shows that the patient is still admitted to the Extended Care Facility on the 60th day post-discharge.
- *"Correctional facility"*
  Note: This information can be found at: https://mdocweb.state.mi.us/otis2/otis2.aspx
  Include: Correctional facility, jail, prison, penitentiary
- *"Deceased"*
  Answer question 2.1
  Include: Patient expired, patient deceased, termination of life
- *"None of the above"*
- "*Unknown*"

2.1. Deceased was selected. Please indicate the date of death.
Instructions: Review the medical record to determine the date the patient died or expired. Indicate the date in the MM/DD/YYYY format. If the date of death is unknown, please enter 1/1/1900.

60-Day Follow Up Contact Information

Note: Throughout this section, the term "caregiver" refers to a person that your hospital protocols/policies deem appropriate to answer medical questions for a patient in the event of incapacitation or inability to respond. These individuals should only be spoken to if the patient is unable to answer your questions.

1. Which of the following methods of contacting the patient or their caregiver are available?
Instructions: Review the medical record to determine which methods of contact are available for the patient or their caregiver.

> ***Note:*** *The answers to this question will branch through to indicate if collection of patient-reported outcomes is required and, if so, which methods of collecting patient-reported outcomes are required (phone, email, and/or text).*

Select all that apply:

- "*Home or cell phone*"
  Answer questions 1.1 and 1.2
- *"Email address"*
  Note: If this is the ONLY selection made, please complete the electronic PROs process via the PROs tab using the patient or caregiver's email address.
- *"No contact information available in the medical record"*
  Note 1: Use this option only if a phone number AND email address are not listed in the medical record for the patient or their caregiver.

Note 2: Use this option if you know the phone number and/or email address belongs to a professional court-appointed guardian. Please refrain from contacting professional court-appointed guardians.

- *"An Institution-Based PROs process (This would be utilized in lieu of the HMS Electronic PROs process)"* ***Answer questions in section noted below***
- *"N/A - Medical record indicates a change in patient status since 60th day post-discharge which prohibits contacting the patient (e.g., in hospital, deceased, in hospice, etc. at the time follow up is to be made)"*
  Note: This selection should be made if you can determine via the medical record that there has been a status change for this patient AFTER the 60th day post-discharge that prohibits you from contacting the patient. These situations include the patient being admitted to the hospital, in hospice, deceased, at an extended care facility, or in a correctional facility AFTER the 60th day on the day that you are attempting to contact the patient.

> *Example: At the 60th day post-discharge, there is no documentation of the patient's status in the medical record. You are attempting to call the patient on the 62nd day post-discharge and you can see that the patient is admitted to the hospital on this day. Please utilize this selection option in this scenario.*

1.1. How many phone calls did you make to contact this patient?
Instructions: Please select the number of phone call attempts that were made to contact this patient.
Note 1: Please attempt to call the patient or caregiver up to 3 times, unless you are notified otherwise (i.e., the patient or caregiver declines to provide information, the phone number is disconnected or is a wrong number, etc.). If the patient or caregiver does not respond to a phone call on the 3rd attempt, you do not need to keep contacting them via phone. Please DO NOT attempt all phone calls on the same day. You may attempt the first two calls on the same day, if they are completed at different times (i.e., morning and afternoon).
Note 2: If the first number you contact for the patient or caregiver is incorrect and you try another number that is found to be correct, please only count the attempts made to the CORRECT phone number.

- *"1"*
  Answer question 1.1.1
- *"2"*
  Answer questions 1.1.1 and 1.1.2
- *"3"*
  Answer questions 1.1.1 through 1.1.3

1.1.1. Please indicate the date of the first follow-up phone call.
Instructions: For the first phone call, enter the date on which the phone call was made. Indicate the date in the MM/DD/YYYY format.
Reminder: All phone calls MUST be made on the 60th day post-discharge from the hospitalization of interest or after. Phone calls should not be made prior to this time.

1.1.2. Please indicate the date of the second follow-up phone call.
Instructions: For the second phone call, enter the date on which the phone call was made. Indicate the date in the MM/DD/YYYY format.

1.1.3. Please indicate the date of the third follow-up phone call.
Instructions: For the third phone call, enter the date on which the phone call was made. Indicate the date in the MM/DD/YYYY format.

1.2. Were you able to obtain information from the patient or their caregiver via phone? Select "Yes" if you found out via this method that the patient was deceased within the 60 days post-discharge.
Instructions: Indicate whether or not you were able to obtain information from the patient or their caregiver. Some individuals may not be able to communicate with you directly due to language barriers, cognitive status, lack of education, etc. It is only acceptable to speak to someone other than the patient if you can confirm the identity of the patient and you know the person has the appropriate authority to speak on behalf of the patient per your hospital policies. If you are voluntarily notified by a caregiver via the phone that the patient is deceased, you should select "Yes" to this question.

- *"Yes"*
  Answer question 1.2.1
- *"No"*
  Answer questions 1.2.2 through

1.2.1. Is the patient deceased (within the 60 days post-discharge)?
Instructions: Indicate whether the patient is reported via the phone call to be deceased **within the 60 days post-discharge**. This question is for information gathered on the **phone call only**. If you are told on the phone call that the patient is deceased AFTER the 60 days post-discharge, please answer "No" to the question above".

- *"Yes"*
  Answer question 1.2.1.1
- *"No"*

1.2.1.1. Please enter the patient's reported day of death.
Instructions: Indicate the date that the patient has expired/is deceased **within the 60 days** following the hospital encounter. Enter the date in MM/DD/YYYY format.

1.2.2. Indicate the FINAL reason as to why you were unable to successfully complete the 60-day follow-up phone call. This is the reason that you were unable to complete the follow-up call on the last attempt to reach the patient by phone.
Instructions: Indicate the final reason as to why you were unable to successfully complete the 60-day follow up phone call on your LAST attempt to contact the patient.

- *"Wrong number"*
  Note: In this scenario, please be sure to check back in the medical record to see if there are alternate phone numbers listed for the patient that you could contact. If that second phone number that you contact IS the correct phone number, your first phone call attempt would be considered to be the first phone call attempt to the CORRECT phone number.
- *"Disconnected number"*
  Note 1: If you have an email address for the patient or caregiver, you will be required to complete the electronic PROs process via email. If you do not have an email address for the patient or caregiver, this will be the end of your attempts to contact the patient.
  Note 2: If your site utilizes an Institution-Based PROs process, you will be required to complete the questions in the next section for this process and fill out the patient's responses to that PROs process in the next section of this survey.
- *"Patient or caregiver did not answer the phone"*
  Include: Another family member answers the phone and indicates that the patient is not home/unable to talk at this time (not because of a status change).

- *"Patient or caregiver refused to answer questions"*
  Note: If a patient or caregiver states that they do not want to answer questions over the phone, please offer to send the electronic PROs process (or Institution-Based PROs process) to them to be able to elicit their feedback. If they take that option, please select "Patient requested electronic (or Institution-Based) PROs process" below.
- *"Patient unable to respond due to cognitive impairments and no caregiver available to respond"*
  Note: In this situation, you will still be required to complete the electronic PROs process via email or text (or Institution-Based PROs process) in the event that there is a caregiver that is available to answer questions and is monitoring those contact methods for the patient.
- *"Language barrier"*
  Note 1: If there is a noted language barrier in the medical record that would exist between you and the patient, please attempt to utilize your hospital's translation services on the phone call before making this selection.
  Note 2: In this situation, you will still be required to complete the electronic PROs process via email or text (or Institution-Based PROs process) as our electronic PROs process is available in other languages and patients/caregivers may have accessibility equipment on their devices to overcome language barriers.
- *"Patient requested electronic PROs process"*
  Note: This should only be selected if the patient asks if there is a way to answers these questions electronically or if you would not have the chance to obtain the PROs information otherwise.
- *"Patient requested Institution-Based PROs process"* ***Answer questions in the Institution-Based PROs Process section below***
  Note: This should only be selected if the patient asks if there is a way to answers these questions via their patient portal/Institution-Based process or if you would not have the chance to obtain the PROs information otherwise.
- *"Patient had a status change on or since the 60th day post-discharge (in hospital, ECF, correctional facility, etc.)"*
  Note: Utilize this selection if you are notified by the patient's caregiver that there was a status change for the patient (in hospital, correctional facility, ECF, or hospice) **on or since the 60th day post discharge**. If you are informed that the patient is deceased, this selection should only be made if the patient's date of death is AFTER the 60th day post-discharge.

<u>Institution-Based PROs Process Questions:</u>

1. Were you successful in gathering follow-up information for the patient utilizing your Institution-Based PROs process?
Instructions: Indicate if the patient or caregiver responded to the PROs questions via your Institution-Based PROs process.

- *"Yes"*
  You will then be taken to the next section in this form to enter in the information gathered via this process.
- *"No"*

60-Day Follow Up Patient Reported Outcomes

Note: Throughout this section, the term "caregiver" refers to a person that your hospital protocols/policies deem appropriate to answer medical questions for a patient in the event of incapacitation or inability to respond. These individuals should only be spoken to if the patient is unable to answer your questions. If the caregiver is responding, they should answer questions based upon how the patient would answer these questions if they were able to; they should not answer the questions from their own experience.

Tips/Tricks for Administering the PROs Survey (from WHODAS):

- Be serious, pleasant, and self-confident; nervousness can make the respondent feel uneasy
- Speak slowly and clearly to set the tone
- Appear interested in the questions you are asking
- Be aware that different respondents require different amounts of information about what you are asking them, and adjust your instructions accordingly
- Make a good introduction
  - State your name and role
  - Note that this survey is for gathering information for important, worthwhile quality improvement work
  - Note that the respondent's participation is vital to improving quality of care
  - Note that respondent's responses will be kept confidential to the extent provided for by law or site-specific regulations
- Provide feedback as necessary to reinforce focused, attentive respondent behavior and discourage digression, distraction, and inappropriate inquiries
  - When respondents have inappropriate inquiries (e.g., asking for advice, information, or the interviewer's personal experiences), you can use one of these phrases:
    - "In this interview, we are really interested in learning about *your* experiences."
    - "When we finish, let's talk about that."
    - "We will come to that later."
  - When respondents digress from the questions by giving lengthy responses or providing more information than is necessary, use one of these phrases:
    - "I have many more questions to ask, so we should move on to those now."
    - "If you would like to talk more about that, we can do that at the end of the interview."

1. Question Directed to Patient or Caregiver: You were discharged from [HOSPITAL NAME] on [DATE OF DISCHARGE]. In the 60 days after that hospitalization, were you hospitalized again?
Instructions: Ask if the patient was hospitalized in the 60 days post-discharge from the index hospital encounter.

- *"Yes"*
  Answer question 1.1
- *"No"*
- *"Unknown"*
- *"Declined to respond"*

1.1. Question Directed to Patient or Caregiver: Were any of these rehospitalizations at a site/institution other than [SITE/INSTITUTION NAME]?
Instructions: Ask if the patient was hospitalized in the 60 days post-discharge from the index hospital encounter at an institution or site other than your site/institution.

> ***Note:*** *This question is seeking to understand if there may have been a readmission noted by the patient in an institution or site that does not share EHR data with your site, so it may not have been captured by chart review.*

- *"Yes"*
- *"No"*
- *"Unknown"*
- *"Declined to respond"*

2. Question Directed to Patient or Caregiver: Did you have a follow-up appointment with an established or new primary care provider in the 60 days post-discharge?
Instructions: Ask if the patient had follow up with a new or established primary care provider in the 60 days post-discharge from the index hospital encounter.

- *"Yes, established primary care provider"*
  Answer question 2.1
  Include: Patient is seen by another PCP in their current PCP's same practice/office
- *"Yes, new primary care provider"*
  Answer question 2.1
- *"No"*
  Answer question 2.2
- *"Unknown"*
- *"Declined to respond"*

2.1. Question Directed to Patient or Caregiver: How many days after your discharge did the visit with the primary care physician occur?
Instructions: Ask how many days out from discharge from the index hospital encounter the patient had a follow-up appointment with a primary care physician.

- *"< 15 days"*
- *"15-30 days"*
- *"> 30 days"*
- *"Unknown"*
- *"Declined to respond"*

2.2. Question Directed to Patient or Caregiver: If no, why?
Instructions: Ask why the patient did not have a follow-up appointment with a primary care provider in the 60 days post-discharge.
Select all that apply:

- *"Appointment is scheduled and will occur after 60 days post-discharge"*
- *"Appointment was cancelled by PCP office"*
- *"Awaiting scheduling"*
- *"Concerned about cost"*
- *"Concerned about needing to quarantine"*
- *"Concerned about personal safety"*
- *"Did not feel it was necessary to follow up"*

- *"Did not know who to follow up with"*
- *"Felt too sick to follow up"*
- *"Had a visit with a different medical provider instead"*
- *"Lack of transportation"*
- *"No follow-up was required"*
- *"Personal reasons"*
- *"Unable to find a primary care provider"*
- *"Unable to make an appointment"*
- *"Was readmitted to the hospital or another facility"*
- *"Unsure"*
- *"Declined to respond"*

3. Question Directed to Patient or Caregiver: Did you have a follow-up appointment with an established or new outpatient physician specialist (e.g., cardiologist, pulmonologist, etc.) in the 60 days post-discharge?
Instructions: Ask if the patient had a follow-up appointment with any other new or established outpatient physician specialist in the 60-days post-discharge from the index hospital encounter.

> *Intent: We ask about other outpatient physician specialists in addition to PCPs because we know that there are some patients who have a specialist as their primary care provider because of chronic conditions. We want to capture if these visits are happening post-discharge in the event that the patient does not have a PCP.*

- *"Yes, established specialist"*
  Answer question 3.1
  Include: Patient is seen by another specialist in their current specialist's same practice/office
- *"Yes, new specialist"*
  Answer question 3.1
- *"No"*
- *"Unknown"*
- *"Declined to respond"*

3.1. Question Directed to Patient or Caregiver: How many days after your discharge did the visit with the outpatient physician specialist occur?
Instructions: Ask how many days from discharge from the index hospital encounter the follow-up appointment with the outpatient physician specialist occurred.

- *"< 15 days"*
- *"15-30 days"*
- *"> 30 days"*
- *"Unknown"*
- *"Declined to respond"*

4. Question Directed to Patient or Caregiver: Were you employed full-time, part-time, or not at all prior to your hospitalization?
Instructions: Ask about the patient's employment status immediately prior to the index hospital encounter.

- *"Full-time"*
  Answer question 4.1
- *"Part-time"*
  Answer question 4.1
- *"Not at all"*
- *"Declined to respond"*

4.1. Question Directed to Patient or Caregiver: Were you able to return to work within the 60 days post-discharge?
Instructions: Ask if the patient was able to return to work in the 60 days post-discharge from the index hospital encounter.

- *"Yes"*
  Answer questions 4.1.1 and 4.1.2
- *"No"*
  Answer question 4.1.3
- *"Declined to respond"*

4.1.1. Question Directed to Patient or Caregiver: When did you return to work? (Note: This date should be within the 60 days post-discharge.)
Instructions: Ask when the patient reports to have been able to return to work. Indicate the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

4.1.2. Question Directed to Patient or Caregiver: Did you have new/updated accommodations upon returning to work because of your health status?
Instructions: Ask if the patient had new or updated accommodations to their work duties upon returning to work in the 60 days post-discharge from the index hospital encounter.
Include: Reduced hours, modified duties, complete role change, switch to remote work, etc.

- *"Yes"*
  Answer question 4.1.2.1
- *"No"*
- *"Declined to respond"*

4.1.2.1. Question Directed to Patient or Caregiver: Were the new accommodations…
Instructions: Ask what new or updated accommodations the patient had when they returned to work in the 60 days post-discharge.
Select all that apply:

- *"Reduced hours"*
- *"Modified duties"*
- *"Complete role change"*
- *"Worked remotely"*
- *"None of the above"*

4.1.3. Question Directed to Patient or Caregiver: Was the reason you were unable to return to work because of health issues?

Instructions: Ask if the patient was unable to return to work in the 60 days post-discharge because of health issues.

- *"Yes"*
- *"No"*
- *"Declined to respond"*

5. Question Directed to Patient or Caregiver: How much were you emotionally affected by your health condition in the 60 days post-discharge?

Instructions: Ask how much the patient was emotionally affected by their health condition in the 60 days post-discharge.

Reminder: This should be something new or worsening because of the hospitalization of interest that was not happening at the same level before that hospitalization. If things are the same as before the hospitalization, select "None".

Definition from WHODAS: This question refers to the degree to which respondents have felt an emotional impact due to their health condition. Emotions may include anger, sorrow, regret, thankfulness, appreciation, or any other positive or negative emotions.

- *"None"*
- *"Mild"*
- *"Moderate"*
- *"Severe"*
- *"Extreme"*
- *"Declined to respond"*

Instruction Directed to Patient or Caregiver

This portion of the questionnaire asks about difficulties due to health conditions. Health conditions include diseases or illnesses, other health problems that may be short or long lasting, injuries, mental or emotional problems, and problems with alcohol or drugs. Think back to the second month after discharge from the hospitalization of interest and answer these questions, thinking about how much difficulty the patient had doing the following activities. For all items in question 1, please provide the answer that most closely aligns with the patient's experience using the scale (0-4): none, mild, moderate, severe, or extreme/cannot do.

Definition from WHODAS: Having difficulty with an activity means: increased effort, discomfort or pain, slowness, or changes in the way the person does the activity

6. In the second month after discharge, how much difficulty did you have…

- *Concentrating on doing something for ten minutes?*

Definition from WHODAS: This question is intended to determine the respondent's rating of difficulty with concentration for a short period, defined here as 10 minutes. Generally, respondents understand this item. However, if clarification is requested, encourage the respondent to think about their concentration in usual circumstances, rather than when they are preoccupied by a problem or are in an unusually distracting environment. If necessary, prompt the respondent to think about their concentration while they were doing something such as work tasks, reading, writing, drawing, playing a musical instrument, assembling a piece of equipment, and so on.

- *Learning a new task, for example, learning how to get to a new place?*

Definition from WHODAS: In this question, learning a new route is offered as an example. If respondents ask for clarification or appear to be thinking only about learning how to get to a new place, encourage them to think of other situations in the past month where learning something new was required, such as: a task at work, school, home, or leisure. Ask respondents, when rating themselves, to consider how easily they acquired new information, how much assistance or repetition they needed in order to learn and how well they retained what they learned.

- *Walking across a room?*
- *Standing for long periods, such as 30 minutes?*
- *Walking a long distance, such as a half mile?*

- *Washing your whole body?*

Definition from WHODAS: This question refers to respondents washing their entire body in whatever manner is usual for their culture. If respondents report that they have not washed their bodies in the specified timeframe, ask whether this is due to a health condition (as defined by WHODAS 2.0). If respondents report that it is due to a health condition, then code the item "5" for "Extreme or cannot do".

- *Getting dressed?*

Definition from WHODAS: This question includes all aspects of dressing the upper and lower body. Ask respondents to consider activities such as gathering clothing from storage areas (i.e. closet, dressers) and securing buttons, tying knots, etc., when making the rating.

- *Dealing with people you don't know?*

Definition from WHODAS: This item refers to interactions with strangers in any situation, such as: shop-keepers, service personnel, or people from whom one is asking directions. When making the rating, ask respondents to consider both approaching such individuals, and interacting successfully with them to obtain a desired outcome.

- *Taking care of your household responsibilities?*

Definition from WHODAS: This global question is intended to elicit respondents' appraisal of any difficulty they encounter in maintaining the household and in caring for family members or other people they are close to. Ask respondents to consider all types of household or family needs, including: physical, emotional, financial, or psychological needs. In some cultures, males may indicate that they do not have household responsibilities. In this situation, clarify that household responsibilities include: managing finances, car and home repairs, caring for the outside area of the home, picking up children from school, or helping with homework. Here, "household" is defined broadly. In the case of participants who do not have a stable dwelling place, there are still activities surrounding the upkeep and maintenance of their belongings. This question refers to those activities.

- *Completing your day-to-day work?*

Definition from WHODAS: This global question is intended to elicit respondents' appraisal of difficulties encountered in day-to-day work or school activities. This includes issues such as attending on time, responding to supervision, supervising others, planning and organizing, meeting expectations in the workplace and any other relevant activities.

- *How much time did you spend on your health condition, or its consequences?*

Definition from WHODAS: This question seeks to capture an overall rating or snapshot of the portion of the past 30 days spent by respondents in dealing with any aspect of their health condition. This may include time spent in activities such as: visiting a treatment center, managing financial matters related to their health condition (payment of bills, reimbursement of insurance or benefits, etc.), and obtaining information about the health condition or in educating others about it.

- *How much of a problem did your family have because of your health problems?*

Definition from WHODAS: Family is broadly defined to include relatives; however, it also includes those to whom respondents are not related but consider to be like family, including those who may be sharing in the financial aspects of the health condition. The focus here is on problems created by the interaction of a respondent's health condition with the world in which the person lives. The question seeks information on problems that are borne by the family; these might include financial, emotional, physical problems, etc.

- *How much has your health been a drain on the financial resources of you or your family?*

Definition from WHODAS: "Family" is defined above. The focus of this question is on the depletion of personal savings or current income to meet the needs created by a health condition. If respondents have experienced a significant financial drain but their family has not, or vice versa, they should respond to the question based on the drain experienced by either party.
Note: If Mild, Moderate, Severe, or Extreme/Unable to Do are selected as a response to this question, question 6.2 will branch below.

Select one of the following for each of the above items:

- *"0 – None"*
- *"1 – Mild"*
  Answer question 6.1
- *"2 – Moderate"*
  Answer question 6.1
- *"3 – Severe"*
  Answer question 6.1
- *"4 – Extreme/unable to do"*
  Answer question 6.1
- *"Decline to respond"*

6.1. Is your ability to [...] worse, the same, or better than prior to your hospitalization?
Instructions: If difficulty is expressed for any of the responses in the above question, this question will then ask if the difficulty with performing the task is worse, the same, or better than prior to the patient's hospitalization.
Select one of the following for each difficulty noted:

- *"Worse"*
- *"The same"*
- *"Better"*

6.2. Because of the financial cost of dealing with your hospitalization and related care, did any of the following things happen in the 60 days post-discharge?
Instructions: Ask if the patient had any of the listed things occur in the 60 days post-discharge because of the financial cost of dealing with the index hospital encounter and related care.

> ***Reminder:*** *This should be something new or worsening because of the hospitalization of interest that was not happening at the same level before that hospitalization. If things are the same as before the hospitalization, select "None of the above".*

Select all that apply:

- "*You skipped or delayed getting medical care you thought you needed because of the cost*"
- "*You took less medication than was prescribed to you because of the cost*"
- "*None of the above*"
- "*Declined to respond*"

PROs How-To

Begin the electronic PROs process by sending an email and/or text message **after** three unsuccessful phone call attempts, or if the **final phone call attempt** resulted in:

- Patient or caregiver did not answer the phone
  - You will determine this after the 3rd attempt.
  - Select this option if the patient did not answer the phone after three attempts.
  - Select this option if someone else answers the phone and they are not the patient's caregiver.
- A disconnected number
  - You will determine this on 1st, 2nd, or 3rd attempt.
- A wrong number
  - You will determine this on 1st, 2nd, or 3rd attempt.
- A language barrier
  - If you determine a language barrier during the phone call, you should begin the electronic PROs process if you were not able to obtain information from the patient.
  - If the EMR states that English is not the patients primary or preferred language, do not automatically skip to the electronic PROs process without attempting to call the patient.
  - The survey sent to the patient is available in four languages: Arabic, Chinese Traditional, Chinese Simplified, and Spanish.
- The patient requested electronic PROs
  - You will determine this on 1st, 2nd, or 3rd attempt.
- Patient unable to respond due to cognitive impairments and no caregiver available to respond
  - You will determine this on 1st, 2nd, or 3rd attempt.

Phone Number for Sending Text Messages Rules:

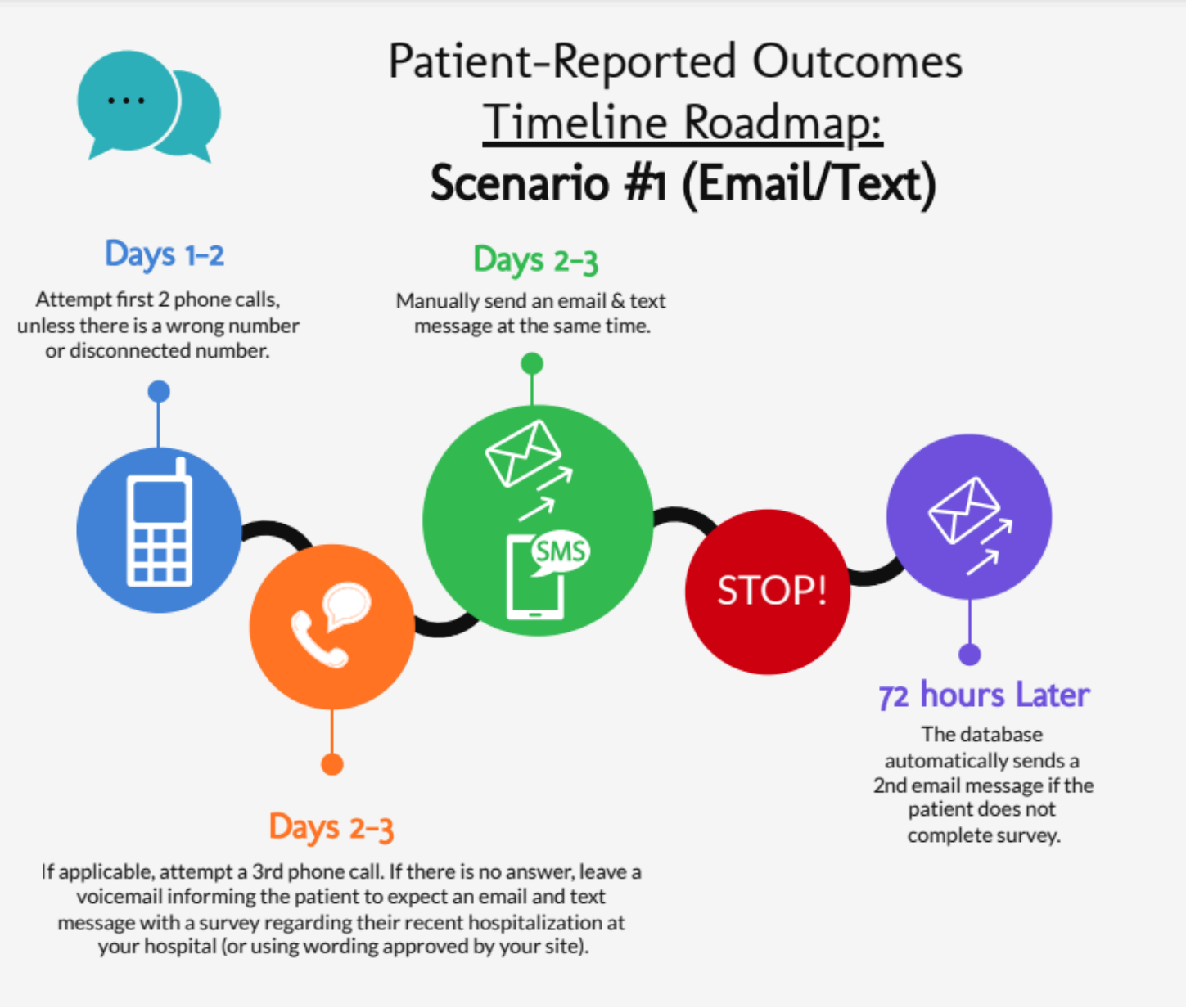
- If the patient/caregiver has both a home/landline phone number AND a cell/mobile phone number, utilize the cell/mobile phone number for sending electronic PROs below.
- If the patient/caregiver has a phone number listed and you cannot tell if it is a landline or a cell phone, utilize the phone number that you have available for sending electronic PROs.
- If the patient/caregiver has a phone number listed that is listed specifically as a landline phone number, utilize the fake phone number given below when sending electronic PROs.
- If the patient/caregiver only has a cell phone number listed, utilize that phone number for sending electronic PROs.

The following pages include the steps to complete the electronic PROs process for each scenario below.

- Scenario #1 – Both email address and phone number available
- Scenario #2 – ONLY email address available
- Scenario #3 – ONLY phone number available

***DO NOT begin the electronic PROs process if you were successful in completing a follow up phone call with the patient, if the patient refused, or if you know the phone number/email address do not belong to the patient or their caregiver.

Scenario #1 – Both Email Address and Phone Number Available

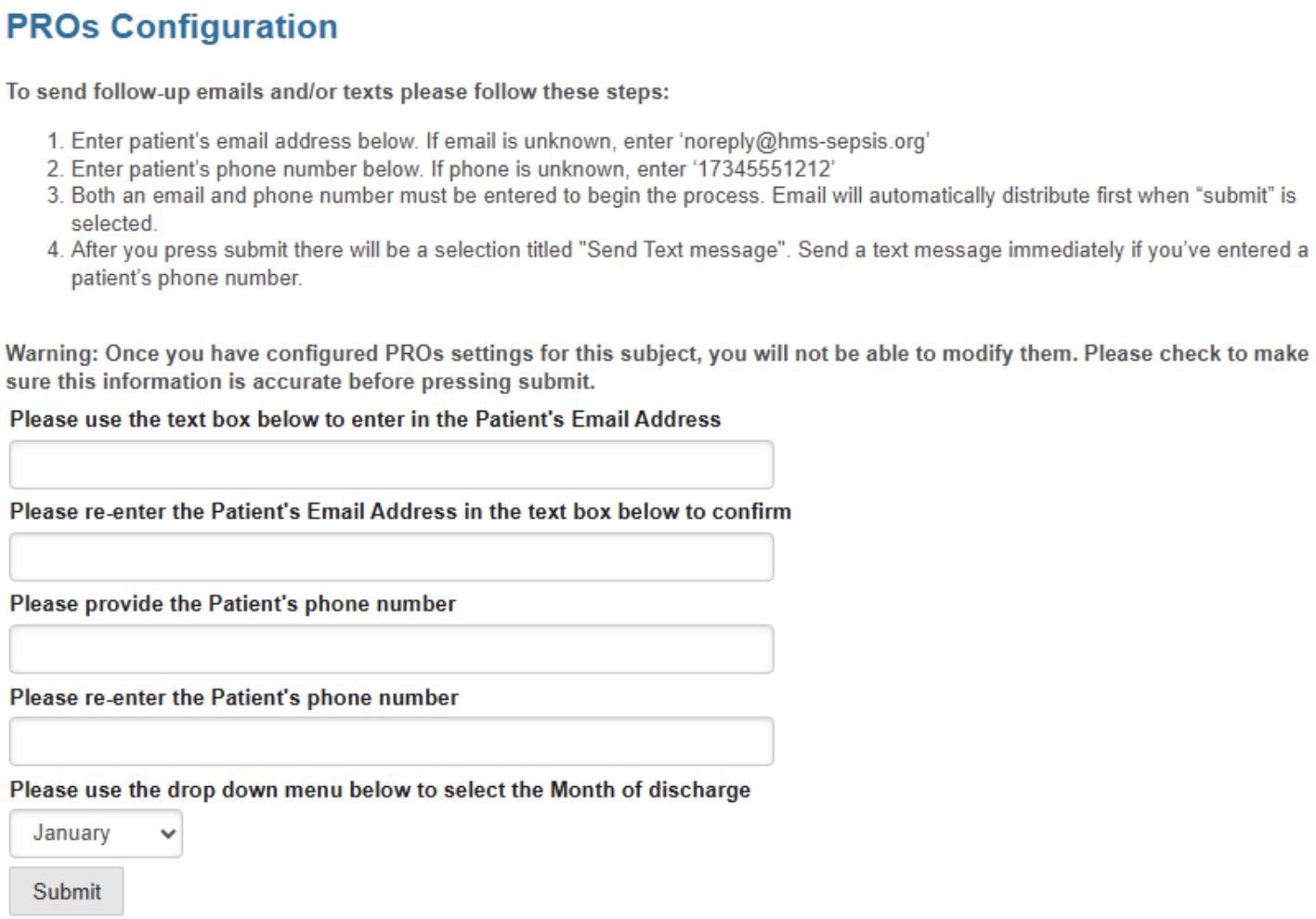


On the third/final phone call attempt, if there is no answer, please leave a detailed voice message (if able). In the voicemail, state the purpose of the phone call and that the person you are calling will be receiving an email and text message shortly from the HMS Coordinating Center, your quality improvement partner, with a survey link to obtain information about their recent hospital stay.

PROs Tab:

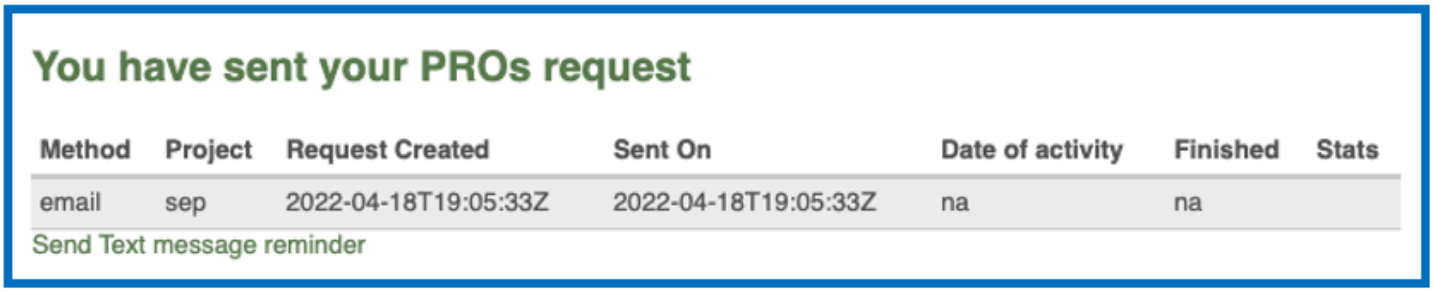
After three unsuccessful attempts to reach the patient using a phone call, click on the PROs tab and then proceed with the following steps:
(*Both an email address and mobile phone number must be entered to begin the process)*

1. Enter the patient's **email address** found in the medical record in the first text box.
2. Re-enter the patient's **email address** in the second text box.
3. Enter patient's **phone number (1xxxxxxxxxx**, no spaces) found in the medical record in the third text box.
4. Re-enter the patient's **phone number** in the fourth text box.
5. Use the drop-down menu to select the **month of discharge** based on the medical chart.
6. Once all information is confirmed correct, click the "**Submit**" button.



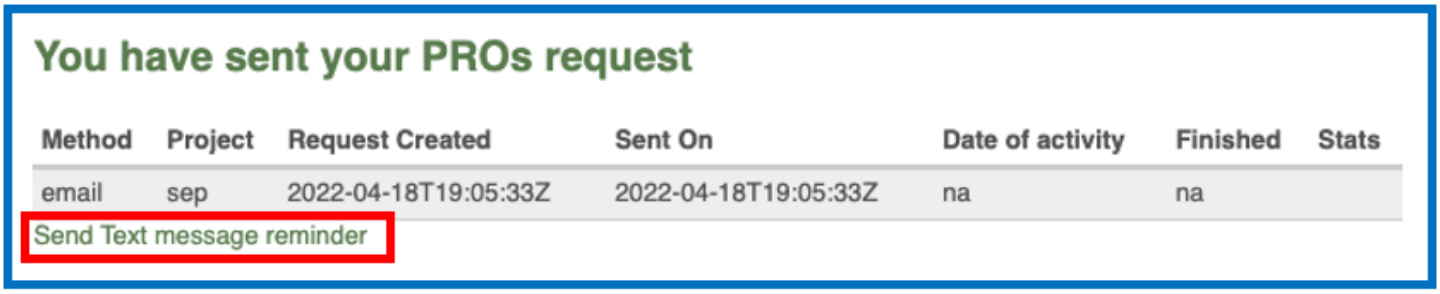
<u>PROs via Email and Text (sending simultaneously):</u>

1. Click the "**Submit**" button on the PROs tab after you complete the steps above. This sends an email message with the survey link to the patient.
2. You will be returned to the "**View**" tab.
3. Click on the "**PROs**" tab. The image below will appear if your email was sent to the patient.

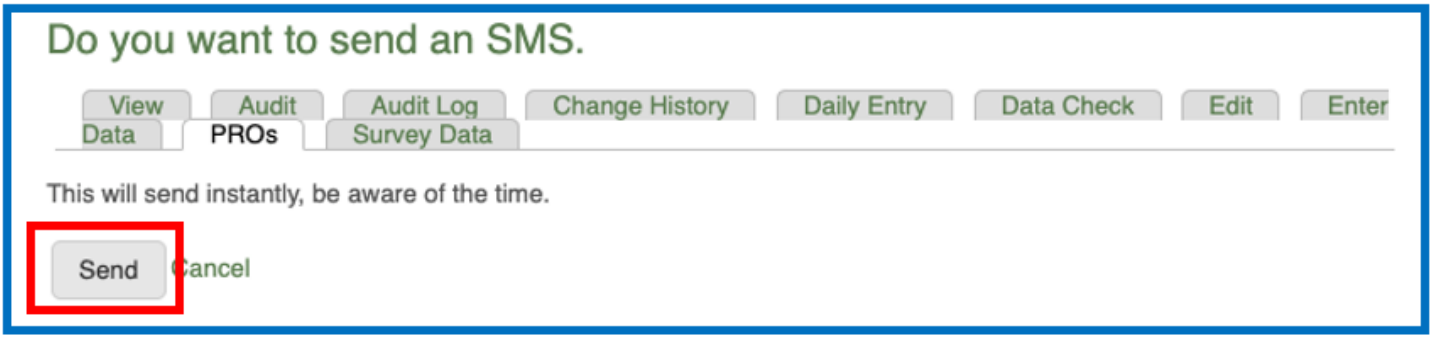


Note: *You can view the date and time the email was sent. Subtract 4 hours from the time sent for Eastern Standard Time, e.g., 19:05:33 is equal to 15:05:33 or 3:05 pm. Email will automatically distribute first when "submit" is clicked. Omit the letters T and Z on the date/time stamp, those are internal indicators.*

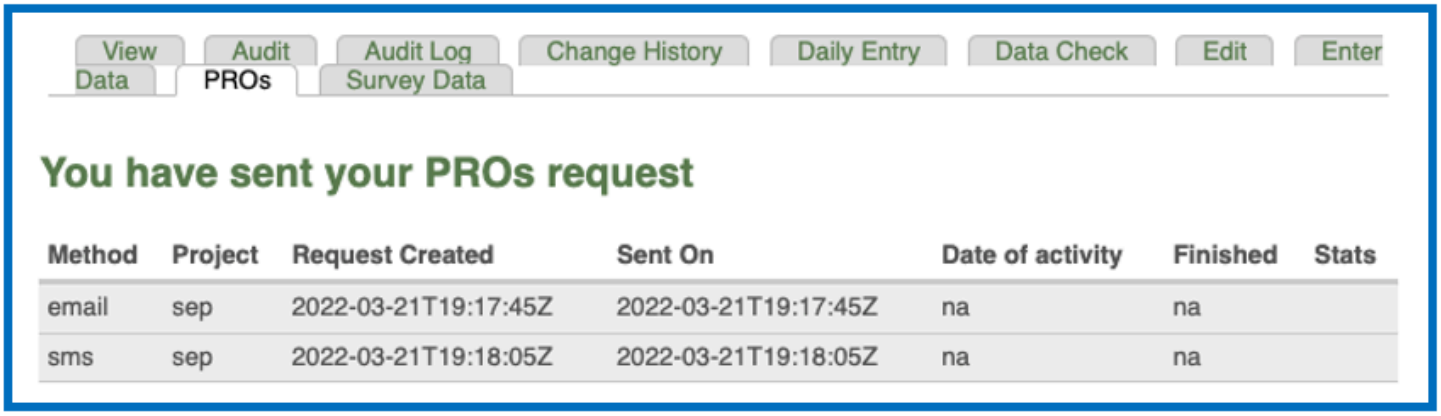
4. **Immediately send a text message** after you send the email message.
5. Click the "**Send Text message reminder**" link on the PROs tab as shown in the image below.



6. Click the "**Send**" button to send a text message to the patient. You will see the image below appear to confirm that you want to send a text message to the patient.

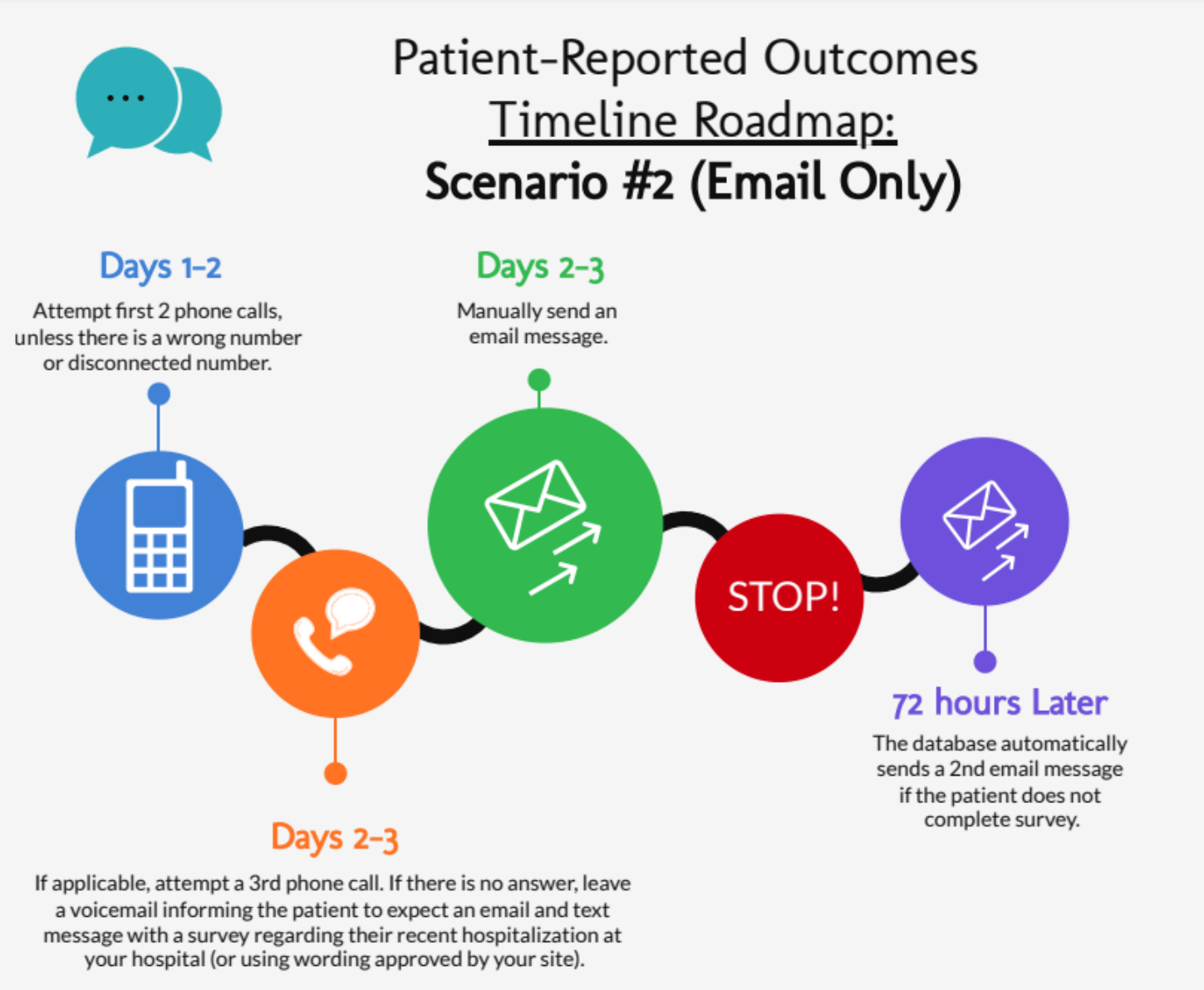


7. After you click "**Send**", you will be returned to the "**View**" tab.
8. Click the "**PROs**" tab to confirm your text message was sent to the patient. The following screen will appear. You can view the date and time the text message was sent.



There is NO further action you need to take after you send this text message.

Scenario #2 – Only Email Address Available



How to use the PROs tab

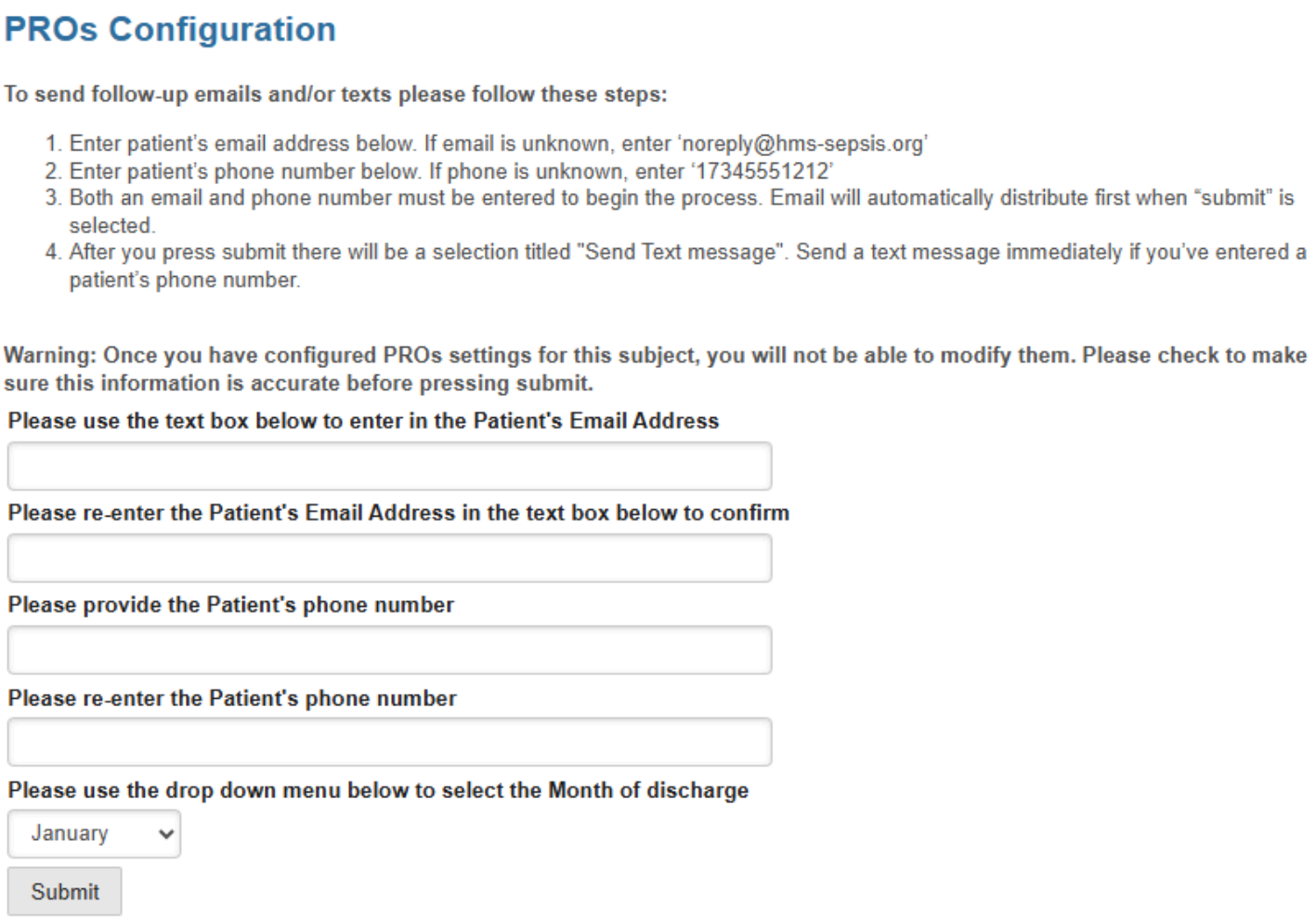
On the third phone call attempt, if there is no answer, please leave a detailed voice message (if able). In the voicemail, state the purpose of the phone call and that the person you are calling will be receiving an email shortly from the HMS Coordinating Center, your quality improvement partner, with a survey link to obtain information about their recent hospital stay.

After three unsuccessful attempts to reach the patient using a phone call, click on the PROs tab and complete the following steps:

(Both an email and pseudo-mobile phone number must be entered to begin the process)

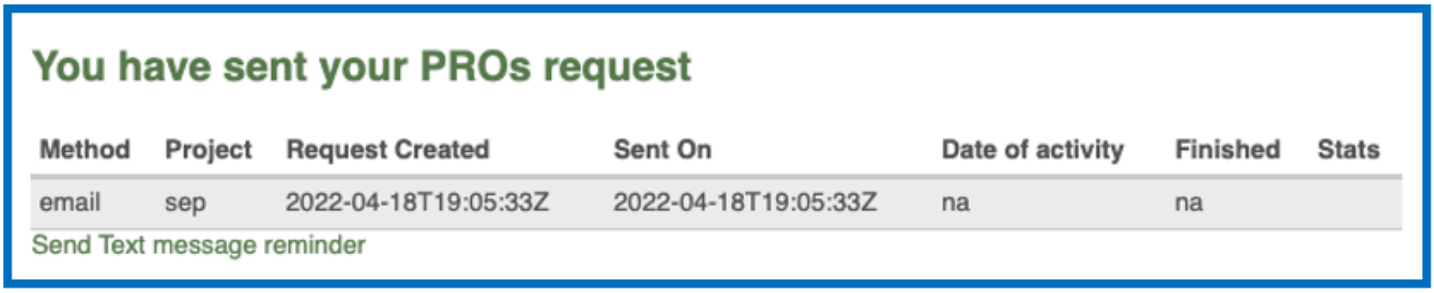
1. Enter the patient's **email address** found in the medical record in the first text box.
2. Re-enter the patient's **email address** in the second text box.
3. Since the patient's phone number is not available in the medical record, enter **'17345551212'** in the third text box.
4. Re-enter **'17345551212'** in the fourth text box.
5. Use the drop-down menu to select the month of discharge based on the medical chart.

6. Once all information is confirmed correct, click the “Submit” button.



PROs via Email:

9. Click the “**Submit**” button on the PROs tab after you complete the steps above. This sends an email message with the survey link to the patient.
10. You will be returned to the “**View**” tab.
11. Click on the “**PROs**” tab. The image below will appear if your email was sent to the patient.

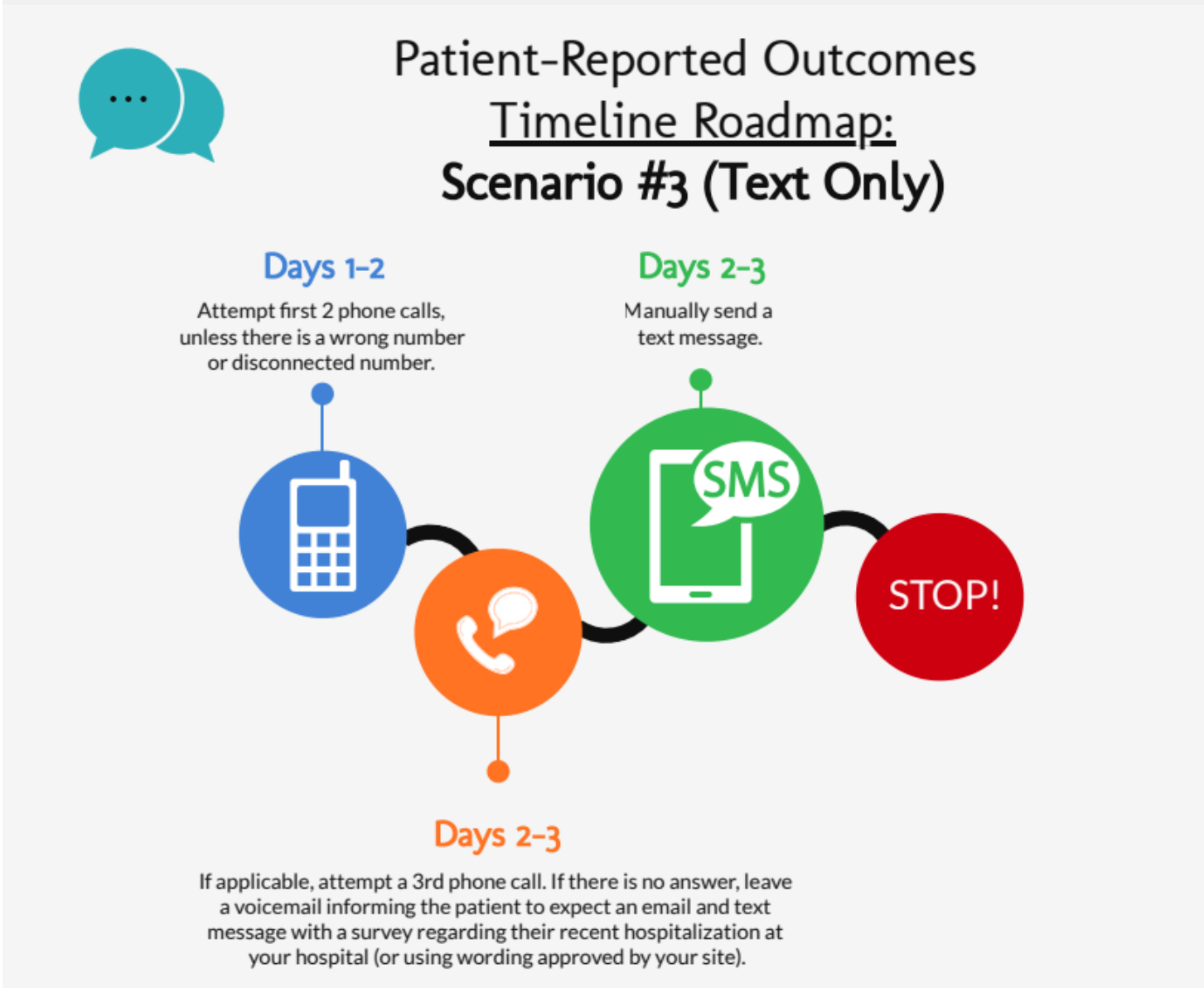


Note: *You can view the date and time the email was sent. Subtract 4 hours from the time sent for Eastern Standard Time, e.g., 19:05:33 is equal to 15:05:33 or 3:05 pm. Email will automatically distribute first when “submit” is clicked. Omit the letters T and Z on the date/time stamp, those are internal indicators.*

Items to note: If the patient does not complete the survey after 72 hours, they will automatically receive another email with a new link to complete the survey. There is no action you need to take to facilitate the sending of this second email – it will happen automatically.

There is NO further action you need to take after you send the first email.

Scenario #3 – Only Phone Number Available



On the third phone call attempt, if there is no answer, please leave a detailed voice message (if able). In the voicemail, state the purpose of the phone call and that the person you are calling will be receiving a text message shortly with a survey link to obtain information about their recent hospital stay.

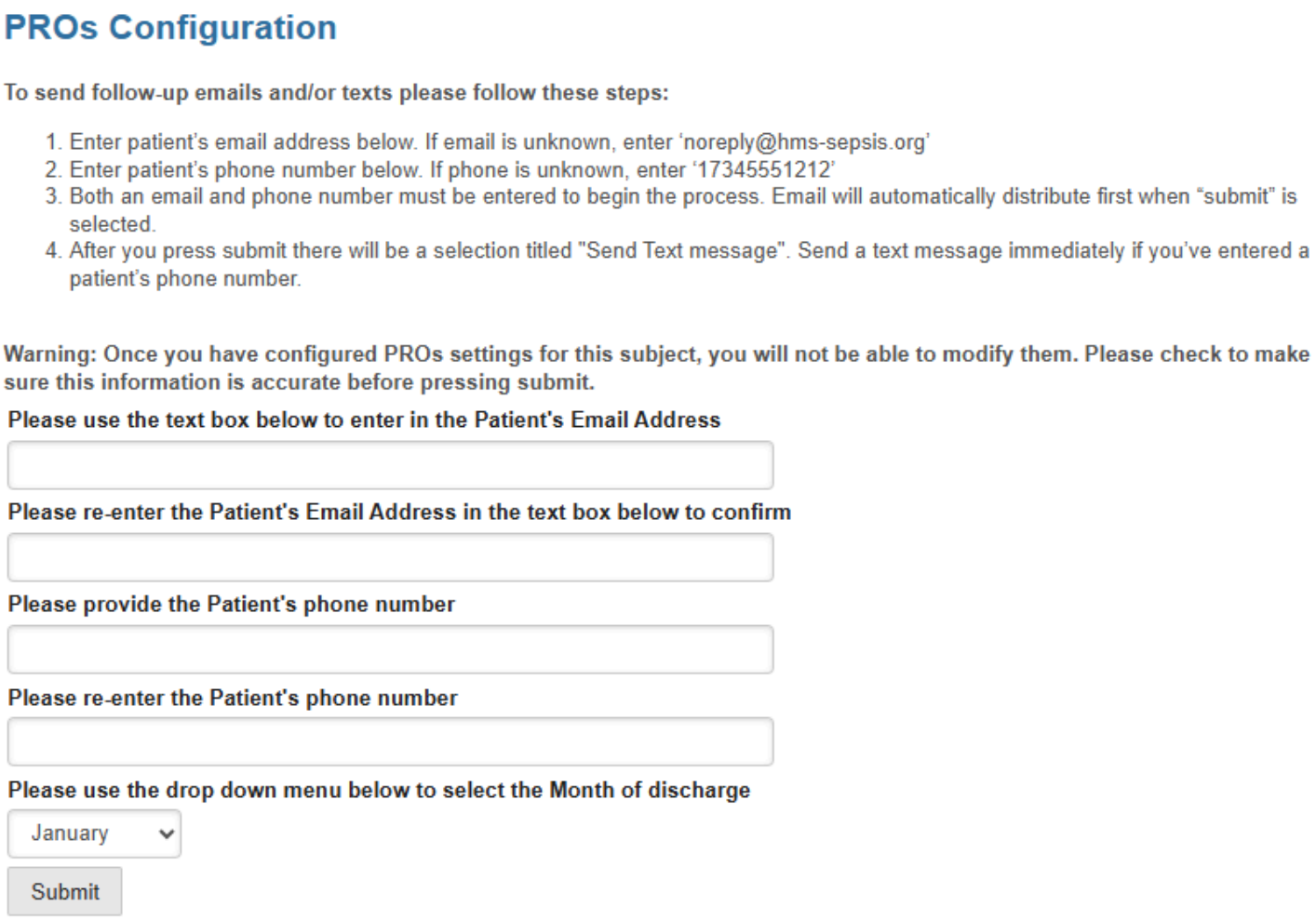
PROs Tab

After three unsuccessful attempts to reach the patient using a phone call, click on the PROs tab and follow the steps below:

(*Both a pseudo-email address and real mobile phone number must be entered to begin the process)*

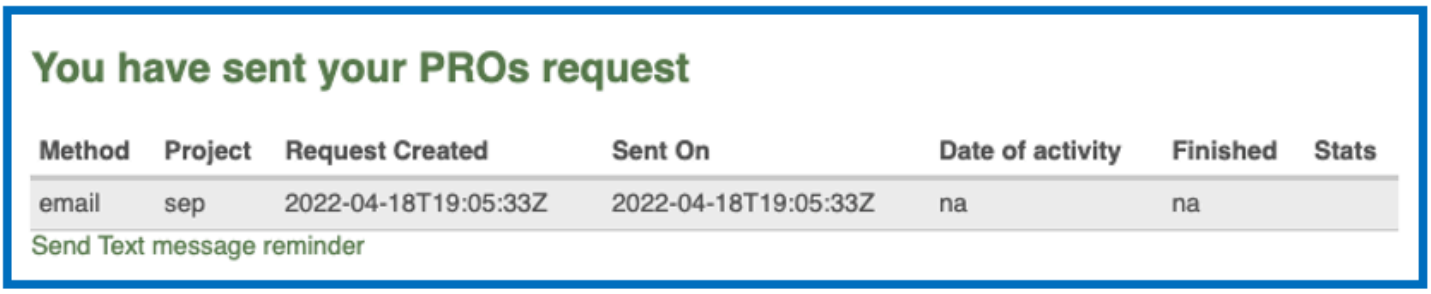
1. Since the patient's email address is not available in the medical record, enter '**noreply@hms-sepsis.org**' in the first text box.
2. Re-enter '**noreply@hms-sepsis.org**' in the second text box.

3. Enter patient's **phone number** (**1xxxxxxxxxx**, no spaces) found in the medical record in the third text box.
4. Re-enter the patient's **phone number** in the fourth text box.
5. Use the drop-down menu to select the **month of discharge** based on the medical chart.
6. Once all information is confirmed correct, click the "**Submit**" button.



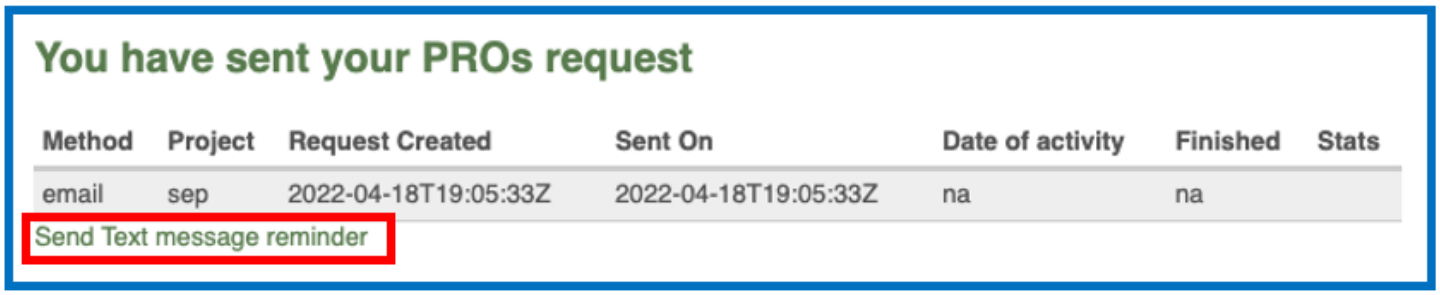
PROs via Text ONLY

7. Click the "**Submit**" button on the PROs tab after you complete the steps above.
8. You will be returned to the "**View**" tab.
9. Click on the "**PROs**" tab. The image below will appear if your form was submitted.

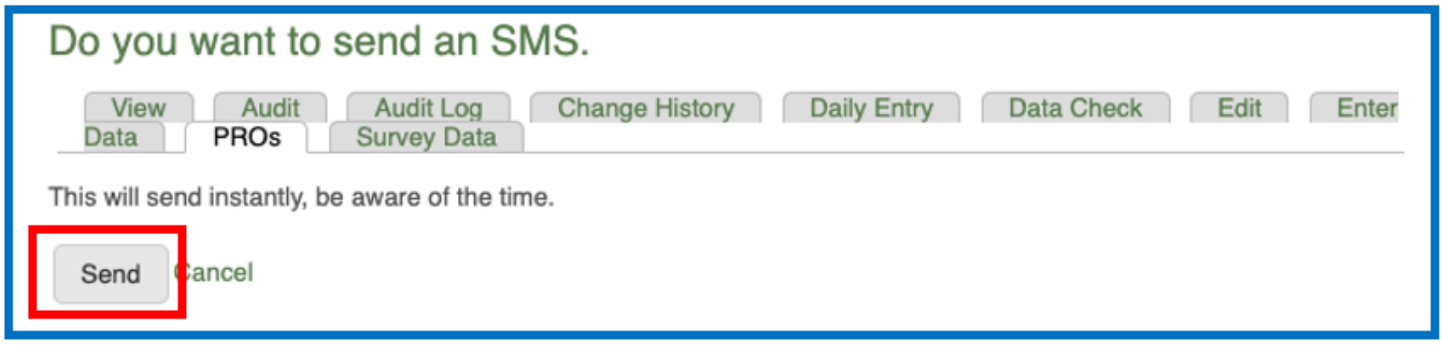


Note: *You can view the date and time the email was sent. Subtract 4 hours from the time sent for Eastern Standard Time, e.g., 19:05:33 is equal to 15:05:33 or 3:05 pm. Omit the letters T and Z on the date/time stamp, those are internal indicators.*

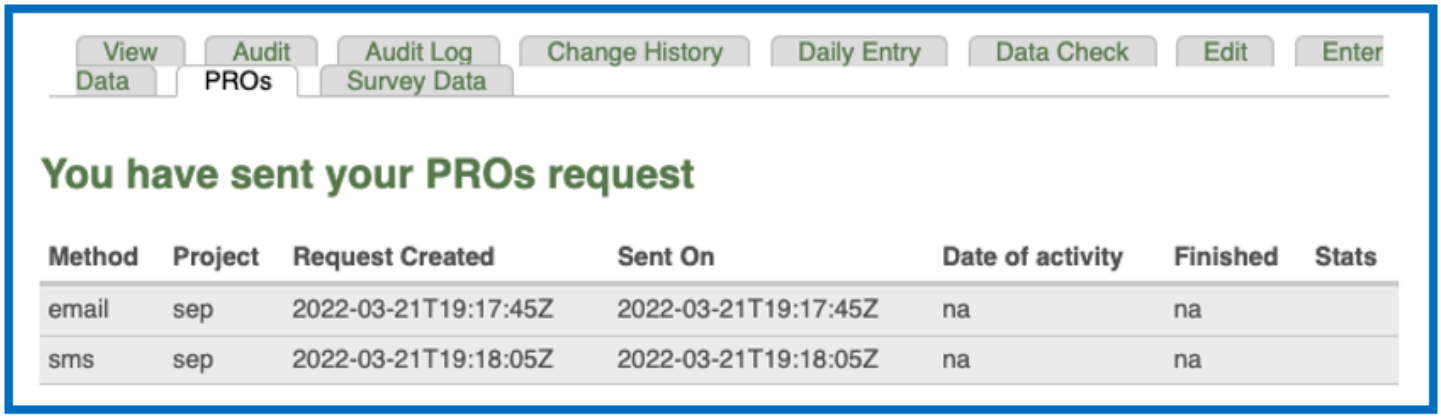
10. **Immediately send a text message** after you submit the PROs form.
11. Click the "**Send Text message reminder**" link on the PROs tab as shown in the image below.



12. Click the "**Send**" button to send a text message to the patient. You will see the image below appear to confirm that you want to send a text message to the patient.



13. After you click "**Send**", you will be returned to the "**View**" tab.
14. Click the "**PROs**" tab to confirm your text message was sent to the patient. The following screen will appear. You can view the date and time the text message was sent.



There is NO further action you need to take after you send this text message.

ICU to Floor Transfer

Instructions: For most questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Reminder: This is a one-time form to be used in the event that the patient was transferred from the ICU to the floor/ward or stepdown unit. If multiple transfers from an ICU occurred during the hospital encounter, use the information from the first ICU to floor/ward/stepdown transfer.

Note 1: When capturing vital signs in this section, please exclude all vital signs and oxygen supplementation documented during a procedure.

Note 2: You should still complete this form even if the patient transferred out of the ICU to the floor/ward and then back to the ICU on the same calendar day (as long as no exclusion criteria are noted below).

Jump to sub-sections:

Last Day of ICU Care

We acknowledge that a transfer out the ICU can be noted in varying ways at differing hospitals. We ask that you determine the time of the transfer by using the following tiered approach:

- Tier 1: When the service taking care of the patient changes from “Critical Care” to the “Hospital Medicine” or floor team.
- Tier 2: Guidance for Closed vs. Open ICUs
  - If your institution has “Closed ICUs”: The time of the physician handoff or order to transfer.
  - If your institution has “Open ICUs”: The time of the order for a change in care.
- Tier 3: Determine the time of transfer using your knowledge of your institutions’ policies and procedures to determine the best “source of truth”.

This form is NOT applicable for the following clinical scenarios:

- Patient is discharged home from the ICU
- Patient is transferred to the floor and discharged from the hospital on the same day.
- Patient is ONLY admitted to a Trauma Bay/ICU within the Emergency Department in which intensive levels of care are provided
- Patient is transferred from the ICU to Floor for comfort care measures.

The ICU vs. the Floor/Ward days should be counted as the following:

X/1: Day of Transfer:	Last Day in ICU (Midnight of the calendar day until the time of transfer) Note: Utilize the tiered transfer approach above to determine the time of transfer.
X/2: Floor/Ward Day 1:	1st full calendar day post Transfer
X/3: Floor/Ward Day 2	2nd full calendar day post Transfer

1. What was the last date the patient was in the ICU (before the first transfer to the Floor/Ward?)
Instructions: Review the medical record to determine the last date that the patient was in an ICU prior to the *first* transfer to a floor/ward/stepdown unit. Enter this date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

2. What was the patient's last recorded temperature in the ICU?
Instructions: Review the medical record to determine the patient's last recorded temperature in the ICU prior to transfer to the floor/ward/stepdown unit. Enter the numeric value that represents the last temperature for the date provided using the free text data entry box.
Note: Enter "999" *if a temperature is not reported on the date indicated above.*

3. What is the patient's last recorded heart rate in the ICU?
Instructions: Review the medical record to determine the patient's last recorded heart rate in the ICU prior to transfer to the floor/ward/stepdown unit. The default response for this question is "60-89 BPM".

- *"Less than 60 BPM"*
- *"60-89 BPM"*
- *"90-100 BPM"*
- *"101-124 BPM"*
- *"Greater than 124 BPM"*
- *"Not available"*

4. **What is the patient's last recorded respiratory rate in the ICU?**

Instructions: Review the medical record to determine the patient's last recorded respiratory rate in the ICU prior to transfer to the floor/ward/stepdown unit. The default response for this question is "Normal (less than 20)".

- *"Normal (less than 20)"*
- *"Abnormal (20)"*
- *"Abnormal (21)"*
- *"Abnormal (22-24)"*
- *"Abnormal (25-30)"*
- *"Abnormal (greater than 30)"*
- *"Not available"*

5. What is the patient's last recorded pulse oximetry in the ICU?
Instructions: Review the medical record to determine the patient's last recorded pulse oximetry in the ICU prior to transfer to the floor/ward/stepdown unit.

- *"70% or less"*
- *"71-80%"*
- *"81-90%"*
- *"91-95%"*
- *"96-100%"*
- *"Not available"*

6. Was the patient on supplemental oxygen at the time of the last pulse oximetry reading in the ICU?
Instructions: Review the medical record to determine if the patient was on supplemental oxygen at the time of the last pulse oximetry reading in the ICU prior to transfer to the floor/ward/stepdown unit. If information on supplemental oxygen is not reported in this timeframe, capture the most recently documented amount of oxygen support. If there is no previous documentation of oxygen support, then select, "Unknown".
Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.

- *"Yes"*
  Answer questions 6.1 and 6.2
- *"No"*
- *"Unknown"*

6.1. Select the route which supplemental oxygen was delivered.
Instructions: Review the medical record to determine the route with which the supplemental oxygen was delivered at the time that the last pulse oximetry reading was taken in the ICU prior to transfer to floor/ward/stepdown unit.

Tiering System	
1	Intubated on Ventilator
2	NIPPV (Non-invasive ventilation)
3	Heated High Flow Nasal Cannula
4	Low Flow Oxygen System (nasal cannula or oxygen mask)

- *"Heated high-flow nasal cannula"*
  Include: Optiflow
- *"Intubated on ventilator"*
- *"Nasal cannula"*
  Include: Nasal Pendant
- *"Non-invasive ventilation (CPAP, BiPAP)"*
  Include: AVAPS, Face-mask ambu-bag

Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.

- *"Oxygen mask (i.e. nonrebreather, Venturi)"*
  Include: Trach mask, T-piece
- *"Other"*

6.2. Was the supplemental oxygen reported in liters or percent FiO2?
Instructions: Review the medical record to determine if the supplemental oxygen that was delivered at the time that the was delivered at the time that the last pulse oximetry reading was taken in the ICU prior to transfer to floor/ward/stepdown unit was given in liters or percent.
Note: If a patient is on a trach collar for oxygen delivery, capture the FiO2 of oxygen delivered, not the number of liters.

- *"Liters"*

  6.2.1. Liters
  Instructions: Review the medical record to determine the amount of oxygen (in liters) that the patient was on at the time that the that the last pulse oximetry reading was taken in the ICU prior to transfer to floor/ward/stepdown unit.
  Note: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.

  - *"< 1L"*
  - *"1-15L"*
  - *">15L"*
  - *"Not available"*
- *"Percent"*

  6.2.2. PERCENT
  Instructions: Review the medical record to determine the amount of oxygen (in percent FiO2) that the patient was on at the time that the that the last pulse oximetry reading was taken in the ICU prior to transfer to floor/ward/stepdown unit.

  - *"21 – (Room Air)"*
  - *"22-30%"*
  - *"31-40%"*
  - *"41-50%"*
  - *"51-60%"*
  - *"61-70%"*
  - *"71-80%"*
  - *"81-90%"*
  - *"91-100%"*
  - *"Not available"*

7. What is the patient's last recorded systolic blood pressure in the ICU?
Instructions: Review the medical record to determine the patient's last recorded systolic blood pressure in the

ICU prior to transfer to the floor/ward/stepdown unit. Enter the numeric value that represents the last recorded systolic blood pressure using the free text data entry box.
Note 1: Enter "999" if a systolic blood pressure is not reported on the date indicated above.
Exclude: Blood pressure readings where the SBP = DBP.

8. What is the patient's last recorded diastolic blood pressure in the ICU?
Instructions: Review the medical record to determine the diastolic blood pressure that corresponds with the last recorded systolic in the ICU prior to transfer to the floor/ward/stepdown unit. Enter the numeric value that represents the last recorded diastolic blood pressure using the free text data entry box.
Note: Enter "999" if a diastolic blood pressure is not reported on the date indicated above.
Exclude: Blood pressure readings where the SBP = DBP.

9. Is there documentation of the patient's weight (in the ICU) on the day of the ICU to floor transfer?
Instructions: Review the medical record to determine if there is documentation of the patient's weight in the ICU prior to transfer to the floor/ward/stepdown unit on the day of the ICU-to-floor/ward/stepdown unit transfer.
Exclude: Dosing weights used for determining medication dosing.

- *"Yes"*
  Answer questions 9.1 and 9.2
- *"No"*
- *"Unknown"*

9.1. Last weight in the ICU (before the transfer to floor/ward):
Instructions: Review the medical record to determine the last weight of the patient taken in the ICU before the transfer to the floor/ward/stepdown unit. Enter this numerical value in the free text box provided. Enter the last actual (measured) weight documented in the ICU on the day of transfer. This should be captured before the patient physically moved to the floor/ward.

> *Please refer to the following hierarchy to determine which weight to enter:*
>
> 1. *Standing weight*
> 2. *Bed weight*
> 3. *Stated weight*

9.2. Unit of weight
Instructions: Review the medical record to determine the unit of measurement that corresponds to the last weight of the patient taken in the ICU before the transfer to the floor/ward/stepdown unit.

- *"Pounds"*
- *"Kilograms"*

10. Did the patient receive a diuretic on the last day in the ICU?
Instructions: Review the medical record to determine if the patient received a diuretic in the ICU prior to transfer to the floor/ward/stepdown unit on the day of the ICU-to-floor/ward/stepdown unit transfer.
Include: Combination blood-pressure/diuretic medication with a diuretic as an active ingredient. Please log each ingredient separately.

- *"Yes"*
  Answer question 10.1
- *"No"*
- *"Unknown"*

10.1. Select the medication(s) the patient received on the last day in the ICU:
Instructions: Review the medical record to determine the name(s) of the diuretic(s) the patient received in the ICU prior to transfer to the floor/ward/stepdown unit on the day of the ICU-to-floor/ward/stepdown unit transfer.
Select all that apply:

- *"Acetazolamide (Diamox)"*
- *"Amiloride"*
- *"Bumetanide (Bumex)"*
- *"Chlorthiazide (Diuril)"*
- *"Chlorthalidone"*
- *"Ethacrynic acid (Edecrin)"*
- *"Eplerenone (Inspra)"*
- *"Furosemide (Lasix)"*
- *"Hydrochlorothiazide or HCTZ"*
- *"Indapamide (Lozol)"*
- *"Metolazone (Zaroxyln)"*
- *"Spironolactone (Aldactone)"*
- *"Torsemide (Demedex)"*
- *"Triamterene (Dyrenium)"*
- *"None of the above"*

11. Did the patient receive an intravenous (IV) or oral steroid on the last day in the ICU?
Instructions: Review the medical record to determine if the patient received an IV or oral steroid in the ICU prior to transfer to the floor/ward/stepdown unit on the day of the ICU-to-floor/ward/stepdown unit transfer.

- *"Yes"*
  Answer question 11.1
- *"No"*
- *"Unknown"*

11.1. Select the medication(s) the patient received on the last day in the ICU:
Instructions: Review the medical record to determine the name(s) of the IV or oral steroid(s) the patient received in the ICU prior to transfer to the floor/ward/stepdown unit on the day of the ICU-to-floor/ward/stepdown unit transfer.
Select all that apply:

- *"Betamethasone"*
- *"Budesonide"*
- *"Cortisone"*

- *"Deflazacort"*
- *"Dexamethasone"*
- *"Fludrocortisone"*
- *"Hydrocortisone"*
- *"Methylprednisolone"*
- *"Prednisolone"*
- *"Prednisone"*
- *"Triamcinolone"*
- *"None of the above"*

12. Did the patient have a Confusion Assessment Method (CAM), Confusion Assessment Method for the Intensive Care Unit (CAM-ICU), ICU Delirium Checklist, Delirium Detection Score, or Nursing Delirium Screening Scale (Nu-DESC) collected on the last day in the ICU?
Instructions: Review the medical record to determine if the patient had a CAM, CAM-ICU, ICU Delirium Checklist, Delirium Detection Score, or Nursing Delirium Screening Scale collected on the last day in the ICU before transfer to the floor/ward/stepdown unit.
Note: This can be found either in provider documentation or in nursing flowsheets.

- *"Yes"*
  Answer question 12.1
- *"No"*
- *"Unknown"*

12.1. Which delirium assessment(s) were completed on the last day in ICU?
Instructions: Review the medical record to determine which delirium assessment(s) were completed on the patient on the last day in the ICU prior to transfer to the floor/ward/step-down unit.
Select all that apply:

- *"Confusion Assessment Method (CAM)"*
  Answer question 12.1.1
  Include: 3D CAM Assessment
- *"Confusion Assessment Method for the Intensive Care Unit (CAM-ICU)"*
  Answer question 12.1.1
- *"Intensive Care Delirium Screening Checklist (ICDSC)"*
  Answer question 12.1.2
- *"Delirium Detection Score (DDS)"*
  Answer question 12.1.2
- *"Nursing Delirium Screening Scale (Nu-DESC)"*
  Answer question 12.1.2
- *"None of the above"*
  Include: Delirium Assessments that were performed but are not one of the above selection options.

12.1.1. What was the worst/most acute score documented using the CAM/CAM-ICU on the last day in ICU?
Instructions: Review the medical record to determine the worst/most acute score documented using the CAM and/or CAM-ICU on the last day in the ICU.

- *"Positive"*

- *"Negative"*

12.1.2. What was the worst/most acute score documented using ICDSC/DDS/Nu-DESC on the last day in the ICU?
Instructions: Review the medical record to determine the worst/most acute score documented using the ICDSC, DDS, and/or Nu-DESC on the last day in the ICU. Enter the numerical score in the free text box provided.

Transition of Care

Reminder: This is a one-time form to be used if the patient was transferred from the ICU to the floor/ward or stepdown unit. If multiple transfers from an ICU occurred during the hospital encounter, use the information from the **first** ICU to floor/ward/stepdown transfer.

1. Was a urinary catheter in place on the last calendar day in the ICU?
Instructions: Review the medical record to determine the if a urinary catheter was in place on the last calendar day in the ICU.
Exclude: Suprapubic catheters, external catheters (i.e. condom catheters, pure wicks, etc.), and urostomy tubes.

- *"Yes"*
  Answer question 1.1
- *"No"*
  Include: Urinary Catheters that are in place on the last calendar day in the ICU but are removed prior to transfer.
- *"Unknown"*

1.1. Is there documentation of a plan to remove the urinary catheter prior to ICU discharge?
Instructions: Review the medical record on the last calendar day in the ICU to determine if there is documentation regarding a plan to discontinue the urinary catheter prior to ICU discharge.
Note: Documentation of plans to keep or remove should be found in the ICU Physician/ICU APP notes, not the Nursing documentation/flowsheets, Orders, or Best Practice Advisories.

- *"Yes (Documented plan to remove)"*
- *"No (Documented plan to keep)"*
  Answer question 1.1.1
- *"N/A: Patient is catheter dependent"*
  Include: Chronic foley catheter patients.
- *"Unknown (No mention of a plan)"*

1.1.1. Were any of the following indications documented:
Instructions: Review the medical record to determine the documented indication for keeping the urinary catheter in place.
Select all that apply:

- *"Difficulty urinating without catheter"*
- *"(Risk of) Dermatitis/Skin Irritation"*
  Include: The medical record indicates the urinary catheter was left in place due to dermatitis, incontinence associated dermatitis (IAD), skin irritation, or the risk of dermatitis/skin irritation.

- *"Need for frequent urinary volume measurements"*
  Include: Need for accurate urinary volume measurements
- *"Gross Hematuria"*
  Include: The medical record indicates the urinary catheter was left in place due to gross hematuria, blood in the urine, or blood clots in the urine.
- *"Patient/Family Request"*
- *"Other"*
- *"None of the above"*

2. Prior to transfer out of the ICU, was a plan for discontinuing or down-grading temporary CVC(s) documented?
Instructions: Review the medical record to determine if a plan for discontinuing or down-grading the temporary CVC(s) was documented on the last calendar day in the ICU.
Note 1: Temporary CVC(s) are defined as non-tunneled CVCs, and non-tunneled HD lines. May be charted as "Percutaneous introducer", "Non-Cuffed CVC", "Vascath". A PICC line does not qualify as a temporary CVC.
Note 2: It is okay to assume that central catheters not specifically noted to be "tunneled" are non-tunneled.
Note 3: Documentation of plans to keep or remove should be found in the ICU Physician/ICU APP narrative.

- *"Documented plan to remove temporary CVC(s) prior to transfer out of the ICU"*
- *"Documented plan to remove temporary CVC(s) within 1-2 days of ICU transfer"*
- *"Documented reason to keep temporary CVC(s)"*
  Answer question 2.1
- *"Temporary CVC in place, but no documentation regarding removal or need to keep"*
- *"N/A: No temporary CVCs in place on the last day in the ICU"*
  Include: Temporary CVCs that are in place on the last calendar day in the ICU but are removed prior to transfer.

2.1. Were any of the following indications for keeping temporary CVC(s) in place documented?
Instructions: Review the medical record to determine the indication for keeping the temporary CVC(s) in place.
Select all that apply:

- *"Antibiotics"*
  Include: IV home or inpatient antibiotics
- *"Blood transfusion or blood products"*
- *"Chemotherapy"*
- *"Difficult Access/Blood Draws"*
  Include: Any documentation that the temporary CVC(s) was left in place due to difficult IV access (poor peripheral venous access) and/or inability to draw blood (i.e. blood draws, phlebotomy).
- *"Medications Requiring Central Access"* if the medical record indicates that the temporary CVC(s) was left in place for medications requiring central venous access and the medication meets the criteria below:
  Include: Any documentation that the temporary CVC(s) was left in place due to the administration of medications that require central venous access. These medications only include the following:
  Note: The medication *must be administered* to the patient AND part of the list below to use this selection. If the medication is administered, and not part of the list below, but per your hospital policy is required to be administered centrally please use the "Per Hospital Policy" selection.
  - Administration of vasopressors: Epinephrine, Angiotensin-II, Norepinephrine, Phenylephrine, Phenylephrine Hydrochloride, Dopamine and/or Dobutamine, Vasopressin

- Certain IV fluids: Dextrose solutions 10% or greater, Sodium chloride ≥3%
- Propofol, Fentanyl, Versed, Lidocaine, Promethazine, Pentobarbital Sodium, Phenobarbital Sodium, Pentamidine, Mannitol ≥ 20%, Acyclovir, Arginine.
- Four (4) or more doses of one of the following during the hospitalization:
  - Antibiotics that are known irritants (e.g., Erythromycin, Tetracycline, Nafcillin, Vancomycin, Amphotericin B)
  - Electrolyte solutions (Potassium, Magnesium, or Calcium)
  - Phenytoin, Sodium Bicarbonate, or Amiodarone

- *"Multiple Incompatible Fluids"*
  Note: This should only be selected if this reason is specifically documented by the healthcare professional (MD, Nurse, IR, etc.) in the medical record.
  Include: Any documentation that the temporary CVC(s) was left in place due to multiple infusions that are incompatible (i.e., fluids that cannot be administered at the same time).
- *"Parenteral Nutrition"* if the medical record indicates that the temporary CVC(s) was left in place for administration of parenteral nutrition (PN) ***and the patient received*** Parenteral Nutrition (PN).
  Include: Total parenteral nutrition (TPN), parenteral nutrition (PN), total nutrient admixture (TNA), lipid emulsion.
- *"Medications Requiring Central Access - Per Hospital Policy"*
  Include: Medications requiring central access per your local hospital policy that are <u>not</u> a medication included in the "Medications Requiring Central Access" selection.
- *"Unable to transition to PICC/Midline (e.g. due to recent confirmed or suspected bacteremia)"*
- "*Other*"
  Include: "Plan to transition CVC to PICC/Midline"

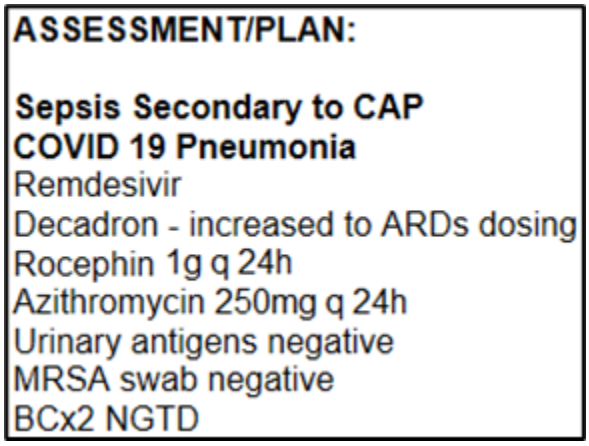
3. Prior to transfer out of the ICU, was there any documentation by the provider regarding the patient's volume status and whether diuresis was indicated?
Instructions: Review the medical record to determine if there is documentation regarding the patient's volume status on the last calendar day in the ICU.
Note 1: Documentation of plans for volume status should be from an ICU Physician/ICU APP note, not the Nursing documentation or flowsheets. Please do not take this information from auto-populated intake/output data.
Note 2: The provider must include clear documentation of their assessment of the patient's current volume status (see wording below). They do not need to include a plan for diuresis in their note.

- *"Yes"*
  Include: Documentation of patient's acute volume status at time of transfer. Include Hypovolemia/Fluid Depletion, Hypervolemia/Anasarca/Fluid Overload, Euvolemia. Please reach out to the Coordinating Center with questions.
  Exclude: Plan for diuresis without volume status assessment.
- *"No"*
- *"Unknown"*

4. Prior to transfer out of the ICU, was there documentation by the primary medical team of the duration, dosing, and/or choice of antibiotics for this patient?
Instructions: Review the medical record on the last calendar day in the ICU to determine if antibiotic choice, duration, or dosing is documented. This information should be pulled from the narrative in the notes written

by the primary medical team (ICU physician or ICU APP) for that calendar day. Please do not use auto-populated medication lists to answer this question.
Note 1: Only refer to consult notes if the primary medical team refers to another note (i.e. Infectious Disease, Pharmacy, Pulmonology, etc) when discussing the antibiotic therapy.
Note 2: Orders that state "Pharmacy to dose anti-infectives" can be used as an indication to review pharmacy notes for documentation of dose, duration, and/or choice.
Note 3: The antibiotic documentation does not need to include all antibiotics given on that calendar day.
Select all that apply:

- *"Dosing"*
  Examples of documentation reflecting dosing:
  i. Per MAR, patient received Rocephin 1g and Azithromycin 250mg on this day. Admitting provider's note states:


ASSESSMENT/PLAN:

Sepsis Secondary to CAP
COVID 19 Pneumonia
Remdesivir
Decadron - increased to ARDs dosing
Rocephin 1g q 24h
Azithromycin 250mg q 24h
Urinary antigens negative
MRSA swab negative
BCx2 NGTD

  ii. Per MAR, patient received Vancomycin 1g on this day.

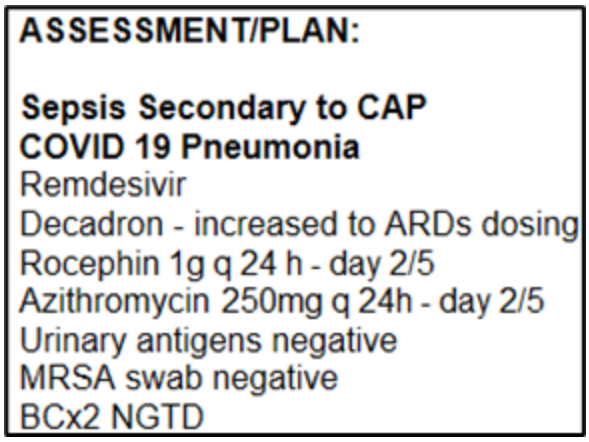
Admitting Provider note states: "Pharmacy-to-dose order placed for Vanco. Appreciate recommendations."

Because the admitting provider deferred to pharmacy when discussing the dosing of vancomycin on this day, you would then go to the pharmacy note from that day to see if antibiotic dosage was discussed.

Pharmacy Note from Same Day: "Patient is currently receiving vancomycin therapy. Indication: Sepsis. Vancomycin administration instructions: 1g daily. Collect trough tomorrow AM."

- *"Duration"*
  Note: This must be specific as to the number of days of the intended antibiotic course.
  Exclude: Documentation that the provider is "awaiting culture results" to determine antibiotic coverage
  Examples of documentation reflecting duration:

  i. Per MAR, patient received Rocephin 1g and Azithromycin 250mg on this day. Admitting provider's note states (days or actual dates are both acceptable)



ii. Per MAR, patient received Rocephin and Azithromycin on this day.

Admitting Provider note states: "ABX plan discussed with ID team. Appreciate recs. Plan for IV ABX post-discharge."

Because the admitting provider deferred to the ID team when discussing antibiotics, you would then go to the ID note from that day to see if antibiotic duration was discussed.

ID Note from Same Day: "Pt receiving Rocephin and Azithromycin for Sepsis secondary to CAP. Plan to DC patient tomorrow with midline for IV antibiotic administration for a total of 7 days of therapy."

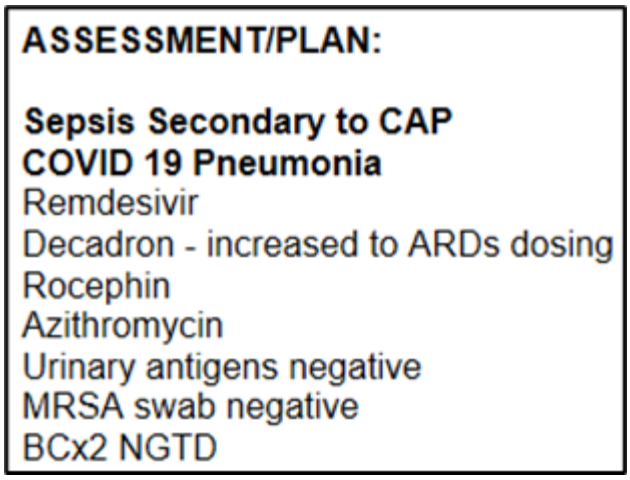
- *"Antibiotic Choice"*
  Examples of documentation reflecting "Choice"

  i. "Rocephin/Azithro started in ED; will continue Rocephin as Legionella is negative"

  ii. "Patient started on Zosyn (X/11--), will de-escalate to Ceftriaxone today"

  iii. "Patient culture returned positive for MSSA will narrow antibiotics to Cefazolin"

  iv. Per MAR, patient received Rocephin and Azithromycin on this day. Admitting provider's note states:



v. Per MAR, patient received Rocephin and Azithromycin on this day.

Admitting Provider note states: "ABX plan discussed with ID team. Appreciate recs. Plan for 5 days IV post-discharge."

Because the admitting provider deferred to the ID team when discussing antibiotics, you would then go to the ID note from that day to see if antibiotic choice was discussed.

ID Note from Same Day: "Pt receiving Rocephin and Azithromycin for Sepsis secondary to CAP. Plan to DC patient tomorrow with midline for IV antibiotic administration."

- *"Patient was not on an antibiotic at the time of transfer"*
- *"None of the above"*

First and Second Post-ICU Day on Floor/Ward

Reminder: This is a one-time form to be used in the event that the patient was transferred from the ICU to the floor/ward or stepdown unit. If multiple transfers from an ICU occurred during the hospital encounter, use the information from the **first** ICU to floor/ward/stepdown transfer.

This section is asking for information and events that occurred on the first two full calendar days after the first transfer out of the ICU.
Note: If the patient is transferred out of the ICU to the floor/ward and then back to the ICU on the same calendar day, you should mark all vital signs in this section as "Not Available" and leave the responses to the other questions blank.

The ICU vs. the Floor/Ward days should be counted as the following:

X/1: Day of Transfer Order:	Last Day in ICU (Midnight of the calendar day until the time of transfer) Note: Utilize the transfer order to determine the time of transfer, not the time the patient physically transfers units.
X/2: Floor/Ward Day 1:	1st full calendar day post Transfer
X/3: Floor/Ward Day 2:	2nd full calendar day post Transfer

1. During the first two full calendar days on the floor/ward, what was the patient's highest recorded temperature?
Instructions: Review the medical record to determine the patient's highest recorded temperature during the first two full calendar days on the floor/ward. Enter the numeric value using the free text data entry box.
Note: Enter "999" if a temperature is not reported on the date indicated above.

2. During the first two full calendar days on the floor/ward, what was the patient's lowest recorded temperature?
Instructions: Review the medical record to determine the patient's lowest recorded temperature during the first two full calendar days on the floor/ward. Enter the numeric value using the free text data entry box.
Note: Enter "999" if a temperature is not reported on the date indicated above.

3. During the first two full calendar days on the floor/ward, what was the patient's highest recorded heart rate?
Instructions: Review the medical record to determine the patient's highest recorded heart rate during the first two full calendar days on the floor/ward. The default response for this question is "60-89 BPM".

- *"Less than 60 BPM"*
- *"60-89 BPM"*

- *"90-100 BPM"*
- *"101-124 BPM"*
- *"Greater than 124 BPM"*
- *"Not available"*

4. During the first two full calendar days on the floor/ward, what was the patient's lowest recorded heart rate?
Instructions: Review the medical record to determine the patient's lowest recorded heart rate during the first two full calendar days on the floor/ward. The default response for this question is "60-89 BPM".

- *"Less than 60 BPM"*
- *"60-89 BPM"*
- *"90-100 BPM"*
- *"101-124 BPM"*
- *"Greater than 124 BPM"*
- *"Not available"*

5. During the first two full calendar days on the floor/ward, what was the patient's highest recorded respiratory rate?
Instructions: Review the medical record to determine the patient's highest recorded respiratory rate during the first two full calendar days on the floor/ward. The default response for this question is "Normal (less than 20)".

- *"Normal (less than 20)"*
- *"Abnormal (20)"*
- *"Abnormal (21)"*
- *"Abnormal (22-24)"*
- *"Abnormal (25-30)"*
- *"Abnormal (greater than 30)"*
- *"Not available"*

6. During the first two full calendar days on the floor/ward, what was the patient's lowest recorded respiratory rate?
Instructions: Review the medical record to determine the patient's lowest recorded respiratory rate during the first two full calendar days on the floor/ward. The default response for this question is "Normal (less than 20)".

- *"Normal (less than 20)"*
- *"Abnormal (20)"*
- *"Abnormal (21)"*
- *"Abnormal (22-24)"*
- *"Abnormal (25-30)"*
- *"Abnormal (greater than 30)"*
- *"Not available"*

7. During the first two full calendar days on the floor/ward, what was the patient's highest recorded pulse oximetry?
Instructions: Review the medical record to determine the patient's highest recorded pulse oximetry during the first two full calendar days on the floor/ward.

- *"70% or less"*
- *"71-80%"*
- *"81-90%"*
- *"91-95%"*
- *"96-100%"*
- *"Not available"*

8. Was the patient on supplemental oxygen at the time of the highest pulse oximetry reading during the first two full calendar days on the floor/ward?
Instructions: Review the medical record to determine if the patient was on supplemental oxygen at the time of the highest pulse oximetry reading during the first two full calendar days on the floor/ward. If information on supplemental oxygen is not reported in this timeframe, capture the most recently documented amount of oxygen support. If there is no previous documentation of oxygen support, then select, "Unknown".
Note: If there is more than one recording with the same highest pulse oximetry reading during this time frame, utilize the reading with the highest level of respiratory support.
Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.

- *"Yes"*
  Answer questions 8.1 and 8.2
- *"No"*
- *"Unknown"*

8.1. Select the route which supplemental oxygen was delivered.
Instructions: Review the medical record to determine the route with which the supplemental oxygen was delivered at the time of the highest pulse oximetry reading during the first two full calendar days on the floor/ward.
Note: If there is more than one recording with the same highest pulse oximetry reading during this time frame, utilize the reading with the highest level of respiratory support.

- *"Heated high-flow nasal cannula"*
  Include: Optiflow
- *"Intubated on ventilator"*
- *"Nasal cannula"*
  Include: Nasal Pendant
- *"Non-invasive ventilation (CPAP, BiPAP)"*
  Include: AVAPS, Face-mask ambu-bag
  Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.
- *"Oxygen mask (i.e. nonrebreather, Venturi).*
  Include: Trach mask, T-piece
- *"Other"*

8.2. Was the supplemental oxygen reported in liters or percent FiO2?
Instructions: Review the medical record to determine if the supplemental oxygen that was delivered at the time that the highest pulse oximetry reading during the first two full calendar days on the floor/ward was given in liters or percent.
Note: If a patient is on a trach collar for oxygen delivery, capture the FiO2 of oxygen delivered, not the number of liters.

Select one of the following:

- *"Liters"*

  8.2.1. Liters
  Instructions: Review the medical record to determine the amount of oxygen (in liters) that the patient was on at the time that the highest pulse oximetry reading during the first two full calendar days on the floor/ward.
  Note: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.

  - *"< 1L"*
  - *"1-15L"*
  - *">15L"*
  - *"Not available"*
- *"Percent"*

  8.2.2. Percent
  Instructions: Review the medical record to determine the amount of oxygen (in percent FiO2) that the patient was on at the time that the highest pulse oximetry reading during the first two full calendar days on the floor/ward.

  - *"21 – (Room Air)"*
  - *"22-30%"*
  - *"31-40%"*
  - *"41-50%"*
  - *"51-60%"*
  - *"61-70%"*
  - *"71-80%"*
  - *"81-90%"*
  - *"91-100%"*
  - *"Not available"*

9. During the first two full calendar days on the floor/ward, what was the patient's lowest recorded pulse oximetry?
Instructions: Review the medical record to determine the patient's lowest recorded pulse oximetry during the first two full calendar days on the floor/ward.

- *"70% or less"*
- *"71-80%"*

- *"81-90%"*
- *"91-95%"*
- *"96-100%"*
- *"Not available"*

10. Was the patient on supplemental oxygen at the time of the lowest pulse oximetry reading during the first two full calendar days on the floor/ward?

Instructions: Review the medical record to determine if the patient was on supplemental oxygen at the time of the lowest pulse oximetry reading during the first two full calendar days on the floor/ward.
Note: If there is more than one recording with the same lowest pulse oximetry reading during this time frame, utilize the reading with the highest level of respiratory support.
Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.
Select one of the following:

- *"Yes"*
  Answer questions 10.1 and 10.2
- *"No"*
- *"Unknown"*

10.1. Select the route which supplemental oxygen was delivered.
Instructions: Review the medical record to determine the route with which the supplemental oxygen was delivered at the time of the lowest pulse oximetry reading during the first two full calendar days on the floor/ward.
Note: If there is more than one recording with the same lowest pulse oximetry reading during this time frame, utilize the reading with the highest level of respiratory support.

Tiering System	
1	Intubated on Ventilator
2	NIPPV (Non-invasive ventilation)
3	Heated High Flow Nasal Cannula
4	Low Flow Oxygen System (nasal cannula or oxygen mask)

- *"Heated high-flow nasal cannula"*
  Include: Optiflow
- *"Intubated on ventilator"*
- *"Nasal cannula"*
  Include: Nasal Pendant
- *"Non-invasive ventilation (CPAP, BiPAP)"*
  Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.
- *"Oxygen mask (i.e. nonrebreather, Venturi).*
- *"Other"*

10.2. Was the supplemental oxygen reported in liters or percent FiO2?
Instructions: Review the medical record to determine if the supplemental oxygen that was delivered at the time that the lowest pulse oximetry reading during the first two full calendar days on the floor/ward was given in liters or percent.

- *"Liters"*

  10.2.1. Liters
  Instructions: Review the medical record to determine the amount of oxygen (in liters) that the patient was on at the time that the lowest pulse oximetry reading during the first two full calendar days on the floor/ward.
  Note: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.

  - *"< 1L"*
  - *"1-15L"*
  - *">15L"*
  - *"Not available"*
- *"Percent"*

  10.2.2. Percent
  Instructions: Review the medical record to determine the amount of oxygen (in percent FiO2) that the patient was on at the time that the lowest pulse oximetry reading during the first two full calendar days on the floor/ward.

  - *"21 – (Room Air)"*
  - *"22-30%"*
  - *"31-40%"*
  - *"41-50%"*
  - *"51-60%"*
  - *"61-70%"*
  - *"71-80%"*
  - *"81-90%"*
  - *"91-100%"*
  - *"Not available"*

11. During the first two full calendar days on the floor/ward, what was the patient's highest recorded systolic blood pressure?
Instructions: Review the medical record to determine the patient's highest recorded systolic blood pressure during the first two full calendar days on the floor/ward. Enter the numeric value using the free text data entry box.
Note: Enter "999" if a systolic blood pressure is not reported on the date indicated above.
Exclude: Blood pressure readings where the SBP = DBP.

12. During the first two full calendar days on the floor/ward, what was the patient's diastolic blood pressure that corresponded with the highest systolic blood pressure?
Instructions: Review the medical record to determine the diastolic blood pressure that corresponds with the

highest systolic pressure during the first two full calendar days on the floor/ward. T Enter the numeric value using the free text data entry box.
Note 1: If a blood pressure reading is for a patient with a Left Ventricular Assist Device (LVAD) reported as a systolic pressure/zero ("80/0"), enter 999 for the diastolic pressure.
Note 2: Enter "999" if a diastolic blood pressure is not reported on the date indicated above.
Note 3: If the EMR shows multiple instances where the highest systolic is the same value, with differing diastolics, use the highest diastolic.
Exclude: Blood pressure readings where the SBP = DBP.

13. During the first two full calendar days on the floor/ward, what was the patient's lowest recorded systolic blood pressure?
Instructions: Review the medical record to determine the patient's lowest recorded systolic blood pressure during the first two full calendar days on the floor/ward. Enter the numeric value using the free text data entry box.
Note: Enter "999" if a systolic blood pressure is not reported on the date indicated above.
Exclude: Blood pressure readings where the SBP = DBP.

14. During the first two full calendar days on the floor/ward, what was the patient's diastolic blood pressure that corresponded with the lowest systolic blood pressure?
Instructions: Review the medical record to determine the diastolic blood pressure that corresponds with the lowest systolic pressure during the first two full calendar days on the floor/ward. T Enter the numeric value using the free text data entry box.
Note 1: If a blood pressure reading is for a patient with a Left Ventricular Assist Device (LVAD) reported as a systolic pressure/zero ("80/0"), enter 999 for the diastolic pressure.
Note 2: Enter "999" if a diastolic blood pressure is not reported on the date indicated above.
Note 3: If the EMR shows multiple instances where the lowest systolic is the same value, with differing diastolics, use the lowest diastolic.
Exclude: Blood pressure readings where the SBP = DBP.

15. During the first two full calendar days on the floor/ward, is there documentation of the patient's weight?
Instructions: Review the medical record to determine if there is documentation of the patient's weight during the first two full calendar days on the floor/ward.
Exclude: Dosing weights used for determining medication dosing.

- *"Yes"*
  Answer questions 15.1 and 15.2
- *"No"*
- *"Unknown"*

15.1. Weight
Instructions: Review the medical record to determine the first weight taken for the patient during the first two calendar days on the floor/ward. Enter this numerical value in the free text box provided.

> *Please refer to the following hierarchy to determine which weight to enter:*
>
> 1. *Standing weight*
> 2. *Bed weight*

> 3. *Stated weight*

15.2. Unit of weight
Instructions: Review the medical record to determine the unit of measurement that corresponds to the first weight taken for the patient during the first two calendar days on the floor/ward.

- *"Pounds"*
- *"Kilograms"*

16. During the first two full calendar days on the floor/ward, did the patient receive an antipsychotic medication?
Instructions: Review the medical record to determine if the patient received an antipsychotic medication during the first two full calendar days on the floor/ward.
Exclude: Medications given only during a procedure or peri-operatively.

- *"Yes"*
  Answer questions 16.1 and 16.2
- *"No"*
- *"Unknown"*

16.1. Select the medication(s) the patient received during the first two full calendar days on the floor/ward:
Instructions: Review the medical record to determine the name(s) of the antipsychotic medication(s) the patient received during the first two full calendar days on the floor/ward.
Select all that apply:

- *"Aripiprazole"*
- *"Asenapine (Saphris)"*
- *"Brexipiprazole (Rexulti)"*
- *"Cariprazine (Vraylar)"*
- *"Clozapine"*
- *"Fluphenazine (Modecate)"*
- *"Haloperidol"*
- *"Luradisone (Latuda)"*
- *"Olanzepine"*
- *"Paliperidone (Invega)"*
- *"Quetiapine"*
- *"Risperdone"*
- *"Ziprasidone"*
- *"None of the above"*
- *"Other"* Enter the name of the other antipsychotic in the free text box provided. Please contact the Coordinating Center prior to making this selection.

16.2. What was the indication documented by the provider to continue the antipsychotic on the floor/ward?
Instructions: This question will only appear if the patient received an antipsychotic on the last day in the ICU and on the first 2 calendar days on the floor/ward. Review the medical record for documentation that the patient received an antipsychotic during the first two calendar days on the floor/ward.

Note: This information should be found in the floor/ward provider's narrative during days 1-2 on the floor/ward or in their acceptance note on the date of transfer from the ICU. Please do not use information found in the medication order to answer this question.
Select all that apply:

- *"Delirium"*
- *"Agitation"*
- *"Pain"*
- *"Withdrawal"*
- *"Patient's home medication"*
- *"No Indication Documented"*
- *"Other"*

17. During the first two full calendar days on the floor/ward, did the patient receive a benzodiazepine?
Instructions: Review the medical record to determine if the patient received a benzodiazepine during the first two full calendar days on the floor/ward.
Exclude: Medications given only during a procedure or peri-operatively.

- *"Yes"*
  Answer questions 17.1 and 17.2
  Include: As needed (PRN) dosing for seizures (all routes of administration).
- *"No"*
- *"Unknown"*

17.1. Select the medication(s) the patient received during the first two full calendar days on the floor/ward:
Instructions: Review the medical record to determine the name(s) of the benzodiazepine(s) the patient received during the first two full calendar days on the floor/ward.
Select all that apply:

- *"Alprazolam"*
- *"Chlordiazepoxide"*
- *"Clobazam"*
- *"Clonazepam"*
- *"Clorazepate"*
- *"Diazepam"*
- *"Estazolam"*
- *"Flurazepam"*
- *"Halazepam"*
- *"Lorazepam"*
- *"Midazolam"*
- *"Oxazepam"*
- *"Quazepam"*
- *"Temazepam"*
- *"Triazolam"*
- *"None of the above"*

17.2. What was the indication documented by the provider to continue the benzodiazepine on the floor/ward?
Instructions: This question will only appear if the patient received a benzodiazepine on the last day in the ICU and on the first 2 calendar days on the floor/ward. Review the medical record for documentation that the patient received a benzodiazepine during the first two calendar days on the floor/ward.
Note: This information should be found in the floor/ward provider's narrative during days 1-2 on the floor/ward or in their acceptance note on the date of transfer from the ICU. Please do not use information found in the medication order to answer this question.
Select all that apply:

- *"Delirium"*
- *"Agitation"*
- *"Pain"*
- *"Withdrawal"*
- *"Patient's home medication"*
- *"No Indication Documented"*
- *"Other"*

18. During the first two full calendar days on the floor/ward, did the patient receive a diuretic?
Instructions: Review the medical record to determine if the patient received a diuretic during the first two full calendar days on the floor/ward.
Include: Combination blood-pressure/diuretic medication with a diuretic as an active ingredient. Please log each ingredient separately.
Exclude: Medications given only during a procedure or peri-operatively.

- *"Yes"*
  Answer question 18.1
- *"No"*
- *"Unknown"*

18.1. Select the medication(s) the patient received during the first two full calendar days on the floor/ward:
Instructions: Review the medical record to determine the name(s) of the diuretic(s) the patient received during the first two full calendar days on the floor/ward.
Select all that apply:

- *"Acetazolamide (Diamox)"*
- *"Amiloride"*
- *"Bumetanide (Bumex)"*
- *"Chlorthiazide (Diuril)"*
- *"Chlorthalidone"*
- *"Ethacrynic acid (Edecrin)"*
- *"Eplerenone (Inspra)"*
- *"Furosemide (Lasix)"*
- *"Hydrochlorothiazide or HCTZ"*
- *"Indapamide (Lozol)"*
- *"Metolazone (Zaroxyln)"*

- *"Spironolactone (Aldactone)"*
- *"Torsemide (Demedex)"*
- *"Triamterene (Dyrenium)"*
- *"None of the above"*

19. During the first two full calendar days on the floor/ward, did the patient receive an opioid?
Instructions: Review the medical record to determine if the patient received an opioid during the first two calendar days on the floor/ward.
Exclude: Medications given only during a procedure or peri-operatively. Topical opioids.

- *"Yes"*
  Answer questions 19.1 and 19.2
- *"No"*
- *"Unknown"*

19.1. Select the medication(s) the patient received during the first two full calendar days on the floor/ward:
Instructions: Review the medical record to determine the name(s) of the opioid(s) the patient received during the first two calendar days on the floor/ward.
Select all that apply:

- *"Buprenorphine"*
  Include: Suboxone
- *"Butorphanol"*
- *"Codeine"*
- *"Dihydrocodeine"*
- *"Fentanyl"*
- *"Hydrocodone"*
- *"Hydromorphone"*
- *"Levorphanol"*
- *"Meperidine"*
- *"Methadone"*
- *"Morphine"*
- *"Nalbuphine"*
- *"Oxycodone"*
  Include: Percocet
- *"Oxymorphone"*
- *"Pentazocine"*
- *"Tapentadol"*
- *"Tramadol"*
- *"None of the above"*

19.2 What was the indication documented by the provider to continue the opioid on the floor/ward?
Instructions: This question will only appear if the patient received an opioid on the last day in the ICU and on the first 2 calendar days on the floor/ward. Review the medical record for documentation that the patient received an opioid during the first two calendar days on the floor/ward.

Note: This information should be found in the floor/ward provider's narrative during days 1-2 on the floor/ward or in their acceptance note on the date of transfer from the ICU. Please do not use information found in the medication order to answer this question.
Select all that apply:

- *"Delirium"*
- *"Agitation"*
- *"Pain"*
- *"Withdrawal"*
- *"Patient's home medication"*
- *"No Indication Documented"*
- *"Other"*

20. During the first two full calendar days on the floor/ward, did the patient receive an intravenous (IV) or oral steroid?
Instructions: Review the medical record to determine if the patient received an IV or oral steroid during the first two full calendar days on the floor/ward.

- *"Yes"*
  Answer question 20.1
- *"No"*
- *"Unknown"*

20.1. Select the medication(s) the patient received during the first two full calendar days on the floor/ward:
Instructions: Review the medical record to determine the name(s) of the IV or oral steroid(s) the patient received during the first two calendar days on the floor/ward.
Select all that apply:

- *"Betamethasone"*
- *"Budesonide"*
- *"Cortisone"*
- *"Deflazacort"*
- *"Dexamethasone"*
- *"Fludrocortisone"*
- *"Hydrocortisone"*
- *"Methylprednisolone"*
- *"Prednisolone"*
- *"Prednisone"*
- *"Triamcinolone"*
- *"None of the above"*

21. During the first two full calendar days on the floor/ward, did the patient have a Confusion Assessment Method (CAM), Confusion Assessment Method for the Intensive Care Unit (CAM-ICU), ICU Delirium Checklist, Delirium Detection Score, or Nursing Delirium Screening Scale (Nu-DESC) collected?
Instructions: Review the medical record to determine if the patient had a CAM, CAM-ICU, ICU Delirium

Checklist, Delirium Detection Score, or Nursing Delirium Screening Scale collected on the first two full calendar days on the floor/ward.
Note: This can be found either in provider documentation or in nursing flowsheets.

- *"Yes"* ***Answer question 21.1***
- *"No"* ***Answer question 21.2***
- *"Unknown"* ***Answer question 21.2***

21.1. During the first two full calendar days on the floor/ward, which delirium assessment(s) were completed?
Instructions: Review the medical record to determine which delirium assessment(s) were completed on the patient on the first two full calendar days on the floor/ward.
Select all that apply:

- *"Confusion Assessment Method (CAM)"*
  Answer question 21.1.1
  Include: 3D CAM Assessment
- *"Confusion Assessment Method for the Intensive Care Unit (CAM-ICU)"*
  Answer question 21.1.1
- *"Intensive Care Delirium Screening Checklist (ICDSC)"*
  Answer question 21.1.2
- *"Delirium Detection Score (DDS)"*
  Answer question 21.1.2
- *"Nursing Delirium Screening Scale (Nu-DESC)"*
  Answer question 21.1.2
- *"None of the above"*
  Include: Delirium Assessments that were performed but are not one of the above selection options.

21.1.1. What was the worst/most acute score documented using the CAM/CAM-ICU during the first two full calendar days on the floor/ward?
Instructions: Review the medical record to determine the worst/most acute score documented using the CAM and/or CAM-ICU on the first two full calendar days on the floor/ward.

- *"Positive"*
- *"Negative"*

21.1.2. What was the worst/most acute score documented using the ICDSC, DDS, Nu-DESC during the first two full calendar days on the floor/ward?
Instructions: Review the medical record to determine the worst/most acute score documented using the ICDSC, DDS, and/or Nu-DESC on the first two full calendar days on the floor/ward. Enter the numerical score in the free text box provided.

Abstractor Notes

1. Do you have any notes or do you want to exclude a form?
Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer questions 1.1 and 1.2

- *"No"*

1.1. Abstractor Notes
Instructions: Use free text to input your notes.
IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

1.2. Do you want to exclude this form?
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
  Answer question 1.2.1
- *"No"*

1.2.1. Are you sure you want to exclude this form? If Yes, please enter the reason for form exclusion in the abstractor notes section above.
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
- *"No"*

Intravascular Devices

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Note 1: This is a repeating form. Enter Intravascular Devices that were either present on presentation to the hospital encounter, inserted during Hospital Days 1-4, or inserted during the first ICU admission. Please enter one intravascular device per form. If the patient had multiple intravascular devices a new form will need to be created for the second and subsequent intravascular devices. For example, the patient had two PICC lines inserted during Hospital Days 1-4, each PICC line requires a new Survey Entry.

Note 2: 'During the first ICU admission' is defined as the length of the patients first ICU stay. If the patient was admitted to ICU on Hospital Day 6 and was transferred back to the general medicine floor on Hospital Day 11, any intravascular device that was inserted while in the ICU on Hospital Days 6-11 would be captured in the Intravascular Device Forms.

1. Does the patient have any of the following intravascular devices present during the hospital encounter?
Instructions: Review the medical record to determine if the patient had any of the following intravascular devices present during the hospital encounter.
Exclude: Mediport/Medport that is not accessed during the hospital encounter. Lines placed that were never functional/used. Devices placed on Hospital Day 5 or after. Sheaths placed for procedures/devices, Swan-Ganz Catheters/Pulmonary Artery (PA) Catheters.

- *"Tunneled Central Venous Catheter (CVC)"*
  Answer questions 1.1, 1.6 through 1.8, 1.10, 1.12, 1.14 through 1.16
- *"Non-Tunneled Central Venous Catheter (CVC)"*
  Answer questions 1.1, 1.6 through 1.8, 1.10, 1.12 through 1.16
  Note: In the situation where it is unclear if a vascular access device is tunneled or non-tunneled, assume the device is not tunneled unless it is specifically stated.
- *"Hemodialysis line (i.e. Permacath, Quinton, Trialysis, etc.)*
  Answer questions 1.1, 1.6 through 1.8, 1.10 through 1.12 through 1.16
- *"Mediport/Medport"*
  Answer questions 1.1, 1.12, 1.14 through 1.16
  Exclude: Implanted ports that are not accessed during hospital days 1-4 or the first ICU stay.
- *"Arterial Line"*
  Answer questions 1.1, 1.9, 1.12, 1.14 through 1.16
  Exclude: arterial sheaths placed for a procedure and removed after procedure completion
- *"Midline"*
  Answer questions 1.1 through 1.4, 1.10, 1.12, 1.14 through 1.16
  Include: Extended-dwell peripheral IVs inserted in the arm, above the wrist. Ex. BARD Accucath device.
- *"Peripherally Inserted Central Catheter (PICC)"*
  Answer questions 1.1 through 1.3, 1.5, 1.10, 1.12, 1.14 through 1.16

For All Lines:

1.1. Was the [device] in place at the time of presentation to the hospital (ER, Obs, Inpatient, ICU)?
Instructions: Review the medical record to determine if the intravascular device selected was present on admission to the index hospital encounter.
Include: Ports that are already in place at the time of presentation.

- *"Yes"*
- *"No"*
  Answer questions 1.1.1 through 1.1.2, and 1.1.3 for PICCs/Midlines
- *"Unknown"*

1.1.1. Date of [device] insertion
Instructions: Review the medical record to determine the date of insertion of the selected intravascular device. Enter the date in MM/DD/YYYY format. If the date of insertion is unknown, please enter 01/01/1900.

1.1.2. Time (in military time) of [device] insertion
Instructions: Review the medical record to determine the time of insertion of the selected intravascular device. Enter the time in HH:MM format (military time). If the time of insertion is unknown, please enter 99:99.

For Midlines and PICCs:

1.1.3. What was the documented indication for [device] placement?
Instructions: Review the medical record to determine the indication for PICC or Midline placement (i.e., the documented reason for why the PICC or Midline is being placed).
Note: The indication for PICC/Midline placement must be documented in the PICC/Midline order, the Interventional Radiology note or Vascular Access note *and* must specifically state "PICC/Midline indication, PICC/Midline placed for, etc." If nothing is documented, select "Unknown"
Exclude: "Venous Access", "Physician Request" or "Patient Request" are not acceptable as a documented indication.
Select all that apply:

- *"Antibiotics"*
  Include: Any documentation that the PICC/Midline was placed for intravenous antibiotic therapy
- *"Blood transfusion or blood products"*
  Include: Any documentation that the PICC/Midline was placed for transfusion of blood or blood products. Examples include (but not limited to): whole blood, PRBC, plasma, platelets, Hemopure (HBOC-201).
- *"Chemotherapy"*
  Include: Any documentation that the PICC/Midline was placed for chemotherapy administration.
- *"Difficult Access/ Blood Draws"* – ***PICC LINES ONLY***
  Include: Any documentation that the PICC was placed due to difficult IV access (poor peripheral venous access) and/or inability to draw blood (i.e. blood draws, phlebotomy).
- *"Blood Draws"* – ***MIDLINES ONLY***
  Include: Any documentation that the Midline was placed due to inability to draw blood (i.e., blood draws, phlebotomy).
- *"Difficult Access"* – ***MIDLINES ONLY***
  Include: Any documentation that the Midline was placed due to difficult IV access (poor peripheral venous access, need for reliable or long-term access, patient requiring frequent IV restarts)

- *"IV Fluids or Hydration"* – ***MIDLINES ONLY***
- *"Medications Requiring Central Access"* – ***PICC LINES ONLY*** - if the medical record indicates that the PICC was placed for medication requiring central venous access and the medication meets the criteria below:
  Include: Any documentation that the PICC was placed due to the administration of medications that require central venous access. These medications only include the following:
  Note: The medication *must be administered* to the patient AND part of the list below to use this selection. If the medication is administered, and not part of the list below, but per your hospital policy is required to be administered centrally please use the "Per Hospital Policy" selection.
  - Administration of vasopressors: Epinephrine, Angiotensin-II, Norepinephrine, Phenylephrine, Phenylephrine Hydrochloride, Dopamine and/or Dobutamine, Vasopressin
  - Certain IV fluids: Dextrose solutions 10% or greater, Sodium chloride ≥3%
  - Propofol, Fentanyl, Versed, Lidocaine, Promethazine, Pentobarbital Sodium, Phenobarbital Sodium, Pentamidine, Mannitol ≥ 20%, Acyclovir, Arginine.
  - Four (4) or more doses of one of the following during the hospitalization:
    - Antibiotics that are known irritants (e.g., Erythromycin, Tetracycline, Nafcillin, Vancomycin, Amphotericin B)
    - Electrolyte solutions (Potassium, Magnesium, or Calcium)
    - Phenytoin, Sodium Bicarbonate, or Amiodarone
- *"Multiple Incompatible Fluids"* ***– PICC LINES ONLY -***
  Note: This should only be selected if this reason is specifically documented by the healthcare professional (MD, Nurse, IR, etc.) in the medical record.
  Include: Any documentation that the PICC was placed due to multiple infusions that are incompatible (i.e., fluids that cannot be administered at the same time).
- *"Parenteral Nutrition"* if the medical record indicates that the PICC/Midline was placed for administration of parenteral nutrition (PN) ***and the patient received*** Parenteral Nutrition (PN) during the period of review.
  Include: Total parenteral nutrition (TPN), parenteral nutrition (PN), total nutrient admixture (TNA), lipid emulsion.
- *"Medications Requiring Central Access - Per Hospital Policy"* – ***PICC LINES ONLY***
  Include: Medications requiring central access per your local hospital policy that are <u>not</u> a medication included in the "Medications Requiring Central Access" selection.
- *"Radiographic Study"* – ***MIDLINES ONLY***
  Include: Any documentation that the Midline was placed due to need for a radiographic study (i.e., PE Protocol). An example may include placement for power injection of contrast medium for a planned radiologic exam.
- *"Other"* ***– MIDLINES ONLY***
  Please contact the HMS Coordinating Center for approval to use "Other".
  Instructions: Free text the reason specified for placement of the Midline
  Include: Patient Request, IVIG Infusion, Medication Delivery (if written as the indication in the order, radiology note, insertion note, or VAST note).
- *"Unknown"* ***– MIDLINES ONLY***

1.2. Extremity in which [device] was placed

Instructions: Review the medical record to determine the extremity (i.e. limb) in which the device was placed.

- *"Right arm"*
  Include: Right upper extremity
- *"Left arm"*
  Include: Left upper extremity
- *"Unknown"*

1.3. Vein in which [device] was placed

Instructions: Review the medical record to determine the vein in which the device was placed.
Exclude: Transjugular, Jugular, Subclavian, Brachiocephalic and Non Arm Vein device lines

- *"Basilic"*
- *"Cephalic"*
- *"Axillary"*
- *"Median"*
- *"Brachial"*
- *"Unknown"*
- *"Other"*
- Please contact the HMS Coordinating Center for approval to use "Other".

For Midlines:

1.4. Line thickness/gauge

Instructions: Review the medical record to determine the thickness/French (F, FR, Fr.) size or gauge of the Midline catheter placed. The French catheter scale is commonly used to measure the size and external diameter of catheter. This piece of information is likely to be found on a Midline procedure note.

- *"3"*
- *"4"*
- *"4.5"*
- *"5"*
- *"5.5"*
- *"6"*
- *"7"*
- *"16"*
- *"18"*
- *"20"*
- *"22"*
- *"Unknown"*
- *"Other"* if the medical record indicates the thickness of the Midline of interest is something other than what is listed above.

For PICCs:

1.5. Line thickness/gauge

Instructions: Review the medical record to determine the thickness/French (F, FR, Fr.) size of the PICC placed. The French catheter scale is commonly used to measure the size and external diameter of catheter. This piece of information is likely to be found on a PICC procedure note.

- *"3"*
- *"4"*
- *"4.5"*
- *"5"*
- *"5.5"*
- *"6"*
- *"7"*
- *"Unknown"*

For Tunneled CVCs, Non-Tunneled CVCs, and Hemodialysis Lines:

1.6. Which side of the body was the [device] placed?

Instructions: Review the medical record to determine the orientation in which the CVC was placed.

- *"Left"*
- *"Right"*
- *"Unknown"*

1.7. Location in which the [device] was placed?

Instructions: Review the medical record to determine the location in which the device was placed.

- *"Subclavian"*
- *"Femoral"*
- *"Internal Jugular"*
- *"Other, please specify"* if the medical record indicates that the device was placed in a location other than one listed above. Free text the location in the text box provided. Please contact the HMS Coordinating Center for approval to use "Other".
- *"Unknown"*

1.8. Line thickness/gauge

Instructions: Review the medical record to determine the thickness/French (F, FR, Fr.) size and gauge of the device placed. The French catheter scale is commonly used to measure the size and external diameter of catheter. This piece of information is likely to be found on a procedure note.

- *"2"*
- *"3"*
- *"4"*
- *"4.5"*
- *"5"*
- *"5.5"*
- *"6"*
- *"7"*
- *"7.5"*
- *"8"*
- *"8.5"*
- *"9"*
- *"9.5"*

- *"10"*
- *"10.5"*
- *"11"*
- *"11.5"*
- *"12"*
- *"12.5"*
- *"13"*
- "*13.5*"
- *"14"*
- "*14.5*"
- "*15*"
- "*15.5*"
- *"16"*
- *"18"*
- *"20"*
- *"Unknown"*
- *"Other, please specify"* if the medical record indicates the thickness of the device of interest is something other than what is listed above. Free text the other thickness in the text box provided. Please contact the HMS Coordinating Center for approval to use "Other".

For Arterial Lines:

1.9. Location in which Arterial Line was placed

Instructions: Review the medical record to determine the location in which the arterial line was placed.

- *"Radial artery"*
- *"Ulnar artery"*
- *"Femoral artery"*
- *"Brachial artery"*
- *"Axial artery"*
- *"Unknown"*

For Tunneled CVCs, Non-Tunneled CVCs, HD Lines, Midlines and PICCs:

1.10. Lumens

Instructions: Review the medical record to determine the number of lumens the device of interest has. The term lumen refers to the number of openings the line has, or IV access lines.

- *"Single"*
- *"Double"*
- *"Triple"*
- *"Quadruple"*
- *"Unknown"*

For HD Lines:

1.11. Select the type of HD line:
Instructions: Review the medical record to determine the type of hemodialysis line in place.
Note: In the situation where it is unclear if a vascular access device is tunneled or non-tunneled, assume the device is not tunneled unless it is specifically stated.

- *"Tunneled"*
- *"Non-tunneled"*
- *"Unknown"*

For All Lines:

1.12. Is there documentation in the medical record that the [device] has been removed during the hospital encounter (ER, Obs, Inpt, ICU)?
Instructions: Review the medical record to determine if the intravascular device was removed during the index hospital encounter.

- *"Yes"*
  Answer questions 1.12.1 through 1.12.3
  Include: Patient expired while line was still in place.
- *"No"*
  Include: Patient being discharged home with the intravascular device in place, de-accessed ports.
- *"Unknown"*

1.12.1. Reason(s) for removal
Instructions: Review the medical record to determine the documented reason(s) why the intravascular device was removed or discontinued. Intravascular devices may be removed for various reasons such as discharge from the hospital, a complication with/caused by the device, or the intravascular device may no longer be indicated (i.e. do not need it for infusion of medications any longer).
Select all that apply:

- *"Accidental removal"*
  Include: Device removal from patient accidentally pulling out line, line was accidentally pulled out by the patient or caregiver, was caught on the bed or IV pole, etc.
- *"Complication"* ***Answer question 1.12.1.1***
  Include: Suspected central line associated blood stream infection (CLABSI), confirmed CLABSI, suspected line sepsis or bacteremia, confirmed line sepsis or bacteremia, suspected DVT, confirmed DVT, suspected PE, confirmed PE, difficulty with blood collection, difficulty infusing and mechanical issues with the device (i.e. kinking, coiling, breakage, etc.).
- *"Death"*
- *"Discharge"*
  Include: Device removal due to patient discharge, regardless of if the patient was discharged home, to another hospital, assisted living, skilled nursing facility, sub-acute rehab, inpatient hospice, prison, inpatient rehab, or psychiatric facility. Documentation of "Device removal prior to patient leaving AMA".
- *"Discontinued per hospital policy"*
- *"Dislodgement"*
- *"No longer indicated"*
  Include: Device removal because it was no longer indicated (i.e. no longer needed). Device no longer needed for medication administration, and/or no longer needed for blood collection, and/or device removed for a "Line Holiday". Device removal to change number of lumens.

- *"Treatment Discontinued"*
  Include: Device removal because TPN discontinued.
- *"Unknown"*

1.12.1.1. Specify the complication(s)

Instructions: Review the medical record to determine the complication(s) that lead to the removal of the intravascular device.
Select all that apply:

- *"Suspected Central Line Associated Blood Stream Infection (CLABSI)/Catheter Related Blood Stream Infection (CRBSI)"*
  Include: Device removal due to suspected pulmonary embolism (PE) or "rule out" PE. Also, device removal due to suspected PE if a confirmation test has been ordered, but the results are pending and/or inconclusive.: Device removal where the decision for removal was due to suspected central line associated blood stream infection (CLABSI), suspected line sepsis, or suspected bacteremia. Removal of device in order to culture the device tip.
- *"Confirmed Central Line Associated Blood Stream Infection (CLABSI)/Catheter Related Blood Stream Infection (CRBSI)"*
  Include: Device removal due to suspected pulmonary embolism (PE) or "rule out" PE. Also, device removal due to suspected PE if a confirmation test has been ordered, but the results are pending and/or inconclusive.: confirmed central line associated blood stream infection (CLABSI), confirmed PICC line associated blood stream infection, confirmed catheter-related or device-related blood stream infection, confirmed line sepsis, or bacteremia, line sepsis, or line bacteremia
- *"Occlusion or occlusive catheter thrombus"* if, at the time of device removal, the medical record indicates that the device was removed due to occlusion of the device catheter.
- *"Exit site problems (such as blood or serous discharge from catheter site)"*

  Include: Device removal due to suspected pulmonary embolism (PE) or "rule out" PE. Also, device removal due to suspected PE if a confirmation test has been ordered, but the results are pending and/or inconclusive.: Removal due to infiltration, blood from the exit site or serous drainage from device catheter site, swelling or redness ONLY at the exit site without additional documentation
- *"Catheter Migration"*
  Include: Device removal due to suspected pulmonary embolism (PE) or "rule out" PE. Also, device removal due to suspected PE if a confirmation test has been ordered, but the results are pending and/or inconclusive.: Device removal due to external movement of the catheter (e.g., increase in the amount of catheter exposed on skin, external movement of the catheter as measured by catheter length on skin etc.)
- *"Malposition"*
  Include: Device removal due to suspected pulmonary embolism (PE) or "rule out" PE. Also, device removal due to suspected PE if a confirmation test has been ordered, but the results are pending and/or inconclusive.: Device removal due to malposition in the internal jugular vein, axillary or subclavian vein, high/middle third of the superior vena cava contralateral arm, etc.
- *"Suspected DVT"*
  Include: Device removal due to suspected pulmonary embolism (PE) or "rule out" PE. Also, device removal due to suspected PE if a confirmation test has been ordered, but the results are pending and/or inconclusive.: Device removal due to a suspected deep vein thrombosis (DVT) or "rule out" DVT. Also, device removal due to suspected DVT, if a confirmation test had been ordered, but the results are pending and/or inconclusive. **Exclude**: Suspected clots (i.e. thrombus) within the device catheter (i.e. intraluminal occlusion of the catheter without evidence of extraluminal occlusion). Superficial

thrombophlebitis (i.e. superficial vein clots - clots in the cephalic vein, median cephalic vein, basilic vein, median cubital vein, median forearm vein, greater saphenous vein, lesser saphenous vein)

- *"Confirmed DVT"*
  Include: Device removal due to DVT, and DVT has been confirmed through diagnostic testing such as venogram, ultrasound/doppler, CT, or MRI.
  Exclude: Clots (i.e. thrombus) within the device catheter (i.e. intraluminal occlusion of the catheter without evidence of extraluminal occlusion). Superficial thrombophlebitis (i.e. superficial vein clots - clots in the cephalic vein, median cephalic vein, basilic vein, median cubital vein, median forearm vein, greater saphenous vein, lesser saphenous vein)
- *"Suspected PE"*
  I**nclude**: Device removal due to suspected pulmonary embolism (PE) or "rule out" PE. Also, device removal due to suspected PE if a confirmation test has been ordered, but the results are pending and/or inconclusive.
- *"Confirmed PE"*
  Include: Device removal due to confirmed pulmonary embolism (PE), with PE confirmed per CT, MRI, Ventilation Perfusion (VQ) scan, and/or pulmonary angiogram.
- *"Difficulty with Blood Collection"*
  Include: Device removal due to difficulty with blood collection or blood sampling, which may include difficulty drawing (i.e. obtaining) blood from one or more ports/lumens of the device. Documentation of no blood return.
- *"Difficulty Infusing"*
  Include: Device removal due to difficulty infusing (i.e. administering) fluids and/or medications. This may include documentation that the lumen(s) are unable to be flushed (i.e. unable to push medicine or fluids into device line).
- *"Mechanical (such as kinking, coiling, breakage)"*
  Include: Device removal due to a mechanical problem such as kinking, coiling, or breakage. Kinking includes occlusion (i.e. blocking) of the line due to a bend or twist in the line. Breakage includes any break in the device line. Coiling includes looping of the device. Radiology report (i.e. chest x-ray, CT, etc.) that the device had kinking, coiling, or breakage, and device was subsequently removed for this reason.
- *"Unknown"*
- *"Other, please specify"* if, at the time of device removal, the medical record indicates the device was removed for a reason not listed above. Free text the other complication in the text box provided. Please contact the HMS Coordinating Center for approval to use "Other".

1.12.2. Date of removal

Instructions: Review the medical record to determine the date the intravascular device was removed or discontinued. Enter the date in MM/DD/YYYY format.

Note 1: If the medical documentation is not specific about the date/time of actual removal, but it is stated that the intravascular device is no longer in place, please do the following: Ascertain the date (via medical documentation) on which it is known that the intravascular device is present. Compare this to the date on which you have documentation that the intravascular device line is no longer present, but you are unable to determine the actual date of removal. Enter the intravascular device removal date as the date that is in the middle of these two known dates. Then, please indicate that you completed this process to determine the intravascular device removal date in the abstractors notes section.

Note 2: If patient expired while the intravascular device was in place, use the date of death as the date of intravascular device removal.

For HD Lines and Non-Tunneled Central Venous Catheters:

1.13. When the [device] was removed, was it replaced with another intravascular device?

Instructions: Review the medical record to determine if another intravascular device was inserted to replace the HD Line or Non-Tunneled Central Venous Catheter.

Include: Lines placed within 1 calendar day after removal.

- *"Yes"*
  Answer question 1.13.1
- *"No"*
- *"Unknown"*

1.13.1. What type of line was placed?

Instructions: Review the medical record to determine if another intravascular device was inserted to replace the HD Line or Non-Tunneled Central Venous Catheter.

Include: Lines placed within 1 calendar day after removal.

- *"CVC (tunneled)"*
- *"CVC (non-tunneled)"*
- *"HD Line (tunneled)"*
- *"HD Line (non-tunneled)"*
- *"PICC"*
- *"Midline"*
- *"Mediport"*
- *"Peripheral IV"*

For All Lines:

1.14. Was the [device] tip sent for culture?

Instructions: This question will only appear if you indicated that the device has been removed. Review the medical record to determine if the patient had a device tip (i.e. of the device being abstracted) sent for microbiological culture during the period of review. This information is likely to be found in the physician progress notes, vascular nursing notes, and/or laboratory (i.e. microbiology) information.

Include: Documentation and/or order for the device tip to be sent for culture. Laboratory results of the device tip culture.

- *"Yes"*
  Answer question 1.14.1
- *"No"*
- *"Unknown"*

1.14.1. Was the [device] tip culture positive?

Instructions: Review the medical record to determine if the device tip culture was positive (i.e. the culture was positive for pathogen growth) during the period of review.

Include: Laboratory result that indicates that the device tip was positive for a pathogen.

- *"Yes"*
  Answer questions 1.14.1.1 through 1.14.1.3
- *"No"*
- *"Unknown"*

1.14.1.1. Date of [device] tip culture

Instructions: Review the medical record to determine the date of collection of the positive device tip culture (i.e. date the culture was drawn). Indicate the date in the MM/DD/YYYY format. Use 01/01/1900 if the date is unknown.

1.14.1.2. Positive [device] tip culture - pathogen identified

Instructions: Review the medical record to determine the pathogen identified on the device tip culture. Pathogens are classified by genus and species. The genus and species of the pathogen will likely be found on the laboratory report; however, they may also be found within the progress notes. First, indicate the genus, which is the broad or the generic name. Once the genus is selected, you will be prompted to indicate the species.

- *"Achromobacter"*
- *"Acinetobacter"*
- *"Actinomyces"*
- *"Aerobacter"*
- *"Aerococcus"*
- *"Aeromonas"*
- *"Alcalignes"*
- *"Alpha-hemolytic Streptococcus, not S. pneumoniae"*
- *"Arachnia"*
- *"Arcanobacterium"*
- *"Arthrobacter"*
- *"Aspergillus"*
- *"Bacillus"*
- *"Bacterionema"*
- *"Bacteroides"*
- *"Bordetella"*
- *"Branhamella"*
- *"Brevibacillus"*
- *"Brevibacterium"*
- *"Burkholderia"*
- *"Candida"*
- *"Citrobacter"*
- *"Clostridium"*
- *"Corynebacterium"*
- *"Coryneform"*
- *"Cupriavidus"*
- *"Dermabacter"*
- *"Dermacoccus"*
- *"Diptherioids"*
- *"Elizabethkingia"*
- *"Enterobacter"*
- *"Enterococcus"*

- *“Escherichia”*
- *“Francisella”*
- *“Friedlander’s”*
- *“Fusobacterium”*
- *“Gordonia”*
- *“Haemophilus”*
- *“Klebsiella”*
- *“Kluyvera”*
- *“Kocuria”*
- *“Legionella”*
- *“Levinea”*
- *“Listeria”*
- *“Micrococcus”*
- *“Monilia”*
- *“Moraxella”*
- *“Morganella”*
- *“Neisseria”*
- *“Nocardia”*
- *“Oidium”*
- *“Paeni”*
- *“Pantoea”*
- *“Pasteurella”*
- *“Pediococcus”*
- *“Peptostreptococcus”*
- *“Pneumocystis”*
- *“Prevotella”*
- *“Propioniferax”*
- *“Propionibacterium”*
- *“Providencia”*
- *“Proteus”*
- *“Pseudomonas”*
- *“Raoultella”*
- *“Rhodococcus”*
- *“Rothia”*
- *“Rummeliibacillus”*
- *“Salmonella”*
- *“Sarcina”*
- *“Solibacillus”*
- *“Serratia”*
- *“Stapyhlococcus”*
- *“Streptococcus”*

- *"Trueparella"*
- *"Tsukamurella"*
- *"Tufted Mitior"*
- *"Viridans Group Streptococci"*
- *"Yersina"*
- *"Stenotrophomonas"*
- *"Streptococcus species"*
- *"Xanthomonas"*
- *"Bacteria Not Specified"*
- *"Other (See the CDC's complete list in the knowledge base)"*

1.14.1.3. For the positive [device] tip culture was there an additional pathogen identified?
Instructions: Review the medical record to determine if there was an additional pathogen identified on the device tip culture.

- *"Yes"*
  The previous questions will repeat so that up to 5 pathogens may be entered.
- *"No"*
- *"Unknown"*

1.15. Did the medical record reflect the diagnosis of a central line-associated blood stream infection (CLABSI) or catheter-related blood stream infection (CRBSI) related to the hemodialysis line during the hospital encounter?
Instructions: Review the medical record to determine if a CLABSI or CRBSI was diagnosed related to the intravascular device of interest.
Exclude: Blood stream infections (BSI) secondary to an infection at another site.

- *"Yes"*
  Answer question 1.15.1
- *"No"*
- *"Unknown"*

1.15.1. Date of diagnosis of the CLABSI/CRBSI
Instructions: Review the medical record to determine the date that the CLABSI or CRBSI was diagnosed. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

1.16. Did the patient develop an exit site infection related to the [device] (while the line was in place)?
Instructions: Review the medical record to determine if the patient developed an exit site infection related to the intravascular device, while the line was still in place. Include if the medical record indicates redness, purulent discharge or granulation tissue documented at the site of the catheter exit which may also be associated with pain or tenderness; OR if there is documentation of "exit site infection" or "site infection". Also include if there are cultures of discharge at the exit site or documentation of redness and swelling at the exit site of the device.

- *"Yes"*
- *"No"*
- *"Unknown"*

Abstractor Notes

1. Do you have any notes or do you want to exclude a form?
Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer questions 1.1 and 1.2
- *"No"*

1.1. Abstractor Notes
Instructions: Use free text to input your notes.
IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

1.2. Do you want to exclude this form?
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
  Answer question 1.2.1
- *"No"*

1.2.1. Are you sure you want to exclude this form? If Yes, please enter the reason for form exclusion in the abstractor notes section above.
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
- *"No"*

Intravenous Fluids in the First 48 Hours

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Jump to sub-sections:

Qualifying intravenous fluids for the purpose of this form include:

- Maintenance IV Fluids given at 11 cc/hr or greater
- IV fluid boluses
- Medications & electrolytes given at 125 cc/hr or greater AND with a total administered volume of 100 mL or greater (i.e. the medication or electrolyte must meet both parameters in order to be included).
  - Note 1: Please include medications that meet the rate and volume parameters that were IV Push (i.e., doesn't have to be put be administered via a pump to include).
- Blood products/albumin
- Bolus or Maintenance IV Fluids given by EMS, in a clinic, or in an IR procedure or routine cardiac procedure immediately prior to the hospital encounter

Fluids **EXCLUDED** for the purpose of this form include:

- Total Parenteral Nutrition (TPN)
- Override fluids given in an emergent situation without any corresponding orders
- Vasopressors
- IV Contrast (Isovue)
- Normal Saline flush given after blood or medication administration
- Dialysate or other fluid/albumin given only during hemodialysis/peritoneal dialysis or CRRT

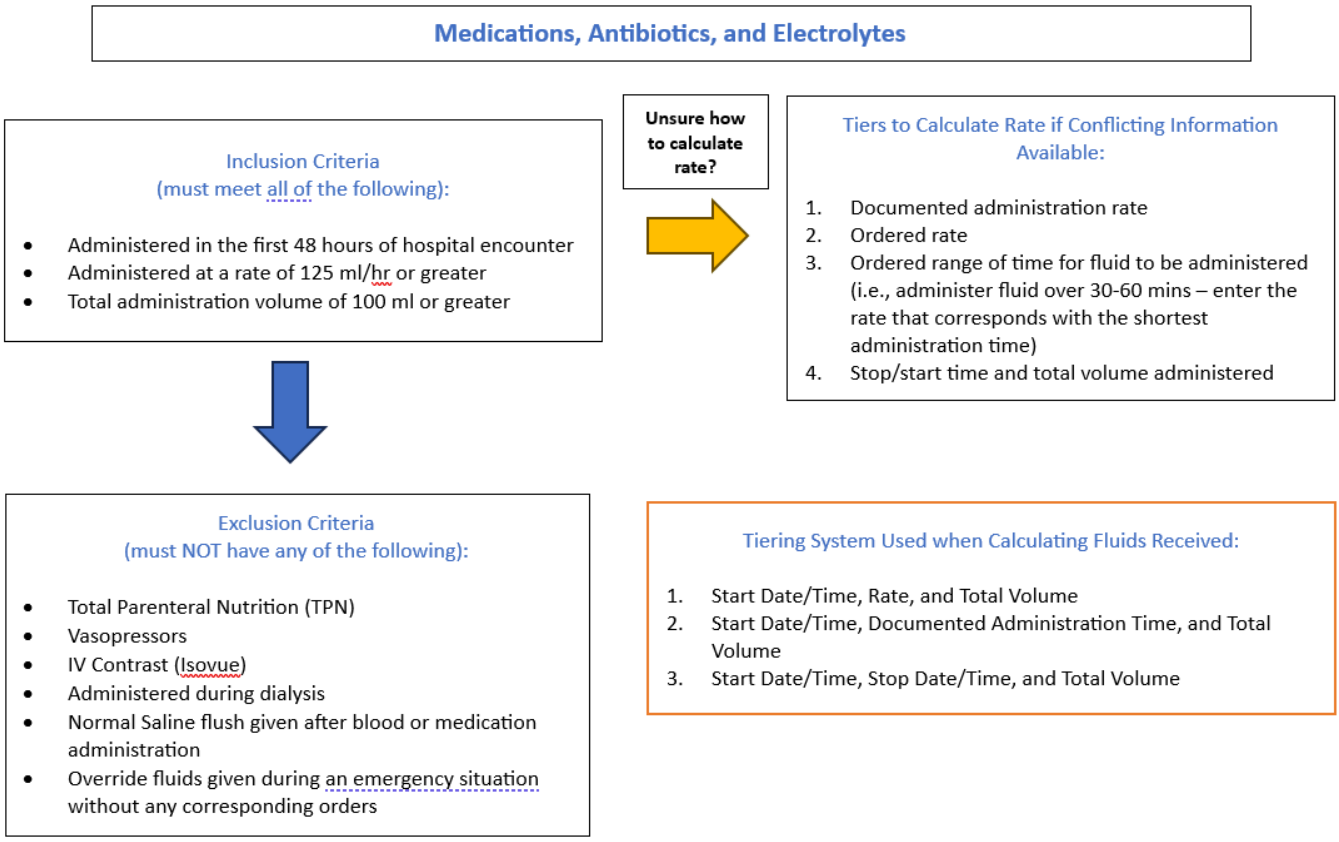
This is a repeating form. Please enter one form for each of the given time blocks when applicable fluids/medications were administered (unless more than 5 different medications/fluids were started within that time block, in which case you would enter two forms for that time block and ensure no medications/fluids overlap).

Within these time blocks, you should only be entering in medications/fluids started during that time block. For example, if a patient arrives at 0900 and a fluid bolus is started at 1300, it should be entered in the ">3 hours to 6 hours from arrival" time block because it was started between 1200 (the end of the 3-hour block) and 1500 (the end of the 6-hour time block).

Hierarchy for capturing fluid administration documentation:
1. Medication Administration Record (MAR) OR Infusion Record
2. Intake and Output Flowsheet
3. Provider Documentation

Note 1: Ignore documented pauses of 10 minutes or less. Anything greater than that should be added up and subtracted from the end time or the 48 hour mark (whichever comes first). Please see the Fluid Abstraction tool on Zendesk for resources to help calculate this information.

Note 2: The following decision tree is meant to help determine how to capture medications/ antibiotics, and electrolytes:



Note 3: The following decision tree is meant to help determine how to capture maintenance IVF:

Maintenance Fluids

Inclusion Criteria
(must meet all of the following):

- Administered immediately prior to arrival (if documented by ED or admitting provider) OR administered in the first 48 hours of hospital encounter
- Administered at a rate of 11ml/hr or greater

Tiering System Used when Calculating Fluids Received:

1. Start Date/Time, Rate, and Total Volume
2. Start Date/Time, Documented Administration Time, and Total Volume
3. Start Date/Time, Stop Date/Time, and Total Volume

Exclusion Criteria
(must NOT have any of the following):

- Total Parenteral Nutrition (TPN)
- Vasopressors
- IV Contrast (Isovue)
- Administered during dialysis
- Normal Saline flush given after blood or medication administration
- Override fluids given during an emergency situation without any corresponding orders

Note 4: The following decision tree is meant to help determine how to capture boluses:

Bolus Fluids

Inclusion Criteria
(must meet all of the following):

- Administered immediately prior to arrival (if documented by ED or admitting provider) OR administered in the first 48 hours of hospital encounter
- Ordered as "Bolus" in medical record (for first 48 hours of hospital encounter)
- A bolus is "a single dose of an intravenous fluid given all at once/over a short period of time"

Tiering System Used when Calculating Fluids Received:

1. Start Date/Time, Rate, and Total Volume
2. Start Date/Time, Documented Administration Time, and Total Volume
3. Start Date/Time, Stop Date/Time, and Total Volume

Exclusion Criteria
(must NOT have any of the following):

- Total Parenteral Nutrition (TPN)
- Vasopressors
- IV Contrast (Isovue)
- Administered during dialysis
- Normal Saline flush given after blood or medication administration
- Override fluids given during an emergency situation without any corresponding orders

1. What time frame were the fluids started in?
Instructions: Review the medical record to determine which time block the fluids were started compared to the time of arrival to the hospital encounter.

- *"Prior to hospital arrival"*
  Answer question 1.1
  Include: Information documented by the Emergency Medicine or Admitting Provider that the patient received IV fluids prior to their hospital arrival via EMS or in a clinic, IR procedure, or routine cardiac procedural unit immediately prior to their arrival to the hospital encounter. These should be fluids that are given for the treatment/resuscitation related to the patient's current state of infection/sepsis.
  Note: You should look for this information in the provider's documentation alone, not just the EMS run sheet or procedural flow sheet. We would like this information to be documented and acknowledged by the provider.
- *"1 hour from arrival"*
  Answer question 1.2
- *"> 1 hour to 3 hours from arrival"*
  Answer question 1.2
- *"> 3 hours to 6 hours from arrival"*
  Answer question 1.2
- *"> 6 hours to 24 hours from arrival"*
  Answer question 1.2
- *"> 24 hours to 48 hours from arrival"*
  Answer question 1.2

1.1. What volume of fluid was documented as delivered prior to arrival to the hospital encounter?
Instructions: Review the medical record to determine the volume of fluid administered prior to the hospital encounter documented by the Emergency Medicine or Attending Provider.

- *"< 500 ml"*
- *"500-999 ml"*
- *"1000-1499 ml"*
- *"1500-1999 ml"*
- *"2000-2499 ml"*
- *"2500-2999 ml"*
- *">= 3000 ml"*
- *"Unknown/no volume documented"*

1.2. What type of fluid was administered?
Instructions: Review the medical record to determine what type of fluid was administered to the patient during the selected time block.

- *"Maintenance Fluid"*
  Answer questions 1.2.1, and 1.2.4 through 1.2.11
  Include: 5% Dextrose with Multivitamins Concentrate, Sodium Bicarbonate ordered as a continuous fluid
- *"Bolus"*
  Answer questions 1.2.1, and 1.2.4 through 1.2.11
  Exclude: Fluids given during dialysis

- *"Antibiotic/Medication"*
  Answer questions 1.2.2, and 1.2.4 through 1.2.11
  Exclude: IVIG, Vasopressors
- *"Electrolyte"*
  Answer questions 1.2.2, and 1.2.4 through 1.2.11
  Note: Sodium Bicarbonate ordered as a continuous fluid should be captured as "Maintenance Fluid"
- *"Blood Products/Albumin"*
  Answer questions 1.2.3 through 1.2.11
  Include: Red Blood Cells, Packed Red Blood Cells (PRBCs), Plasma, Cryoprecipitate, Albumin

1.2.1. For Maintenance Fluid/Bolus, what type of fluid was given?
Instructions: Review the medical record to determine the type of maintenance fluid/bolus administered to the patient during the selected time block.
Exclude: Blood, PRBCs (those are included in Blood Products/Albumin)
Select one of the following:

- "*Balanced Fluids (Lactated Ringer's or Plasma-Lyte*"
  Include: Lactated Ringer's with electrolytes (Potassium Chloride, etc.), Normosol
- "*Normal Saline (0.9% Sodium Chloride/NaCl)*"
  Include: 0.9% Normal Saline with electrolytes (Potassium Chloride, Sodium Phosphate, Magnesium Sulfate, Potassium Phosphate, Potassium Acetate, etc); Normal Saline with no notation of %; Sodium Chloride 154 mEq
- "*½ Normal Saline (0.45% Sodium Chloride/NaCl)*"
  Include: 0.45% Normal Saline with electrolytes (Potassium, Sodium Phosphate, Magnesium Sulfate, Potassium Phosphate, etc)
- "*Hypertonic Saline (greater than 0.9% Sodium Chloride)*"
  Include: 2% Normal Saline, 3% Normal Saline
- "*Dextrose in Balanced Fluids (Lactated Ringer's or Plasma-Lyte)*"
  Include: Dextrose 5% (D5) in Lactated Ringer's; Dextrose 5% (D5) in Lactated Ringer's with Potassium Chloride/KCl; Dextrose 10% (D10) in Lactated Ringer's; Dextrose (no %) in Lactated Ringer's; Dextrose in Normosol
- "*Dextrose in Normal Saline (0.9% Sodium Chloride/NaCl)*"
  Include: Dextrose 5% (D5) in 0.9% Normal Saline (NaCl/Sodium Chloride); Dextrose 10% (D10) in 0.9% Normal Saline (NaCl/Sodium Chloride); Dextrose 5% in 0.9% Normal Saline (NaCl/Sodium Chloride) with Potassium Chloride/KCl (or other electrolytes)
- "*Dextrose in ½ Normal Saline (0.45% Sodium Chloride/NaCl)*"
  Include: Dextrose 5% (D5) in 0.45% Normal Saline (NaCl/Sodium Chloride); Dextrose 10% (D10) in 0.45% Normal Saline (NaCl/Sodium Chloride); Dextrose 5% in 0.45% Normal Saline (NaCl/Sodium Chloride) with Potassium Chloride/KCl (or other electrolytes)
- "*Dextrose in Water*"
  Include: D5W; D5; Dextrose 5%; D5 in H2O; Dextrose 5% with Potassium Chloride/KCl, Sodium Phosphate, Sodium Acetate, Calcium Gluconate, Potassium Phosphate, etc.; D5W with Dextrose 50%; D10W; D10; Dextrose 10%; D10 in H2O; D20W; D20; Dextrose 20%; D20 in H2O
- "*Sodium Bicarbonate (NaHCO3)*"
  Include: Sodium Bicarbonate (NaHCO3) in Dextrose 5% (D5); Sodium Bicarbonate (NaHCO3) in Dextrose 10% (D10); Sodium Bicarbonate (NaHCO3) in Sterile Water; Sodium Bicarbonate (NaHCO3) in 0.45% (1/2) Normal Saline (NaCl/Sodium Chloride); Sodium Bicarbonate (NaHCO3) in 0.9% Normal Saline (NaCl/Sodium Chloride); Sodium Bicarbonate (NaHCO3) in 0.45% (1/2) Normal Saline

(NaCl/Sodium Chloride) with Potassium Chloride/KCl (or other electrolytes); Sodium Bicarbonate (NaHCO3) in 0.45% (1/2) Normal Saline (NaCl/Sodium Chloride) with Potassium Acetate (or other electrolytes); Sodium Bicarbonate (NaHCO3) in Dextrose 5% (D5) with Potassium Chloride/KCl (or other electrolytes)

- "*Other*" Please contact the Coordinating Center prior to making this selection.
- "*Unknown*"

1.2.2. For Antibiotic/Medication/Electrolyte, what was the carrier fluid?
Instructions: Review the medical record to determine the type of carrier fluid used to administer the antibiotic/medication/electrolyte to the patient during the selected time block.
Exclude: Vasopressors

- "*Normal Saline (0.9% NS)*"
  Include: Saline with no notation of %; Sodium Chloride 154 mEq; 0.9% Sodium Chloride/NaCl
- "*1/2 Normal Saline (0.45% NS)*"
  Include: 0.45% Sodium Chloride/NaCl
- "*Sterile Water (H2O)*"
- "*Dextrose (5%, 10%)*"
- "*Hypertonic Saline (>0.9% Normal Saline)*"
  Include: 2% Normal Saline/Sodium Chloride/NaCl; 3% Normal Saline/Sodium Chloride/NaCl
- "*Balanced Fluid (Lactated Ringer's or Plasma-Lyte)*"
  Include: Normosol
- "*Other*" Please contact the Coordinating Center prior to making this selection.
- "*None*"
- "*Unknown*"

1.2.3. What type of blood product was administered?
Instructions: Review the medical record to determine the type of blood product that was administered to the patient during the selected time block.

- "*Red Blood Cells*"
- "*Plasma*"
  Include: Cryoprecipitate.
- "*Platelets*"
- "*Albumin*"

1.2.4. Fluid Start Date
Instructions: Review the medical record to determine the date that the fluid administration was started during the selected time block. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

1.2.5. Fluid Start Time
Instructions: Review the medical record to determine the time that fluid administration was started during the selected time block. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.

1.2.6. Is there a documented rate (mL/hr) at which the fluid was administered?
Instructions: Review the medical record to determine if the rate at which the fluid was administered during the selected time block is documented.

- "*Yes*" ***Answer question 1.2.6.1***
  Exclude: maintenance fluids and blood product administrations that have a rate that changes during the administration.
- *"No"*
  Note 1: If 99:99 is entered as the stop time and "No" is selected
  Note 2: If the documented rate is greater than 4999, select "No" here and proceed with entering the start & stop time and fluid volume
- *"Unknown"*

1.2.6.1. What was the documented rate of fluid administration?
Instructions: Review the medical record to determine the rate at which the fluid was administered. Enter a value in the numeric entry box in mL/hr.
Note: The maximum value that can be entered into this entry box is 4999. If a bolus was given faster, then the faster rate can also be captured/calculated by the database if you enter the start & stop time and the fluid volume.

1.2.7. Is there a documented volume of fluid administered?
Instructions: Review the medical record to determine the volume of the fluid administered during the selected time block.
Note 1: If there is no documented volume of fluid administered, please use the fluid volume listed in the order (example: If a 1,000ml fluid bolus is ordered, but there is no documentation of the fluid volume administered, please use the 1,000ml fluid volume detailed in the order).
Note 2: For maintenance fluids and blood products with a rate change during the administration, please utilize the fluid abstraction tool on zendesk to determine the total amount of fluid given during the first 48 hours of the encounter.

- "*Yes*"
  Answer question 1.2.7.1
- *"No"*
- *"Unknown"*

1.2.7.1. Fluid volume (mL)
Instructions: Review the medical record to determine the volume of fluid that was administered. Enter a value in the numeric entry box in mL.

1.2.8. Is there an ordered range of time given for fluid administration?
Instructions: Review the medical record to determine if there is an ordered range of time over which to administer the fluid.

- *"Yes"*
  Answer question 1.2.8.1
- *"No"*
  Answer question 1.2.8.2
- *"Unknown"*

1.2.8.1. Please enter the shortest time in the range in minutes.
Instructions: Review the medical record to determine if the rate is ordered as a range (i.e. 15-30 minutes), please enter the rate corresponding with the shortest administration time (i.e. 15 minutes). Enter a value in the numeric entry box in mL.

1.2.8.2. Fluid Stop Date
Instructions: Review the medical record to determine the date that the fluid was stopped during the

selected time block. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.
Note 1: For maintenance fluids, if the stop date/time is unknown but there is evidence that the fluid is still running at the 48 hour mark, please enter the 48 hour mark as the stop time.
(For example: The patient presents on 1/1 at 1200, a maintenance fluid is started on 1/2 at 1200 and there is no documented stop date/time, but you can see on 1/3 @ 1200 (the 48 hour mark) that the fluid is still infusing. In this scenario, please capture the stop date/time as 1/3 @ 1200).
Note 2: For cases in which there is no documented stop date, but there is an order end date/time listed prior to the 48 hour mark, please enter the order end date as the stop date. If the order end time is after the 48 hour mark, enter the 48 hour mark as the stop time.

1.2.8.3. Fluid Stop Time
Instructions: Review the medical record to determine the time that the fluid was stopped during the selected time block. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.
Note 1: For maintenance fluids, if the stop date/time is unknown but there is evidence that the fluid is still running at the 48 hour mark, please enter the 48 hour mark as the stop time.
(For example: The patient presents on 1/1 at 1200, a maintenance fluid is started on 1/2 at 1200 and there is no documented stop date/time, but you can see on 1/3 @ 1200 (the 48 hour mark) that the fluid is still infusing. In this scenario, please capture the stop date/time as 1/3 @ 1200).
Note 2: For cases in which there is no documented stop time, but there is an order end time listed prior to the 48 hour mark, please enter the order end time as the stop time. If the order end time is after the 48 hour mark, enter the 48 hour mark as the stop time.

1.2.9. Was another administration of this [fluid type] started within [selected timeframe]?
Instructions: Review the medical record to determine if there was another administration of the fluid entered above within the selected time block.

> ***Note:*** *Criteria for inclusion as a subsequent administration:*
>
> - *Same type of antibiotic/medication/electrolyte with the same carrier fluid OR the same type of bolus/blood product as the one previously entered above*
> - *Fluid administration of the subsequent fluid beginning within the selected time block*
> - *Subsequent fluid should be run at the same rate/range of time with the same fluid volume as the one previously entered above*

- *"Yes"*
  Answer questions 1.2.9.1 through 1.2.9.5
- *"No"*
- *"Unknown"*

1.2.9.1. Fluid Start Date
Instructions: Review the medical record to determine the date that the fluid administration was started during the selected time block. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

1.2.9.2. Fluid Start Time
Instructions: Review the medical record to determine the time that fluid administration was started during the selected time block. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.

1.2.9.3. Fluid Stop Date
Instructions: Review the medical record to determine the date that the fluid was stopped during the selected time block. Enter the date in MM/DD/YYYY format. If the date is unknown, please enter 01/01/1900.

1.2.9.4. Fluid Stop Time
Instructions: Review the medical record to determine the time that the fluid was stopped during the selected time block. Enter the time in HH:MM format (military time). If the time is unknown, please enter 99:99.

1.2.9.5. Was another administration of this [fluid type] started within [selected timeframe]?
Instructions: Review the medical record to determine if there was another administration of the fluid entered above within the selected time frame.

> ***Note:*** *Criteria for inclusion as a subsequent administration:*
>
> - *Same type of antibiotic/medication/electrolyte with the same carrier fluid OR the same type of bolus/blood product as the one previously entered above*
> - *Fluid administration of the subsequent fluid beginning within the selected time block*
> - *Subsequent fluid should be run at the same rate/range of time with the same fluid volume as the one previously entered above*

- *"Yes"*
  You will be prompted to answer the same set of questions listed above (1.2.9.1 through 1.2.9.5)
- *"No"*
- *"Unknown"*

1.2.11. Was there an additional fluid administration performed during [selected timeframe]?

Instructions: Review the medical record to determine if an additional qualifying fluid administration occurred during the selected time block. If "Yes" is selected to this question, all components of Question 2 will populate again, to allow entry of up to 5 entries in a single survey.

Documentation Scenarios

Medications/Electrolytes/Antibiotics

Scenario 1
Encounter Start: X/1 @ 0800 **MAR States:** 150 ml Cefepime given at 1000, there is no end time documented, but there is an administration rate of 125 ml/hr. How do I capture this? **Start Time:** X/1 @ 1000 **Documented Rate:** Yes - 125ml/hr **Documented Volume:** Yes - 150ml **Range of Time:** No

Stop Time: 01/01/1900 99:99

Scenario 2:

Encounter Start: X/1 @ 0800
MAR States: 150 ml Cefepime given at 1000 and there is a documented end time of 1800, but I can tell that is not accurate based on the ordered rate of 125ml/hr. How should I capture this?

Start Time: X/1 @ 1000
Documented Rate: Yes - 125ml/hr
Documented Volume: Yes - 150ml
Range of Time: No
Stop Time: X/1 1800

Scenario 3:

Encounter Start: X/1 @ 0800
MAR States: 150 ml Cefepime given at 1000, there is no documented end time, ordered rate, or administration rate. There is a note in the MAR to administer the medication over 30-60 minutes. How should I capture this?

Start Time: X/1 @ 1000
Documented Rate: No
Documented Volume: Yes - 150ml
Range of Time: Yes - 30mins

Scenario 4:

Encounter Start: X/1 @ 0800
MAR States: 150 ml Cefepime given at 1000 and there is a documented end time of 1030. There are no details regarding the administration rate, but there is an ordered rate of 125ml/hr. The documented end time and the ordered rate do not equal the same amount of time. How should I capture this?

Start Time: X/1 @ 1000
Documented Rate: Yes - 125ml/hr
Documented Volume: Yes - 150ml
Range of Time: No
Stop Time: X/1 @ 1030

Maintenance Fluids

Scenario 1:

Encounter Start: X/1 @ 0800
MAR States: Lactated Ringers ordered to run at a rate of 100ml/hr. LR was started on X/1 @ 0900 and was stopped on X/2 @ 0900. There is no total volume documented. How should I capture this?

Start Time: X/1 @ 0900
Documented Rate: Yes - 100ml/hr
Documented Volume: No
Range of Time: No
Stop Time: X/2 @ 0900

Scenario 2:

Encounter Start: X/1 @ 0800
MAR States: Lactated Ringers ordered to run at a rate of 100ml/hr. LR was started on X/1 @ 0900 and there is no documented end time, but I can see a documented total volume administered of 3330 ml. How should I capture this information?

Start Time: X/1 @ 0900
Documented Rate: Yes - 100ml/hr
Documented Volume: 3330ml
Range of Time: No
Stop Time: 01/01/1900 @ 99:99

Abstractor Notes

1. Do you have any notes or do you want to exclude a form?
Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer questions 1.1 and 1.2
- *"No"*

1.1. Abstractor Notes
Instructions: Use free text to input your notes.
IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

1.2. Do you want to exclude this form?
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
  Answer question 1.2.1

- *"No"*

1.2.1. Are you sure you want to exclude this form? If Yes, please enter the reason for form exclusion in the abstractor notes section above.

Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
- *"No"*

Culture

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

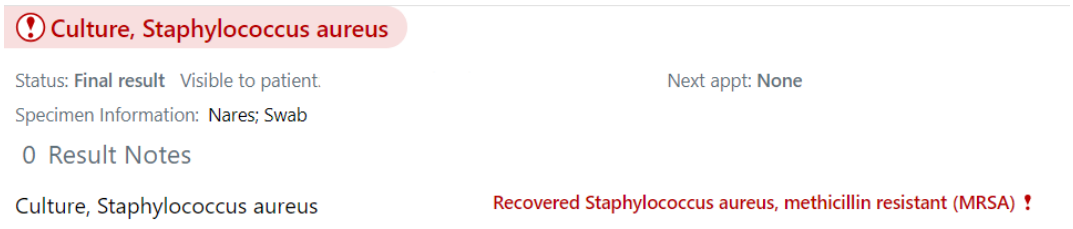
Note: This is a repeating form. Please only enter one Culture per form.

Reminder: Please include all cultures listed below (positive or negative) collected 1 day prior to the hospital encounter and during the first 4 days of the hospital encounter (ER, Obs, Inpatient, ICU).
Example: For a hospital encounter starting on X/2, include days: X/1-X/5

1. Type of Culture
Instructions: Review the medical record to determine the type of culture that was drawn. Select the type from the drop down menu.

> ***Note:*** *Please categorize these cultures by their SOURCE rather than their type. For example, a fungal BAL culture should be entered with a Type as "Bronchoalveolar Lavage (BAL)".*

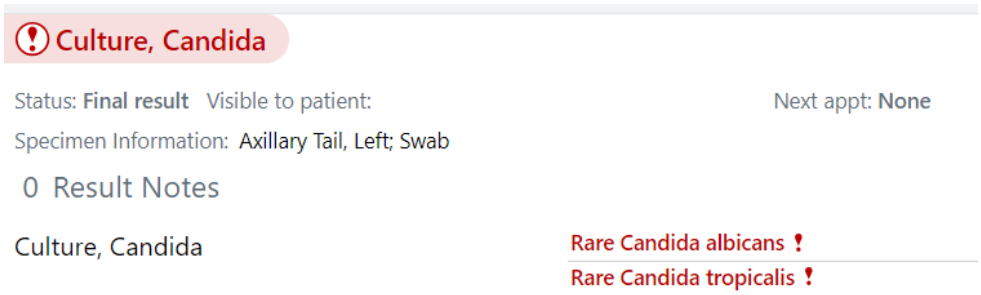
- *"Blood"*
  Answer questions 1.1 and 1.2
- *"Bronchoalveolar Lavage (BAL)"*
  Answer questions 1.1 and 1.2
  Include: Bronchial lung washing, culture bronchoscopy wash, bronchial wash; Alveoli, swab; bronchus, swab; bronchus, NOS; bronchus, aspirate; esophageal brush
- *"Cerebrospinal fluid (CSF)"*
  Answer questions 1.1 and 1.2
  Include: Spine/Lumbar Puncture specimens
- *"Endotracheal Aspirate (ETA)"*
  Answer questions 1.1 and 1.2
  Include: tracheal aspirate, trachea
- *"MRSA Culture/Swab"*
  Answer questions 1.3 through 1.5
  Note: This is a nares swab for MRSA
  Include: Staph aureus culture, nasal swab, MRSA biofire PCR
  Example of MRSA Culture/Swab results:



- *"Peritoneal Fluid"*
  Answer questions 1.1 and 1.2
  Include: Abdominal fluid, body fluid from abdominal wall, pelvic fluid; peripancreatic fluid; ascites fluid
- *"Pleural Fluid"*
  Answer questions 1.1 and 1.2

Include: Thoracentesis, thoracentesis fluid, Pleural peel

- *"Sputum"*
  Answer questions 1.1 and 1.2
  Exclude: A sputum culture that was rejected due to contamination with oral flora
- *"Upper Respiratory"*
  Answer questions 1.1 and 1.2
  Include: Nasal pharyngeal. Sinus aspirate.
- *"Urine"*
  Answer questions 1.1 and 1.2
  Include: fluid from nephrostomy tube, kidney fluid, nephrostomy tube aspiration, upper pole kidney collection
- *"Other"* when approved for entry by the HMS Coordinating Center, select if the medical record indicates a culture other than what is indicated in the drop down field. Free text the type of other culture in the text box provided.
  Answer questions 1.1 and 1.2
  Include: Ureteral stent cultures, lung tissue culture, Abscess cultures, Tissue Cultures (include source), Body Fluid cultures (without other specification of source); synovial fluid culture; bile fluid culture, Gallbladder fluid culture
  Exclude: H. Pylori; throat cultures; stool cultures; Central Venous Catheter/PICC tip cultures; Wound cultures; HSV 1/2, Skin swabs for yeast colonization testing, nephrostomy tube site, PEG tube site, Breast Milk, VRE swabs, wound drainage
  Example of skin swab for yeast colonization that would be EXCLUDED from abstraction:



1.1. Culture Collection Date (Date Drawn)
Instructions: Review the medical record to determine the date the culture was collected/drawn. Indicate the date in the MM/DD/YYYY format.

1.2. Indicate the Final Result of the Culture
Instructions: Review the medical record to the final result of the culture.

> ***Note:*** *This may take a few days to determine after the culture is drawn.*

- *"Positive"*
  Answer questions 1.2.1 through 1.2.6
  Include: Culture result is deemed 'positive' per hospital protocol in the absence of an identifiable isolate.
- *"Negative (No Growth)"*
  Answer question 1.2.7
- *"Unknown"*

1.2.1. Is there documentation that the positive culture is contaminated?
Instructions: Review the medical record to determine if there is documentation that the positive culture was contaminated or possibly contaminated.
Include: Results from lab culture or notes after culture has resulted.
Exclude: Documentation of contamination before the culture has resulted.

- *"Yes"*
- *"No"*
- *"Unknown"*

1.2.2. Is there documentation that the culture grew 'normal flora' or 'oral flora'?
Instructions: Review the medical record to determine if there is documentation that the culture grew normal flora or oral flora.

- *"Yes"*
  Include: Likely grew normal flora/oral flora, too many pathogens to quantify, more than 3 species, mixed oral flora, urogenital flora, perineal flora, respiratory flora.
- *"No"*
- *"Unknown"*

1.2.3. PATHOGEN #1 IDENTIFIED
Instructions: Review the medical record to determine the pathogen identified in the positive culture. Pathogens are classified by genus and species. The genus and species of the pathogen will likely be found on the laboratory report. Indicate the genus, which is the broad or the generic name. Once genus is selected, you will be prompted to indicate the species.

- *Achromobacter"*
  Subspecies options in the registry:
  - *"Xylosoxidans"*
  - *"Other"*
    Include: Achromobacter arsenitoxydans, cholinophagum, clevelandea, cycloclastes, denitrificans, insolitus, lyticus, marplatensis, obae, piechaudii, ruhlandii, or spanius
- *"Acinetobacter"*
  Subspecies options in the registry:
  - *"Baumannii"*
  - *"Other"*
    Include: Acinetobacter lwoffii
- *"Actinomyces"*
  Include: Schaalia odontolyticus, Pseudopropinibacterium propionicum, Winkia neuii
- *"Actinotignum"*
- *"Aerococcus"*
  Subspecies options in the registry:
  - *"Christensenii"*
  - *"Sanguicola"*
  - *"Sanguincola"*
  - *"Spp."*
  - *"Urinae"*
  - *"Urinaeequi"*
  - *"Urinaehominis"*

- *"Viridans"*
- *"Other"*
  Include: Aerococcus suis
- *"Aeromonas"*
  Subspecies options in the registry:
  - *"Caviae"*
  - *"Hydrophila"*
  - *"Punctata"*
  - *"Salmonicida"*
  - *"Other"*
- *"Alcaligenes"*
  Subspecies options in the registry:
  - *"Faecalis"*
  - *"Other"*
    Include: Alcaligenes aquatilis, endopyhticus, nematophilus, or pakistanensis
- *"Alloiococcus"*
- *"Anerococcus"*
- *"Arcanobacterium"*
  Subspecies options in the registry:
  - *"Haemolyticum"*
  - *"Variabilis"*
  - *"Other"*
    Include: Arcanobacterium bovis, canis, hippocoleae, ihumii, phocae, phocisimile, pinnipediorum, pluranimalium, urinimassiliense, or wilhelmae
- *"Aspergillus"*
  Subspecies options in the registry:
  - *"Fumigatus"*
  - *"Other*
    Include: Aspergillus flavus, nidulans, oryzae, or terreus
- *"Bacillus"*
  Include: Brevibacillus
- *"Bacteroides"*
  Subspecies options in the registry:
  - *"Fragilis"*
  - *"Other"*
    Include: Parabacteroides distasonis, Bacteroides cellulosilyticus
- *"Bifidobacterium"*
  Include: Alloscardovia omnicolens
- *"Bordetella"*
- *"Brevibacterium"*
- *"Brevundimonas"*
- *"Burkholderia"*
  Subspecies options in the registry:
  - *"Cepacia"*

- *"Other"*

- *"Campylobacter"*
  Subspecies options in the registry:
  - *"Jejuni"*
  - *"Ureolyticus"*
  - *"Other"*
- *"Candida"*
  Subspecies options in the registry:
  - *"Albicans"*
  - *"Glabrata"*
    Include: Nakaseomyces glabratus
  - *"Krusei"*
    Include: Pichia Kudriavzevii
  - *"Parakrusei"*
  - *"Parapsilosis"*
  - *"Paratropicalis"*
  - *"Tropicalis"*
  - *"Other"*
    Include: Clavispora (Candida) Lusitaniae, Candida kefyr, Kluyveromyces marxianus, Cyberlindnera Fabianii
- *"Capnocytophaga"*
- *"Citrobacter"*
  Subspecies options in the registry:
  - *"Diversus"*
  - *"Freundii"*
  - *"Koseri"*
  - *"Other"*
- *"Clostridium"*
  Subspecies options in the registry:
  - *"Clostridioforme"*
  - *"Difficile"*
  - *"Histolyticum"*
  - *"Innocuum"*
  - *"Paraputrificum"*
  - *"Perfringens"*
  - *"Ramosum"*
  - *"Septicum"*
  - *"Sordellii"*
  - *"Sporogenes"*
  - *"Tertium"*
  - *"Other"*
- *"Corynebacterium"*
  Include: Dermatobacter Hominis - formerly Coryneform Bacteria, Diptheroids

- *"Cryptococcus"*
- *"Desulfovibrio"*
- *"Eggerthella"*
  Include: Eubacterium
- *"Eikenella"*
- *"Elizabethkingia"*
  Subspecies options in the registry:
  - *"Meningoseptica"*
  - *"Other"*
- *"Enterobacter"*
  Subspecies options in the registry:
  - *"Aerogenes"*
    Include: Klebsiella Aerogenes
  - *"Clocae"*
  - *"Other"*
    Include: Cronobacter sakazakii, Pluralibacter gergoviae, Rahnella aquatilis
- *"Enterococcus"*
  Subspecies options in the registry:
  - *"Faecalis"*
  - *"Faecium"*
    Include: Vancomycin Resistant EC faecium/VRE Faecium as Enterococcus faecium with Vancomycin listed as Resistant in Culture and Sensitivity results
  - *"Other"*
- *"Escherichia"*
  Subspecies options in the registry:
  - *"Coli"*
  - *"Other"*
    Include: Leclercia adecarboxylata
- *"Finegoldia"*
- *"Francisella"*
  Subspecies options in the registry:
  - *"Tularensis"*
  - *"Other"*
- *"Fusobacterium"*
- *"Gemella"*
- *"Granulicatella"*
- *"Haemophilus"*
- *"Hafnia"*
- *"Klebsiella"*
  Include: Oxytoca
  Exclude: Klebsiella aerogenes as it should be included as Enterobacter aerogenes
- *"Lactobacillus"*
- *"Legionella"*
  Reminder: Do not enter urine legionella antigen testing in the culture section.

Subspecies options in the registry:
- *"Pneumophila"*
- *"Other"*

- *"Listeria*"
  Subspecies options in the registry:
  - "*Monocytogenes*"
  - "*Other*"
- *"Microbacterium"*
- *"Micrococcus"*
- *"Mold"*
  Include: Dematiaceous sterile mycelia, Mould
- *"Moraxella"*
  Subspecies options in the registry:
  - *"Catarrhalis"*
  - *"Other"*
- *"Morganella"*
  Subspecies options in the registry:
  - *"Morganii"*
  - *"Other"*
- *"Mycobacterium"*
- *"Myroides"*
- *"Neisseria"*
  Subspecies options in the registry:
  - *"Gonorrhea"*
  - *"Meningitidis"*
  - *"Catarrhalis"*
  - *"Other"*
- *"Nocardia"*
- *"Paeni"*
  Subspecies options in the registry:
  - *"Bacillus"*
    Include: Paenibacillus
  - *"Other"*
- *"Pantoea"*
- *"Parvimonas"*
- *"Pasteurella*"
  Subspecies options in the registry:
  - *"Multocida"*
  - *"Other"*
- *"Peptoniphilus"*
- *"Peptostreptococcus"*
- *"Pneumocystis"*
  Subspecies options in the registry:
  - *"Jiroveci (Carinii)"*

- *"Other"*

- *"Prevotella"*
  Include: Disiens
- *"Propionibacterium"*
  Include: Cutibacterium Propionibacterium Acnes, Cutibacterium Acnes
- *"Proteus"*
  Subspecies options in the registry:
  - *"Mirabilis"*
  - *"Other"*
- *"Providencia"*
  Subspecies options in the registry:
  - *"Stuartii"*
  - *"Rettgeri"*
  - *"Other"*
- *"Pseudomonas"*
  Subspecies options in the registry:
  - *"Aeruginosa"*
    Include: "Pseudomonas aeruginosa- organism failed to thrive for susceptibility testing"
  - *"Fluorescens"*
  - *"Putida Group"*
  - *"Other"*
    Include: Pseudomonas species, Pseudomonas flavescens
- *"Psychrobacter"*
- *"Raoultella"*
  Subspecies options in the registry:
  - *"Ornithinolytica"*
  - *"Other"*
- *"Rhodoccus"*
- *"Roseomonas"*
- *"Rothia"*
  Subspecies options in the registry:
  - *"Mucilaginosa"*
  - *"Other"*
    Include: Kocuria kristinae
- *"Salmonella"*
- *"Serratia"*
  Subspecies options in the registry:
  - *"Marcescens"*
  - *"Other"*
- *"Stapyhlococcus"*
  Subspecies options in the registry:
  - *"Aureus"*
    Include: Notations of mecA/C and MREJ - Detected on Pneumonia Panel PCRs should be captured

as Staphylococcus Aureus which is Resistant to Methicillin, MRSA should be captured as Staphylococcus Aureus which is Resistant to Methicillin

- *"Capitis"*
- *"Capitis ss. Capitis"*
- *"Capitis ss. Urealyticus"*
- *"Coagulase Negative"*
  Include: Staph species NOT aureus
- *"Cohnii"*
- *"Epidermidis"*
- *"Gallinarum"*
- *"Hemolyticus"*
- *"Hominis"*
- *"Lentus"*
- *"Lugdunensis"*
- *"Saccharolyticus"*
- *"Saprophyticus"*
- *"Schleiferi"*
- *"Sciuri"*
- *"Simulans"*
- *"Warneri"*
- *"Xylosus"*
- *"Other"*
- *"Stenotrophomonas"*
  Subspecies options in the registry:
  - *"Maltophilia"*
  - *"Other"*

- *"Streptococcus"*
  Subspecies options in the registry:
  - *"Alpha hemolytic"*
  - *"Anginosus"*
    Include: Group F Streptococcus
  - *"Group A"*
    Include: Streptococcus pyogenes
  - *"Group B"*
    Include: Streptococcus agalactiae
  - *"Group C"*
    Include: Streptococcus equi, dysgalactiae, and zooepidemicus
  - *"Group D"*
    Include: Streptococcus galolyticus, bovis, equinus, lutetiensis, and suis
  - *"Group G"*
    Include: Streptococcus dysgalactiae subsp. canis, Streptococcus phocae
  - *"Milleri"*
  - *"Mitis"*

- *"Pneumoniae"*
- *"Viridans"*
  Include: Streptococcus salivarius/vestibularis group, sanguinis/sanguis, and mutans
- *"Other"*
  Include: Streptococcus spp., Group H Streptococcus, Streptococcus constellatus
- *"Unknown"*

- *"Veillonella"*
- *"Yeast"*
  Include: Yeast, not Candida Albicans; Yeast species; Yeast, not C Albicans/Glabrata, Saccharomyces cerevisiae, Rhodotorula species, Kodamaea ohmeri
- *"Yersinia"*
  Subspecies options in the registry:
  - *"Pestis"*
  - *"Other"*
- *"Other, please specify"* select if the pathogen is something other than what is listed above. Enter in the pathogen name in the free text box provided.
  Note: Please contact the HMS Coordinating Center with the "Other" pathogen that is not listed in the selection above or inclusion criteria below prior to making this selection.
  Include: Ewingella americana, Gardneralla vaginalis, Histoplasma capsulatum, Flavonifractor plautii. Erysipelothrix rhusiopathiae, Eggerthia catenaformis, Kluyvera ascorbata, Lactococcus lactis
  Exclude: Mixed flora, Skin flora, ESBL, CTX-M
- *"Bacteria Not Specified"* select when culture is considered positive but the specific bacteria is not identified in the results.
  Include: Gram negative bacilli (lactose fermenter or non-fermenter), Gram negative rods, Non fermenters oxidase negative
  Exclude: Mixed flora, Skin flora, ESBL, CTX-M

1.2.4. Is the lower respiratory culture growth quantity available for Pathogen #1?
Instructions: If endotracheal aspirate (ETA) or bronchoalveolar lavage (BAL) is selected as the type of the culture, review the medical record to determine if there is documentation of the culture growth quantity.

- *"Yes"*
  Answer question 1.2.4.1
- *"No"*
- *"Unknown"*

1.2.4.1. Indicate the Quantity for Pathogen #1
Instructions: Review the medical record to determine the respiratory growth quantity.
Include: col/mL

- *">= 10^4 CFU/ml or similar"*
- *"< 10^4 or similar"*
- *"Unknown"*

1.2.5. Was a culture sensitivity analysis performed for Pathogen #1?
Instructions: Review the medical record to determine if there was a culture sensitivity analysis performed for pathogen #1.

- *"Yes"*
  Answer questions 1.2.5.1 through 1.2.5.4
  Exclude: Sensitivity results for fungal cultures. Antifungal agents
- *"No"*
  Include: Select "No" for this question if a sensitivity analysis was not performed or when entering fungal cultures/cultures positive for a fungus.
- *"Unknown"*

1.2.5.1. How many antibiotics were tested?
Instructions: Review the medical record to determine the number of antibiotics that were tested.

- *"1-40"*
- *"Susceptibility Results Same as Other Culture Entered"*
  Answer question 1.2.5.1.1 and 1.2.5.1.2

  1.2.5.1.1. Type of Culture
  Instructions: Review the medical record to determine the type of culture that contains the same susceptibility results as the culture that is indicated above and select the corresponding culture type from the drop down provided.

  1.2.5.1.2. Date of Culture
  Instructions: Review the medical record to determine the date of the collection of the culture that contains the same susceptibility results as the culture that is indicated above in MM/DD/YYYY format.

1.2.5.2. For Antibiotic X, indicate the name of antibiotic tested.
Instructions: Review the medical record to determine the name of the antibiotic that was tested in the culture sensitivity analysis.
Note 1: This field will populate based on the number of antibiotics that were tested for a total of forty (40).
Note 2: If susceptibilities are reported more than once on the same antibiotic via different routes (i.e., Oral or Meningitis) enter the result once, using the Non-meningitis information.
Note 3: If more than 40 antibiotics were tested, please contact the HMS coordinating center to determine which ones to enter into the fields provided.
Exclude: Antibiotics reported as Synergy, "Screen Well", Inducible, or Beta Lactamase

- *"Amikacin (Amikin)"*
- *"Amoxicillin" (Novamox, Amoxil, Amoxicot, Dispermox, Moxatag, Moxilin, Trihydrate Trimox, Wymox)"*
- *"Amoxicillin-clavulanic acid" (Augmentin, Co-Amoxiclav)*
- *"Ampicillin (Omnipen, Principen, Totacillin)"*
- *"Ampicillin/sulbactam (Unasyn)"*
- *"Azithromycin (Zithromax, Sumamed, Zitrocin)"*
- *"Aztreonam (Azactam)"*
- *Bactrim (Co-Trimoxazole, Sulfamethoxazole, Sulfisoxazole, Trimethoprim, Trimethoprim-Sulfamethoxazole, TMP-SMX)"*
- *"Cefaclor (Ceclor, Ceclor CD)"*
- *"Cefadroxil (Cephadroxil, Duricef)"*
- *"Cefalotin (Cephalothin)"*
- *"Cefazolin (Ancef, Kefzol, Zolicef)"*

- *"Cefdinir (Omnicef, Cefdiel)"*
- *"Cefditoren (Spectracef)"*
- *"Cefepime (Maxipime)"*
- *"Cefiderocol"*
- *"Cefixime (Suprax)"*
- *"Cefoperazone (Cefobid, Sodium)"*
- *"Cefotaxime (Cephotaxime, Claforan)"*
- *"Cefotetan (Cefotan)"*
- *"Cefoxitin (Mefoxin)"*
- *"Cefpodoxime"*
- *"Cefprozil (Cefzil)"*
- *"Ceftaroline"*
- *"Ceftazidime (Ceptaz, Fortaz, Tazicef)"*
- *"Ceftazidime-avibactam (Avycaz)"*
- *"Ceftizoxime"*
- *"Ceftolozane/Tazobactam (Zerbaxa)"*
- *"Ceftibuten (Cedax)"*
- *"Ceftriaxone (Rocephin)"*
- *"Cefuroxime (Ceftin, Kefurox, Zinacef)"*
- *"Cephalexin (Cefalexin, Keflex, Keftal, Cefanox, Biocef, Panixine, Zartan)"*
- *"Cephalosporins"*
- *"Chloramphenicol"*
- *"Ciprofloxacin (Cipro, Ciproxin, Ciprobay)"*
- *"Clarithromycin (Biaxin)"*
- *"Clindamycin (Cleocin)"*
- *"Cloxacillin (Tegopen, Coxapen)"*
- *"Colistin (Xylistin, Polymyxin E, Colistimethate)"*
- *"Dalbavancin"*
- *"Daptomycin"*
- *"Delafloxacin (Baxdela)"*
- *"Dicloxacillin (Dycill, Dynapen)"*
- *"Doripenem (Doribax)"*
- *"Doxycycline (Doxycycline hyclate, Doxy, Vibra, Vibramycin)"*
- *"Eravacycline"*
- *"Ertapenem (Invanz)"*
- *"Erythromycin (E-mycin, Ery-tab, Benzamycin)"*
- *"Fidaxomicin"*
- *"Fosfomycin (Monurol)"*
- *"Gemifloxacin"*
- *"Gentamicin (Gentamycin, Garamycin, Cidomycin, Septopal)"*
- *"Imipenem (Primaxin)"*

- *"Impienem-Relebactam"*
- *"Lefamulin"*
- *"Levofloxacin (Levaquin, Quixin)"*
- *"Linezolid (Zyvox) "*
- *"Meropenem (Merrem)"*
- *"Meropenem Vaborbactam (Vabomere)"*
- *"Methicillin"*
- *"Metronidazole (Flagyl)"*
- *"Minocycline (Minocycline hydrochloride, Minocin, Dynacin, Myrac, Solodayn, Vectrin)"*
- *"Moxifloxacin (Avelox)"*
- *"Nafcillin (Unipen, Nafcil, Nallpen)"*
- *"Nitrofurntoin (Macrobid)"*
- *"Norfloxacin (Noroxin)"*
- *"Ofloxacin (Floxin)"*
- *"Omadycycline"*
- *"Oritavancin (LY333328)"*
- *"Oxacillin (Prostaphilin, Bactocil, Prostaphlin)"*
- *"Penicillin (Benzylpenicillin, Penicillin G, Bicillin C-R/L-A, Pfizerpen, Wycellin)"*
- *"Piperacillin"*
- *"Piperacillin-tazobactam (Zosyn)"*
- *"Polymixin B"*
- *"Streptomycin"*
- *"Sulfonamides"*
- *"Synercid (Quinupristin/Dalfopristin)"*
- *"Tedizolid"*
- *"Telavancin (TD-6424, Vibativ)"*
- *"Tetracycline (Ala-Tet, Panmycin, Sumycin)"*
- *"Tigecycline (Tigacyl)"*
- *"Tobramycin (Tobrex, Nebcin, Kitabis Pak, Tobi TOBI)"*
- *"Vancomycin (Vancocin, Lyphocin)"*
- *"Other, please specify"* Please contact the HMS Coordinating Center with the "Other" pathogen that is not listed in the selection above or inclusion criteria below prior to making this selection.
  Note: The HMS Coordinating Center is aware that Rifampin needs to be added to this list and that is planned for a future upgrade.

1.2.5.3. For Antibiotic 1, indicate the interpretation.
Instructions: Review the medical record to determine the interpretation of the antibiotic that was tested in the culture sensitivity analysis.

- *"Susceptible"*
  Exclude: "Deduced Susceptible"
- *"Intermediate"*
- *"Resistant"*
  Include: result of "Blac", result of "ESBL"

- *"Not Documented"*
  Include: result of "Deduced Susceptible"

1.2.5.4. Are any of the following noted in relation to the pathogen identified above on the urine culture collected on this date?
Instructions: Review the medical record to determine if any of the following are documented in relation to the positive urine culture collected on the date indicated above.

> ***Note:*** *This question will ONLY populate for Urine cultures.*

- *"Extended Spectrum Beta Lactamase (ESBL)"*
  Note: If ESBL is tested and the result is negative, do not select ESBL.
- *"Carbapenem-Resistant Enterobacteriaceae"*
- *"Other"*
- *"Unknown/None of the Above"*

1.2.6. Was there an additional pathogen identified?
Instructions: Review the medical record to determine if there was an additional pathogen identified within the same culture.
Note 1: This section repeats so that up to three (3) pathogens within the same culture can be entered.
Note 2: If the same pathogen is identified but with different morphologies in two separate cultures, enter as separate pathogens, and if they have identical sensitivity results, only enter the sensitivity information once.
Note 3: If a culture result has more than 3 pathogens, please contact the Coordinating Center to determine which ones to include.

- *"Yes"*
- *"No"*
- *"Unknown"*

1.2.7. Is there a second negative culture (of the same type) drawn on the same date?
Instructions: Review the medical record to determine if there is a second negative culture (of the same type) drawn on the same date during the hospital encounter (ER, Obs, Inpatient). For example, the same type equals 2 negative blood cultures or 2 negative urine cultures.

- *"Yes"*
  Answer question 1.2.7.1
- *"No"*
- *"Unknown"*

1.2.7.1. Are there multiple negative cultures (beyond the initial 2) of the same type?
Instructions: Review the medical record to determine if there are multiple negative cultures of the same type beyond the initial 2 collected during the first 4 days of the hospital encounter.

- *"Yes"*
  Note: For all multiple, negative cultures (of the same type), you do not need to enter additional Culture forms beyond this form.
- *"No"*
- *"Unknown"*

1.3. MRSA Swab Collection Date (Date Drawn)
Instructions: Review the medical record to determine the date the MRSA swab was collected/drawn. Indicate the date in the MM/DD/YYYY format

1.4. MRSA Swab Final Result Date
Instructions: Review the medical record to determine the date the MRSA swab result was final. Indicate the date in the MM/DD/YYYY format.

1.5. Indicate the final result of the MRSA swab.
Instructions: Review the medical record to determine the final result of the MRSA swab specimen.

- *"Positive (Detected)"*
  Note: If at your institution, Staphylococcus Aureus and Methicillin Resistance are tested separately from the same swab, both would need to be resulted as "positive" to include as a positive MRSA swab.
- *"Negative (Not Detected)"*
  Note: If at your institution, Staphylococcus Aureus and Methicillin Resistance are tested separately from the same swab, and only the Staphylococcus Aureus is positive, please enter this as a negative MRSA result. See example in screenshot below.

Component	Ref Range & Units	
Staphylococcus aureus	Not Detected	Detected !
Methicillin Resistant	Not Detected	Not Detected

- *"Unknown"*

Abstractor Notes

1. Do you have any notes or do you want to exclude a form?
Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer questions 1.1 and 1.2
- *"No"*

1.1. Abstractor Notes
Instructions: Use free text to input your notes.
IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

1.2. Do you want to exclude this form?
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
  Answer question 1.2.1
- *"No"*

1.2.1. Are you sure you want to exclude this form? If Yes, please enter the reason for form exclusion in the abstractor notes section above.

Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to “No”. If you would like to exclude this form, you must manually change the answer to “Yes”.

- *“Yes”*
- *“No”*

Labs (Non-Culture)

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.
Note: This is a repeating form. Please only enter one non-culture lab per form.

Reminder: This form is for entering labs performed within the time frames noted below:

- 3 Days Prior to Hospital Encounter (All positive and negative)
  - COVID-19
  - Influenza A/B
- 1 Day Prior to Hospital Encounter through Day 4 of the Hospital Encounter (All positive and negative):
  - C.Diff
  - COVID-19
  - Respiratory Legionella PCR
  - Respiratory Virus/Pathogen Panel; PCR (including Influenza A/B)
  - Urine Legionella (Antigen)
  - Urine Pneumococcal (Antigen)
  - Urine Streptococcus pneumonia (Antigen)
  - Other
- Days 5 through End of Hospital Encounter (Only positive):
  - C.Diff

1. Select the type of lab collected.
Instructions: Review the medical record to determine if any of the following lab(s) were collected in the timeframes specified above.
Exclude: Labs where final test results are not given.

- *"C. Diff"*
  Answer questions 1.1 through 1.3
- *"Coronavirus (COVID-19)"*
  Answer questions 1.4 through 1.6
  Include: Patient reported positive COVID tests from a medical facility (i.e. OSH, urgent care, doctor's office, drive-thru clinic, pharmacy, etc). SARS-CoV-2 results.
  Exclude: Self-reported positive COVID-19 Home Tests
- "*Respiratory Legionella PCR*"
  Answer questions 1.13 and 1.14
  Include: Respiratory samples that are collected and run for to test for Legionella by PCR. Influenza A/B testing from the 3 days prior to the hospital encounter.
  Exclude: Sputum culture; Legionella Cultures as this should be entered in the Culture form
- *"Respiratory Virus/Pathogen Panel; PCR"*
  Answer questions 1.15 through 1.17
  Include: Influenza Viruses by PCR, Human Metapneumovirus by PCR, RSV by PCR or Nucleic Acid Amplification (NAA), Respiratory Syncytial Virus by PCR or Nucleic Acid Amplification (NAA), Viral Respiratory Screen, Comprehensive, hMPV by PCR, Mycoplasma pneumoniae (culture by PCR),

Chlamydophila pneumoniae by PCR, Influenza A subtypes H1, H3, 2009 H1, Respiratory Viruses Panel, Influenza A by PCR or Nucleic Acid Amplification (NAA), Parainfluenza Viruses by PCR, Influenza B by PCR or Nucleic Acid Amplification (NAA), Parainfluenza 1, 2, 3, 4 Viruses by PCR, Coronavirus by PCR, Human Rhinovirus / Enterovirus by PCR, Adenovirus by PCR, Bordetella pertussis, Respiratory viruses Screen, Pneumocystis jiroveci (DNA) by PCR, Influenza rapid or quick test, Influenza Enzyme Immunoassay (EIA), nasopharyngeal direct fluorescent antibody stain and those approved by the HMS Coordinating Center for abstraction. If a COVID-19 result is part of an Respiratory Virus/Pathogen Panel; PCR, enter this into the RPAN results.
Exclude: Herpes Simplex 1 & 2, COVID-19 not collected as part of a larger RPAN should be entered as a "Coronavirus (COVID-19) Non-Culture test.

- *"Urine Legionella (Antigen)"*
  Answer questions 1.12 through 1.14
  Include: Legionaries/Legionella, Legionella Urinary Antigen, legionella pneumophilia urine antigen
- *"Urine Pneumococcal (Antigen)"*
  Answer questions 1.12 through 1.14
- *"Urine Streptococcus pneumonia (Antigen)"*
  Answer questions 1.12 through 1.14
  Include: Pneumococcal Antigen, Streptococcus pneumoniae Urinary Antigen, Streptococcus pneumoniae Antigen, Urine
- "*Other*" review the available list of non-culture lab options and if non-culture lab is not already included, contact the HMS Coordinating Center for instruction. Select only after receiving approval for entry from the HMS Coordinating Center.
  Answer questions 1.15 and 1.16
  Exclude: Quantiferon- TB Gold Test; Quantiferon – TB Gold Plus, Cardiolipin Antibody Screen; Rheumatoid Factor test; Immunoglobin E test; Immunoglobin A test; Legionella pneumophia Ab IgM blood test; HIV-1 Quantitative PCR; Epstein BARR Virus PCR; Epstein Barr Virus (EBV) IgG or Epstein Barr Virus (EBV) IgM test; MiraVista Histoplasma Antigen (Urine); Cytomegalovirus DNA or culture; Cryptococcal Antigen; Quantitation PCR test; Aspergillus, coccidiodes antibodies, blastomyces, histoplasma antibodies; Streptococcus pneumoniae Body Fluid/Blood Antigen; Respiratory syncytial virus (RSV) antibody, and influenza titers, Fungitell assay (Fungal beta-d-glucan with reflex to titer); Dengue fever virus antibodies, IgM and IgG. Mycoplasma pneumoniae antibody (IgM). Treponemal antibodies. Mycoplasma pneumoniae IgG

C.Diff.:

1.1. C.Diff Collection Date (Date Drawn)
Instructions: Review the medical record to determine the date the C.Diff lab was collected/drawn. Indicate the date in the MM/DD/YYYY format.

1.2. C.Diff Final Result Date
Instructions: Review the medical record to determine the date the C.Diff lab resulted. Indicate the date in the MM/DD/YYYY format.

1.3. Indicate the final result of the C.Diff specimen.
Instructions: Review the medical record to the final result of the culture.
Note: This may take a few days to determine after the culture is drawn.

- "*Positive (Detected)*"
  Note: Select if culture result is deemed 'positive' per hospital protocol in the absence of an identifiable isolate.

- *"Negative (Not Detected)"*
- *"Unknown"*

COVID-19 Testing:

1.4. Date of Collection:
Instructions: Review the medical record to determine the date the Coronavirus (COVID-19) was collected (not the date the result was finalized). Indicate the date in the MM/DD/YYYY format.

1.5. For Coronavirus (COVID-19), please select the sample source.
Instructions: Review the medical record to determine the source of the specimen.

- *"Nasopharyngeal"*
- *"Lower Respiratory"*
  Include: Tracheal aspirate
- *"Blood"*
- *"Unknown"*
- *"Other, please specify"* Please indicate the other source in the text box provided. Select only after receiving approval for entry from the HMS Coordinating Center.
  Include: Nasal swabs

1.6. For Coronavirus (COVID-19), please indicate the result by choosing one of the following answers:
Instructions: Review the patient's laboratory data and record the COVID-19 result.

- *"Detected"*
- *"Not Detected"*
- *"Unknown"*

Respiratory Legionella PCR:

1.7. Date of Collection
Instructions: Review the medical record to determine the date the Respiratory Legionella PCR was collected (not the date the result was finalized). Indicate the date in the MM/DD/YYYY format.

1.8. For Legionella, please indicate the result:
Instructions: Review the medical record to determine the result of the Respiratory Legionella PCR.

- *"Detected"*
- *"Not Detected"*

Respiratory Virus/Pathogen Panel; PCR:

1.9. Date of Collection

Instructions: Review the medical record to determine the date the Respiratory Virus/Pathogen Panel PCR was collected (not the date the result was finalized). Indicate the date in the MM/DD/YYYY format.

1.10. Select the organisms that were tested
Instructions: Review the medical record to determine the organisms were tested in the Respiratory Virus/Pathogen Panel PCR.
Select all that apply:

- *"Adenovirus"*
- *"Bordetella Pertussis"*

- *"Bordetella Parapertussis"*
- *"Chlamydophila Pneumoniae"*
- *"Coronavirus 229E"*
- *"Coronavirus HKU1"*
- *"Coronavirus NL63"*
- *"Coronavirus OC43"*
- *"COVID-19"*
- *"Human Metapneumovirus"*
- *"Human Rhinovirus – Enterovirus"*
- *"Influenza A"*
- *"Influenza B"*
- *"Mycoplasma Pneumoniae"*
- *"Parainfluenza 1"*
- *"Parainfluenza 2"*
- *"Parainfluenza 3"*
- *"Parainfluenza 4"*
- *"Respiratory Syncytial Virus"*
- *"None of the above"*
- *"Other"*
- *"Unknown"*

1.11. For [organism], please indicate:
Instructions: For the selected organism, indicate whether that organism was 'detected' or 'not detected'.

- "*Detected*"
- "*Not Detected*"

Urine Legionella (Antigen), Urine Pneumococcal (Antigen), and Urine Streptococcus Pneumonia (Antigen):

1.12. Date of Collection
Instructions: Review the medical record to determine the date the lab was collected/drawn. Indicate the date in the MM/DD/YYYY format.

1.13. Date of Final Result
Instructions: Review the medical record to determine the date the lab resulted. Indicate the date in the MM/DD/YYYY format.

1.14. Indicate the Final Result
Instructions: Review the medical record to the final result of the lab.

- "*Positive*"
- "*Negative*"
  Include: No growth

Other:

1.15 Test Collection Date
Instructions: Review the medical record to determine the date the lab was collected/drawn. Indicate the date in the MM/DD/YYYY format.

1.16 Test Result
Instructions: Review the medical record to the final result of the test.

- *"Positive"*
- *"Negative"*
  Include: No growth
- *"Unknown"*

Abstractor Notes

1. Do you have any notes or do you want to exclude a form?
Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer questions 1.1 and 1.2
- *"No"*

1.1. Abstractor Notes
Instructions: Use free text to input your notes.
IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

1.2. Do you want to exclude this form?
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
  Answer question 1.2.1
- *"No"*

1.2.1. Are you sure you want to exclude this form? If Yes, please enter the reason for form exclusion in the abstractor notes section above.
Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
- *"No"*

Discharge Medications

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.
Note: This is a repeating form. Please only enter one discharge medication per form.
Reminder: This form is for capturing medications that are “New”, Continued”, or “Modified” at discharge. Please see the image below on how to capture discharge medications based on the patient’s discharge disposition.

Capture **ALL** applicable Discharge Medications:	Capture **ONLY** discharge antibiotics:	Do **NOT** capture **ANY** discharge medications or discharge antibiotics:
Discharged to home	Discharged to skilled nursing facility	Discharged to inpatient hospice
Discharged to home with home health services	Discharged to sub-acute rehab	Discharged to home hospice
Discharged to assisted living facility	Discharged to a long-term acute care hospital (LTAC)	Discharged to hospice at another healthcare facility
Discharged to custodial nursing home	Discharged to a correctional facility	Discharged to inpatient psychiatric facility or inpatient rehab
Discharged to temporary shelter	Discharged to a dedicated disaster alternative care site	Transferred to another acute care hospital
	Discharged to swing bed	

Exclude: medications on discharge when the patient transfers to another acute care hospital, is discharged to inpatient or home hospice, inpatient rehabilitation, inpatient psychiatric facility, or expires at the end of the index hospital encounter.

A resource to help determine Custodial vs. Skilled Nursing care can be found here.

1. Which subgroup does the medication belong to?
Instructions: Review the medical record to determine the subgroup of the discharge medications being entered.

- *“ACE inhibitors”*
  Answer question 1.1

- *"Angiotensin II receptor blockers (ARB)"*
  Answer question 1.2
- *"Antibiotics"*
  Answer questions 1.3, 1.10, and 1.12 through 1.14
  Exclude: Antibiotics written only for dental procedures. Ophthalmic, otic, bladder washes and irrigation antibiotics.
- *"Antipsychotics"*
  Answer question 1.4
  Exclude: Intranasal or topical antipsychotics.
- *"Benzodiazepines"*
  Answer questions 1.5 and 1.11 through 1.13
  Include: As needed (PRN) dosing for seizures.
  Exclude: Intranasal or topical benzodiazepines.
- *"Beta Blockers"*
  Answer question 1.6
- *"Diuretics"*
  Answer question 1.7
- *"Statins"*
  Answer questions 1.8
- *"Opioids"*
  Answer questions 1.9, 1.11 through 1.13, and 1.15
  Exclude: Topical opioids

1.1. Name of the ACE inhibitor

Instructions: Review the medical record to determine the name of the ACE inhibitor the patient was discharged on.

Include: Combination blood-pressure medication with an ACE inhibitor as an active ingredient. Please log each ingredient separately.

- "*Accupril (quinapril)"*
- *"Aceon (perindopril)"*
- *"Altace (ramipril)"*
- *"Capoten (captopril)"*
- *"Enalapril (Vasotec)*
- *"Lotensin (benazepril)"*
- *"Mavik (trandolapril)"*
- *"Monopril (fosinopril)"*
- *"Prinivil"*
- *"Zestril (lisinopril)"*
- *"None of the above"*

1.2. Name of the angiotensin II receptor blocker (ARB)

Instructions: Review the medical record to determine the name of the ARB the patient was discharged on.
Include: Combination blood-pressure medication with an ARB as an active ingredient. Please log each ingredient separately.

- *"Azilsartan (Edarbi)"*
- *"Candesartan (Atacand)"*
- *"Eprosartan (Teveten)"*
- *"Irbesartan (Avapro)"*
- *"Losartan (Cozaar)"*
- *"Olmesartan (Benicar)"*
- *"Telmisartan (Micardis)"*
- *"Valsartan (Diovan, Prexxartan)"*
  Include: Entresto
- *"None of the above"*

1.3. Name of the antibiotic

Instructions: Review the medical record to determine the name of the antibiotic the patient was discharged on.
Include: For all cases, enter antibiotics ordered for the infectious disease state being abstracted in the 2 calendar days following the date of discharge. The day of discharge equals day zero. For example, for a patient discharged on X/23 antibiotics ordered on X/24 and X/25 should also be entered.
Exclude: Antibiotics written only for dental procedures. Topical, optic, otic, bladder wash, and irrigation antibiotics. Any antibiotic that is ordered for prophylaxis, suppression, and/or chronic therapy (e.g. Rifaximin/Xifaxan).

- *"Amikacin (Amikin)"*
- *"Amoxicillin (Novamox, Amoxil, Amoxicot, Dispermox, Moxatag, Moxilin, Trihydrate Trimox, Wymox)"*
- *"Amoxicillin-clavulanic acid (Augmentin, Co-Amoxiclav)"*
- *"Ampicillin (Omnipen, Principen, Totacillin)"*
- *"Ampicillin/sulbactam (Unasyn)"*
- *"Azithromycin (Zithromax, Sumamed, Zitrocin)"*
- *"Aztreonam (Azactam)"*
- *"Bactrim (Co-Trimoxazole, Sulfamethoxazole, Sulfisoxazole, Trimethoprim, Trimethoprim-Sulfamethoxazole, TMP/SMX)"*
- *"Cefaclor (Ceclor, Ceclor CD)"*
- *"Cefadroxil (Cephadroxil, Duricef)"*
- *"Cefalotin (Cephalothin)"*
- *"Cefazolin (Ancef, Kefzol, Zolicef)"*
- *"Cefdinir (Omnicef, Cefdiel)"*
- *"Cefditoren (Spectracef)"*

- *"Cefepime (Maxipime)"*
- *"Cefiderocol"*
- *"Cefixime (Suprax)"*
- *"Cefoperazone (Cefobid, Cefoperazone Sodium)"*
- *"Cefotaxime (Cephotaxime, Claforan)"*
- *"Cefotetan (Cefotan)"*
- *"Cefoxitin (Mefoxin)"*
- *"Cefpodoxime"*
- *"Cefprozil (Cefzil)"*
- *"Ceftaroline"*
- *"Ceftazidime (Ceptaz, Fortaz, Tazicef)"*
- *"Ceftazidime-avibactam (Avycaz)"*
- *"Ceftizoxime"*
- *"Ceftolozane/Tazobactam (Zerbaxa)"*
- *"Ceftibuten (Cedax)"*
- *"Ceftriaxone (Rocephin)"*
- *"Cefuroxime (Ceftin, Kefurox, Zinacef)"*
- *"Cephalexin (Cefalexin, Keflex, Keftal, Cefanox, Biocef, Panixine, Zartan)"*
- *"Ciprofloxacin (Cipro, Ciproxin, Ciprobay)"*
- *"Clarithromycin (Biaxin)"*
- *"Clindamycin (Cleocin) "*
- *"Cloxacillin (Tegopen, Coxapen)"*
- *"Colistin (Xylistin, Polymyxin E, Colistimethate)"*
- *"Dalbavancin"*
- *"Daptomycin"*
- *"Delafloxacin (Baxdela)"*
- *"Dicloxacillin (Dycill, Dynapen)"*
- *"Doripenem (Doribax)"*
- *"Doxycycline (Doxycycline hyclate, Doxy, Vibra, Vibramycin)"*
- *"Ertapenem (Invanz)"*
- *"Erythromycin (E-mycin, Ery-tab, Benzamycin)"*
- *"Fidaxomicin (Dificid)"*
- *"Eravacycline"*
- *"Fosfomycin (Monurol)"*
- *"Gemifloxacin"*
- *"Gentamicin (Gentamycin, Garamycin, Cidomycin, Septopal)"*
- *"Imipenem (Primaxin)"*

- *"Imipenem-Relebactam"*
  Include: Recarbrio
- *"Lefamulin"*
- *"Levofloxacin (Levaquin, Quixin)"*
- *"Linezolid (Zyvox)"*
- *"Meropenem (Merrem)"*
- *"Meropenem Vaborbactam (Vabomere)"*
- *"Metronidazole (Flagyl)"*
- *"Minocycline (Minocycline hydrochloride, Minocin, Dynacin, Myrac, Solodayn, Vectrin)"*
- *"Moxifloxacin (Avelox)"*
- *"Nitrofurantoin (Macrobid)"*
- *"Norfloxacin (Noroxin)"*
- *"Ofloxacin (Floxin)"*
- *"Omadycycline"*
- *"Oritavancin (LY333328)"*
- *"Oxacillin (Prostaphilin, Bactocil, Prostaphlin)"*
- *"Penicillin (Benzylpenicillin, Penicillin G, Bicillin C-R/L-A, Pfizerpen, Wycellin)"*
- *"Piperacillin"*
- *"Piperacillin-tazobactam (Zosyn)"*
- *"Polymixin B"*
- *"Rifampin (Rifadin)"*
- *"Solithromycin"*
- *"Streptomycin"*
- *"Sulfasalazine (Azulfidine, Sulfazine)"*
- *"Sulfonamides"*
- *"Synercid (Quinupristin/Dalfopristin)"*
- *"Tedizolid"*
- *"Telavancin (TD-6424, Vibativ)"*
- *"Tetracycline (Ala-Tet, Panmycin, Sumycin)"*
- *"Tigecycline (Tigacyl)"*
- *"Tobramycin (Tobrex, Nebcin, Kitabis Pak, Tobi TOBI)"*
- *"Vancomycin (Vancocin, Lyphocin)"*
- *"Unknown"*

1.4. Name of the antipsychotic

Instructions: Review the medical record to determine the name of the antipsychotic the patient was discharged on.

- *"Aripiprazole"*

- *"Asenapine (Saphris)"*
- *"Brexpiprazole (Rexulti)"*
- *"Cariprazine (Vraylar)"*
- *"Clozapine"*
- *"Fluphenazine (Modecate)"*
- *"Haloperidol"*
- *"Lurasidone (Latuda)"*
- *"Olanzepine"*
- *"Paliperidone (Invega)"*
- *"Quetiapine"*
- *"Risperdone"*
- *"Ziprasidone"*
- *"None of the above"*
- *"Other"* Enter the other medication in the free text box provided. Please contact the Coordinating Center prior to making this selection.

1.5. Name of the benzodiazepine

Instructions: Review the medical record to determine the name of the benzodiazepine the patient was discharged on.

Exclude: Intranasal Benzodiazepines, Topical Benzodiazepines (i.e. ABHR gel - Ativan, Benadryl, Haldol, Reglan gel)

- *"Alprazolam"*
- *"Chlordiazepoxide"*
- *"Clobazam"*
- *"Clonazepam"*
- *"Clorazepate"*
- *"Diazepam"*
- *"Estazolam"*
- *"Flurazepam"*
- *"Halazepam"*
- *"Lorazepam"*
- *"Midazolam"*
- *"Oxazepam"*
- *"Quazepam"*
- *"Temazepam"*
- *"Triazolam"*
- *"None of the above"*

1.6. Name of the beta blocker

Instructions: Review the medical record to determine the name of the beta blocker the patient was discharged on.

- *"Acebutolol (Sectral)"*
- *"Carvedilol (Coreg)"*
- *"Betaxolol (Kerlone)"*
- *"Bisoprolol (Zebeta, Ziac)"*
- *"Carteolol (Cartrol)"*
- *"Labetalol (Normodyne, Trandate)"*
- *"Metoprolol (Lopressor, Toprol-XL)"*
- *"Nadolol (Corgard)"*
- *"Nebivolol (Bystolic)"*
- *"Penbutolol (Levatol)"*
- *"Pindolol (Visken)"*
- *"Propranolol (Inderal)"*
- *"Sotalol (Betapace)"*
- *"Timolol (Blocadren)"*
- *"None of the above"*

1.7. Name of the diuretic

Instructions: Review the medical record to determine the name of the diuretic the patient was discharged on.

Include: Combination blood-pressure medication with a diuretic as an active ingredient. Please log each ingredient separately.

- *"Acetazolamide (Diamox)"*
- *"Amiloride"*
- *"Bumetanide (Bumex)"*
- *"Chlorthiazide (Diuril)"*
- *"Chlorthalidone"*
- *"Ethacrynic acid (Edecrin)"*
- *"Eplerenone (Inspra)"*
- *"Furosemide (Lasix)"*
- *"Hydrochlorothiazide or HCTZ"*
- *"Indapamide (Lozol)"*
- *"Metolazone (Zaroxyln)"*
- *"Spironolactone (Aldactone)"*
- *"Torsemide (Demedex)"*
- *"Triamterene (Dyrenium)"*

- *"None of the above"*

1.8. Name of the statin

Instructions: Review the medical record to determine the name of the stain the patient was discharged on.

- *"Atorvastatin (Lipitor)"*
- *"Fluvastatin (Lescol, Lescol XL)"*
- *"Lovastatin (Mevacor, Altoprev)"*
- *"Pitavastatin (Livalo)"*
- *"Pravastatin (Pravachol)"*
- *"Rosuvastatin (Crestor)"*
- *"Simvastatin (Zocor)"*
- *"None of the above"*

1.9. Name of the opioid

Instructions: Review the medical record to determine the name of the opioid the patient was discharged on.
Exclude: Topical opioids.

- *"Buprenorphine"*
  Include: Suboxone
- *"Butorphanol"*
- *"Codeine"*
- *"Dihydrocodeine"*
- *"Fentanyl"*
- *"Hydrocodone"*
- *"Hydromorphone"*
- *"Levorphanol"*
- *"Meperidine"*
- *"Methadone"*
- *"Morphine"*
- *"Nalbuphine"*
- *"Oxycodone"*
  Include: Percocet
- *"Oxymorphone"*
- *"Pentazocine"*
- *"Tapentadol"*
- *"Tramadol"*
- *"None of the above"*

For Antibiotics:

1.10. Route of [MEDICATION]

Instructions: Review the medical record to determine the route of administration for the selected antibiotic that the patient was discharged on.

- *"Intravenous (IV)"*
- *"Oral (PO)"*
- *"Intramuscular (IM)"*
- *"Subcutaneous (SQ)"*
- *"Inhalation"*
- *"Unknown"*

For Benzodiazepines and Opioids:

1.11. Dose of [MEDICATION]

Instructions: Review the medical record to determine the dosage of the selected medication that the patient was discharged on. Please enter this numeric value in *milligrams* in the free text box provided. If there is no dosage recorded in the medical record, please enter "999."
Note 1: For patients that received a loading dose prior to a regularly scheduled lower dose, or are completing a taper, please capture the highest dose of the medication prescribed.
Note 2: If there are two prescriptions written for the same medication with the intent to combine the doses for one larger dose, this only needs to be captured under one entry.
Note 3: If a range of dosing is provided, choose the highest dose in the range (ex: Oxycodone 5-10mg Q6H PRN - enter 10mg Q6H).

For Antibiotics, Benzodiazepines, and Opioids:

1.12. Frequency of [MEDICATION]

Instructions: Review the medical record to determine the frequency of the selected medication that the patient was discharged on.
Note 1: If a medication is written for "q 4 hours PRN" use the selection of the timeframe given, in this example, "Q4H".
Note 2: If a medication is written solely for "PRN" with no associated frequency use the selection, "Other".
Note 3: For Antibiotics only: If the patient is receiving antibiotics on the day of discharge as an inpatient and also is instructed to take a dose of their antibiotic later that same day, "Other" should be selected.

- *"Q4H"*
  Include: every 4 hours, six times per day
- *"Q6H"*
  Include: QID, every 6 hours, four times per day
- *"Q8H"*
  Include: TID, every 8 hours, three times per day

- *"Q12H"*
  Include: BID, every 12 hours, two times per day
- *"Q18H"*
  Include: every 18 hours
- *"Q24H"*
  Include: Daily, QD, every 24 hours
- "*Q36H*"
  Include: every 36 hours
- *"Q48H"*
  Include: Every other day, QOD, every 48 hours
- "*Other*"
  Include: Tapered frequencies, PRN medications with no associated frequency.

1.13. Does the prescription state the intended duration of [MEDICATION]?

Instructions: Review the medical record to determine if the discharge (outpatient) prescription for the selected medication lists the duration of therapy that the patient was discharged on.

Note 1: If no duration of therapy is listed in the prescription, the discharge summary can be utilized to capture this information, if applicable.

Note 2: When the number of days of therapy is not specified in the outpatient script, however, it can be determined from the dose, frequency, and number of pills, enter the calculated number of days of therapy. If the calculated duration of therapy does not come out to a full day (4.5 days, for example), round up to the nearest day (4.5 → 5 days).

Note 3: For Antibiotics Only: If a Z-Pak was ordered at discharge and no days are indicated, enter 5 as the Intended Length of Therapy.

Note 4: If the patient is to finish their antibiotic dosing on the day of discharge (when they get home) and no additional days of the antibiotic are prescribed, please select "0". Example: The patient is discharged to finish their inpatient antibiotic treatment, which has only one dose remaining (the evening dose). As this is the only dose remaining, and they received antibiotic treatment as an inpatient on the date of discharge, please select "0" as the response to this question.

Note 5: For Antibiotics only: If the patient is receiving antibiotics on the day of discharge as an inpatient and also is instructed to take a dose of their antibiotic later that same day, do not count the day of discharge toward the intended duration of the medication. For example, if a patient receives one dose of Azithromycin on the morning of the day of discharge and is instructed to take another dose when they get home as an outpatient and then continue BID for 3 more days, enter in an Intended Length of Therapy of 3.

- *"Yes"*
  Answer question 1.13.1
- *"No"*
- *"Unknown"*

1.13.1. What is the intended length of therapy (in days)?

Instructions: Review the medical record to determine the number of days of the medication selected that the patient has been prescribed after discharge from the hospital encounter. Free text the number of days in the text box provided.

Example: 5mg of Norco Q6 PRN is prescribed on discharged and the script specifies that 12 tablets are ordered. Using the ordered frequency (Q6 PRN) and the number of tablets, you would enter "3" for the number of days of therapy.

For Antibiotics:

1.14. Does the medical record indicate the number of doses of [MEDICATION]?

Instructions: Review the medical record to determine if the discharge prescription for the selected medication specifies the number of doses of the medication.

- *"Yes"*
  Answer question 1.14.1
- *"No"*
- *"Unknown"*

1.14.1. Number of doses

Instructions: Review the medical record to determine the number of doses that the antibiotic prescription is written for. Enter the correct number of doses as a numeric entry only in the text box provided.
Note 1: If a Z-Pak was ordered at discharge and the number of doses is not indicated, enter 5 for the 'Number of Doses'.
Note 2: When the number of doses is not specified in the outpatient script, but it can be determined from the days and frequency of the script, enter the calculated number of doses of therapy. Example: for an outpatient order script reading "Keflex 500 mg TID for 7 days", enter '21' for the number of doses.

For Opioids:

1.15. Does the prescription for [MEDICATION] specify any refills?

Instructions: Review the medical record to determine if the discharge prescription for the selected medication specifies any refill for the medication.

- *"Yes"*
  Answer question 1.15.1
- *"No"*
- *"Unknown"*

1.15.1. How many refills were written?

Instructions: Review the medical record to determine the number refills indicated for the discharge medication. Free text the number of total refills in the text box provided.

Abstractor Notes

1. Do you have any notes or do you want to exclude a form?

Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer questions 1.1 and 1.2

- *"No"* if you do not have notes that you would like to include and you do not want to exclude this form.

1.1. Abstractor Notes

Instructions: Use free text to input your notes. IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

1.2. Do you want to exclude this form?

Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*

  Answer question 1.2.1
- *"No"* if you would not like to exclude this form from data analysis.

1.2.1. Are you sure you want to exclude this form? If Yes, please enter the reason for form exclusion in the abstractor notes section above.

Instructions: Indicate whether you would like to exclude this form from data analysis. This question will default to "No". If you would like to exclude this form, you must manually change the answer to "Yes".

- *"Yes"*
- *"No"*

Daily Entry (Days 1-4)

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Enter the following information from each day of the hospital encounter using the daily entry tab. The specific date for each of the day of the hospitalization will populate according to the dates entered on the Enrollment form.

Jump to sub-sections:

Questions

1. Were any of the following documented on [DATE]?
Instructions: Review the medical record to determine if any of the following were documented on the specified date. Exclude medications ordered but not administered.
Select all that apply:

- *"Antibiotics"*
  Note: If an antibiotic was scheduled for Day 3 of the hospital encounter, but was given early (i.e. on Day 2 of the hospital encounter). Please capture this antibiotic as given on Day 3 as it was scheduled.
  Exclude: Micafungin (this is an antifungal), Pentamidine (this is an antiprotozoal); Topical, optic, otic, intrabladder & irrigation antibiotics. Any antibiotic that is ordered for prophylaxis, suppression, and/or chronic therapy.
- *"Antivirals"*
- *"Diuretics"*
- *"Opioids"*
  Exclude: Topical opioids.
- *"Antipsychotics"*
  Exclude: Intranasal or topical antipsychotics.

- *"Benzodiazepines"*
  Include: As needed (PRN) dosing for seizures.
  Exclude: Intranasal or topical benzodiazepines.
- *"Steroids"*
  Exclude: Inhaled steroids, Topical steroids/corticosteroids.
- *"Vasopressors"*
  Exclude: Vasopressors given during a code, procedures, or in an Operating Room without continuation after these incidences. Intramuscular Epinephrine given for anaphylaxis/allergic reactions.
- *"Delirium Assessment"*
  Note: This can be found either in provider documentation or in nursing flowsheets.
- *"Laboratory"*
- *"Level of care"*
  Include: Please capture the daily ordered level of care and physical location of care based off of the most recent level of care/location of care ordered, if not available on that date. Capture the patient's current level of care status until there is a new order placed or the patient moves to a new physical location.
- *"Physical Therapy"* if the medical documentation indicates that the patient **participated** in Physical Therapy on the specified date.
  Include: Walking with a Physical Therapy Assistant or Mobility Tech. PT performing Range of Motion (ROM) on a patient who is intubated/sedated.
  Exclude: Participation in Occupational Therapy only
- *"Vital Signs"*
  Include: Respiratory support
- *"None of the above"*

Antibiotics

1. Name of antibiotic(s)
Instructions: Review the medical record to determine the name of the antibiotic the patient received on the date indicated.
Select all that apply:

- *"Amikacin (Amikin)"*
- *"Amoxicillin (Novamox, Amoxil, Amoxicot, Dispermox, Moxatag, Moxilin, Trihydrate Trimox, Wymox)"*
- *"Amoxicillin-clavulanic acid (Augmentin, Co-Amoxiclav)"*
- *"Ampicillin (Omnipen, Principen, Totacillin)"*
- *"Ampicillin/Sulbactam (Unasyn)"*
- *"Azithromycin (Zithromax, Sumamed, Zitrocin)"*
- *"Aztreonam (Azactam)"*
- *"Bactrim (Co-Trimoxazole, Sulfamethoxazole, Sulfisoxazole, Trimethoprim, Trimethoprim Sulfamethoxazole, TMP-SMX)"*
- *"Cefaclor (Ceclor, Ceclor CD)"*
- *"Cefadroxil (Cephadroxil, Duricef)"*
- *"Cefalotin (Cephalothin)"*
- *"Cefazolin (Ancef, Kefzol, Zolicef)"*

- *"Cefdinir (Omnicef, Cefdiel)"*
- *"Cefditoren (Spectracef)"*
- *"Cefepime (Maxipime)"*
- *"Cefiderocol"*
- *"Cefixime (Suprax)"*
- *"Cefoperazone (Cefobid, Sodium)"*
- *"Cefotaxime (Cephotaxime, Claforan)"*
- *"Cefotetan (Cefotan)"*
- *"Cefoxitin (Mefoxin)"*
- *"Cefpodoxime"*
- *"Cefprozil (Cefzil)"*
- *"Ceftaroline"*
- *"Ceftazidime (Ceptaz, Fortaz, Tazicef)"*
- *"Ceftazidime-avibactam (Avycaz)"*
- *"Ceftizoxime"*
- *"Ceftolozane/Tazobactam (Zerbaxa)"*
- *"Ceftibuten (Cedax)"*
- *"Ceftriaxone (Rocephin)"*
- *"Cefuroxime (Ceftin, Kefurox, Zinacef)"*
- *"Cephalexin (Cefalexin, Keflex, Keftal, Cefanox, Biocef, Panixine, Zartan)"*
- *"Ciprofloxacin (Cipro, Ciproxin, Ciprobay)"*
- *"Clarithromycin (Biaxin)"*
- *"Clindamycin (Cleocin)"*
- *"Cloxacillin (Tegopen, Coxapen)"*
- *"Colistin (Xylistin, Polymyxin E, Colistimethate)"*
- *"Dalbavancin"*
- *"Daptomycin"*
- *"Delafloxacin (Baxdela)"*
- *"Dicloxacillin (Dycill, Dynapen)"*
- *"Doripenem (Doribax)"*
- *"Doxycycline (Doxycycline Hyclate, Doxy, Vibra, Vibramycin)"*
- *"Eravacycline"*
- *"Ertapenem (Invanz)"*
- *"Erythromycin (E-mycin, Ery-tab, Benzamycin)"*
- *"Fidaxomicin (Dificid)"*
- *"Fosfomycin (Monurol)"*
- *"Gemifloxacin"*
- *"Gentamicin (Gentamycin, Garamycin, Cidomycin, Septopal, Gentamycin Synergy)"*
- *"Imipenem (Primaxin)"*
- *"Imipenem/Relebactam"*

Include: Recarbrio

- *"Lefamulin"*
- *"Levofloxacin (Levaquin, Quixin)"*
- *"Linezolid (Zyvox)"*
- *"Meropenem (Merrem)"*
- *"Meropenem Vaborbactam (Vabomere)"*
- *"Metronidazole (Flagyl)"*
- *"Minocycline (Minocycline hydrochloride, Minocin, Dynacin, Myrac, Solodayn, Vectrin)"*
- *"Moxifloxacin (Avelox)"*
- *"Nafcillin (Unipen, Nafcil, Nallpen)"*
- *"Nitrofurantoin (Macrobid)"*
- *"Norfloxacin (Noroxin)"*
- *"Ofloxacin (Floxin)"*
- *"Omadycycline"*
- *"Oritavancin (LY333328)"*
- *"Oxacillin (Prostaphilin, Bactocil, Prostaphlin)"*
- *"Penicillin (Benzylpenicillin, Penicillin G, Bicillin C-R/L-A, Pfizerpen, Wycellin)"*
- *"Piperacillin"*
- *"Piperacillin-tazobactam (Zosyn)"*
- *"Polymixin B"*
- *"Rifampin (Rifadin)"*
- *"Streptomycin"*
- *"Sulfasalazine (Azulfidine, Sulfazine)"*
- *"Sulfonamides"*
- *"Synercid (Quinupristin/Dalfopristin)"*
- *"Tedizolid"*
- *"Telavancin (TD-6424, Vibativ)"*
- *"Tetracycline (Ala-Tet, Panmycin, Sumycin)"*
- *"Tigecycline (Tigacyl)"*
- *"Tobramycin (Tobrex, Nebcin, Kitabis Pak, Tobi TOBI)"*
- *"Vancomycin (Vancocin, Lyphocin)"*
- *"Unknown"*

Exclude: Rifaximin (Xifaxan)

1.1. [ANTIBIOTIC]: Route of administration

Instructions: Review the medical record to determine the route of administration for the selected antibiotic on the date indicated.

- *"Intravenous (IV)"*
- *"By mouth (PO)"*
- *"Intramuscular (IM)"*
- *"Inhalation"*
- *"PR (Per rectum)"*
- *"IV/PO"*

- *"IV/IM"*
- *"IM/PO"*
- *"IV/Inhalation"*
- *"PO/Inhalation"*
- *"IM/Inhalation"*
- *"IV/PR"*
- *"PO/PR"*
- *"IM/PR"*
- *"Inhalation/PR"*
- *"N/A"*

Antivirals

1. Name of antiviral(s) received
Instructions: Review the medical record to determine the name of the antiviral the patient received on the date indicated.
Select all that apply:

- *"Acyclovir"*
- *"Baloxavir"*
- *"Nirmatrelvir/ritonavir (Paxlovid)"*
- *"Oseltamivir"*
- *"Peramivir"*
- *"Remdesivir"*
- *"Zanamivir"*
- *"Unknown"*

Diuretics

1. Name of diuretic(s)?
Instructions: Review the medical record to determine the name(s) of the diuretic(s) the patient received on the date indicated.
Include: Combination blood pressure and diuretic medications received on the date indicated.
Select all that apply:

- *"Acetazolamide (Diamox)"*
- *"Amiloride"*
- *"Bumetanide (Bumex)"*
- *"Chlorothiazide (Diuril)"*
- *"Chlorthalidone"*
- *"Ethacrynic Acid (Edecrin)"*
- *"Eplerenone (Inspra)"*
- *"Furosemide (Lasix)"*
- *"Hydrochlorothiazide or HCTZ"*

- *"Indapamide (Lozol)"*
- *"Metolazone (Zaroxyln)"*
- *"Spironolactone (Aldactone)"*
- *"Torsemide (Demedex)"*
- *"Triamterene (Dyrenium)"*
- *"Other"*

Opioids

1. Select the medication(s) the patient received on [DATE]
Instructions: Review the medical record to determine the name(s) of the opioid(s) the patient received on the date indicated.
Select all that apply:

- *"Buprenorphine"*
  Include: Suboxone
- *"Butorphanol"*
- *"Codeine"*
- *"Dihydrocodeine"*
- *"Fentanyl"*
- *"Hydrocodone"*
- *"Hydromorphone"*
- *"Levorphanol"*
- *"Meperidine"*
- *"Methadone"*
- *"Morphine"*
- *"Nalbuphine"*
- *"Oxycodone"*
  Include: Percocet
- *"Oxymorphone"*
- *"Pentazocine"*
- *"Tapentadol"*
- *"Tramadol"*
- *"Unknown"*

Antipsychotics

1. Select the medication(s) the patient received on [DATE]
Instructions: Review the medical record to determine the name(s) of the antipsychotic(s) the patient received on the date indicated.
Exclude: Intranasal or topical antipsychotics
Select all that apply:

- *"Aripiprazole"*

- *"Asenapine (Saphris)"*
- *"Brexpiprazole (Rexulti)"*
- *"Cariprazine (Vraylar)"*
- *"Clozapine"*
- *"Fluphenazine (Modecate)"*
- *"Haloperidol"*
- *"Lurasidone (Latuda)"*
- *"Olanzapine"*
- *"Paliperidone (Invega)"*
- *"Quetiapine"*
- *"Risperidone"*
- *"Ziprasidone"*
- *"None of the above"*
- *"Other"* Enter the other antipsychotic medication here using free text. Please reach out to the Coordinating Center prior to making this selection.

Benzodiazepines

1. Select the medication(s) the patient received on [DATE]
Instructions: Review the medical record to determine the name(s) of the benzodiazepine(s) the patient received on the date indicated.
Include: As needed (PRN) dosing for seizures.
Exclude: Intranasal benzodiazepines, Topical benzodiazepines
Select all that apply:

- *"Alprazolam"*
- *"Chlordiazepoxide"*
- *"Clobazam"*
- *"Clonazepam"*
- *"Clorazepate"*
- *"Diazepam"*
- *"Estazolam"*
- *"Flurazepam"*
- *"Halazepam"*
- *"Lorazepam"*
- *"Midazolam"*
- *"Oxazepam"*
- *"Quazepam"*
- *"Temazepam"*
- *"Triazolam"*
- *"None of the above"*

Steroids

1. Name of medication(s)
Instructions: Review the medical record to determine the name(s) of the steroid(s) the patient received on the date indicated.

> *Note: For all medications selected, answer questions 1.1 and 1.2*

Select all that apply:

- *"Betamethasone"*
- *"Budesonide"*
- *"Cortisone"*
- *"Deflazacort"*
- *"Dexamethasone"*
- *"Fludrocortisone"*
- *"Hydrocortisone"*
- *"Methylprednisolone"*
- *"Prednisolone"*
- *"Prednisone"*
- *"Triamcinolone"*
- *"None of the above"*

1.1. [MEDICATION]: Total Daily Dosage
Instructions: Review the medical record to determine the total daily dose of the selected steroid that the patient received on the date indicated. Enter the numeric value in the free text box provided.

1.2. [MEDICATION]: Unit of dosage
Instructions: Review the medical record to determine the unit that corresponds to the dose of the selected steroid that the patient received on the date indicated that was entered above.

- *"mg"*
- *"G"*
- *"Unknown"*
- *"Other, please specify"*

Vasopressors

1. Which Vasopressors were administered on [DATE]?
Instructions: Review the medical record to determine the vasopressor(s) the patient received on the date indicated.
Include: The following medications at any dose.
Exclude: Vasopressors given during a code, procedures, or in an Operating Room without continuation after these incidences. Intramuscular Epinephrine given for anaphylaxis/allergic reactions.
Select all that apply:

- *"Angiotensin II"*

- *"Dopamine"*
- *"Epinephrine"*
- *"Norepinephrine"*
- *"Midodrine (PO)"*
- *"Phenylephrine"*
- *"Vasopressin"*
- *"Other"* enter the vasopressor administered to the patient not listed above in the free text box. Please contact the Coordinating Center prior to making this selection.

Delirium Assessment

1. Which delirium assessment(s) were completed on [DATE]?
Instructions: Review the medical record to determine which delirium assessment(s) were completed on the patient on the date indicated above.
Note: This can be found either in provider documentation or in nursing flowsheets.
Select all that apply:

- *"Confusion Assessment Method (CAM)"* ***Answer question 1.1***
  Include: 3D CAM Assessment
- *"Confusion Assessment Method for the Intensive Care Unit (CAM-ICU)"* ***Answer question 1.1***
- *"Intensive Care Delirium Screening Checklist (ICDSC)"* ***Answer question 1.2***
- *"Delirium Detection Score (DDS)"* ***Answer question 1.2***
- *"Nursing Delirium Screening Scale (Nu-DESC)"* ***Answer question 1.2***
- *"Other"*

1.1. What was the worst/most acute score documented using the CAM or CAM-ICU on [DATE]?
Instructions: Review the medical record to determine the worst/most acute score documented using the CAM and/or CAM-ICU on the date indicated above.

- *Positive"*
- *"Negative"*

1.2. What was the worst/most acute score documented using the ICDSC, DDS, or Nu-DESC on [DATE]?
Instructions: Review the medical record to determine the worst/most acute score documented using the ICDSC, DDS, and/or Nu-DESC on the date indicated above. Enter the numerical score in the free text box provided.

Laboratory

Note: For lab values reported using directional symbols for "less than" or "greater than" a numeric value, please enter the numeric value reported. For example, if the labs result states "< 150", please enter that as 150.
1. Which of the following are available on [DATE]?
Instructions: Review the medical record to determine if any of the following labs were collected on the specified date.

Exclude: Labs collected prior to the hospital encounter, even if on the same calendar day.
Select all that apply:

- *"Lactate"*
  Answer questions 1.1 and 1.2
  Include: Lactic Acid results and lactates drawn as part of an arterial or venous blood gas (ABG/VBG).
- *"White Blood Cell (WBC) Count"*
  Answer question 1.3
- *"Hemoglobin (Hgb)"*
  Answer question 1.4
  Include: POC Hemoglobin results.
- *"Platelet Count"*
  Answer question 1.5
- *"Creatinine"*
  Answer questions 1.6 and 1.7
  Include: POC Creatinine results.
- *"Total Bilirubin"*
  Answer questions 1.8 and 1.9
- *"Procalcitonin"*
  Answer question 1.10

1.1. Highest Lactate
Instructions: Indicate the highest lactate reported on the specified date as a numeric value in the free text box provided.

1.2. Lactate unit of measurement
Instructions: Indicate the unit of measurement the highest lactate value was reported in.
Note: This question is required.

- *"mmol/L"*
- *"mg/dL"*
- *"mEq/L"*

1.3. Highest White Blood Cell (WBC)
Instructions: Indicate the highest WBC reported on the specified date as a numeric value in K/uL in the free text box provided.

1.4. Lowest Hemoglobin (Hgb)
Instructions: Indicate the lowest Hgb reported on the specified date as a numeric value in g/dL in the free text box provided.

1.5. Lowest Platelets
Instructions: Indicate the lowest platelet count reported on the specified date as a numeric value in the hundred thousands, K/uL in the free text box provided.

1.6. Highest Creatinine
Instructions: Indicate the highest creatinine reported on the specified date as a numeric value in the free text box provided.

1.7. Creatinine unit of measurement
Instructions: Indicate the unit of measurement the highest creatinine value was reported in.
Note: This question is required.

- *"mg/dL"*
- *"µmol/L"*

1.8. Highest Total Bilirubin
Instructions: Indicate the highest total bilirubin reported on the specified date as a numeric value in the free text box provided.

1.9. Total bilirubin unit of measurement
Instructions: Indicate the unit of measurement the highest total bilirubin value was reported in.
Note: This question is required.

- *"mg/dL"*
- *"µmol/L"*

1.10. Highest Procalcitonin
Instructions: Indicate the highest procalcitonin reported on the specified date as a numeric value in ng/mL in the free text box provided.

Level of Care

1. What was the patient's highest ordered level of care on [DATE]?
Instructions: Review the medical record to determine what the patient's highest ordered level of care is on the date indicated above.
Note 1: This is the highest level of care (from the physician order) that the patient is receiving on the selected date, not the physical location of the patient.
Note 2: Please capture the daily level of care based off of the most recent level of care ordered. Capture the patient's current level of care status until there is a new order placed.
Note 3: The hierarchy of care is the following (lowest to highest): Emergency Department, Observation, Floor/Ward, Step-down, Intensive Care.

- "*Emergency*"
- "*Observation*"
  Answer question 1.1
  Include: Observation with telemetry
- "*Floor/Ward*"
  Answer question 1.1
  Include: Hospital at Home. General Inpatient. General Inpatient with telemetry.
- "*Step-down*"
  Include: Progressive Care, & Intermediate Care
- "*Intensive Care (include all instances - Emergency, Medicine, Surgical)*"
- "*Unknown*"

1.1. Did the patient have an order for telemetry while under Observation/Floor/Ward status?
Instructions: Review the medical record to determine if the patient had an order for telemetry monitoring while they were under Observation or Floor/Ward status on this day.

2. WHAT WAS THE MOST ACUTE PHYSICAL LOCATION OF THE PATIENT ON [DATE]?
Instructions: Review the medical record to determine what was the most acute physical location of the patient on the date indicated above.

Note 1: This is the most acute physical location of the patient on the selected date, not the highest *ordered* level of care of the patient on that day.
Note 2: Please capture the daily physical location of care based off of the most recent physical location of care. Capture the patient's physical location of care until there is evidence that the patient has changed to a less or more acute physical location of care.
Note 3: The hierarchy of care is the following (least acute to most acute): Emergency Department, Observation/Short Stay Unit, Floor/Ward, Telemetry Unit, Step-down Unit, Emergency Department Critical Care Unit, Universal/Flexible Bed Unit, Intensive/Critical Care Unit.

- "*Emergency Department*"
  Include: ED Boarding Units (non-Critical Care)
- *Emergency Department Critical Care Unit*"
  Include: Units in the ED with the same or similar staffing, monitoring, and capability for therapies as an ICU and your institution considers it to be a Critical Care Unit within the ED.
- "*Observation/Short Stay Unit*"
  Include: Observation Unit with Telemetry
- "*Hospital at Home*"
- "*Floor/Ward*"
- "*Telemetry Unit*"
  Include: Units that are specifically equipped for continuous cardiac and vital sign monitoring and classified by your institution as a telemetry unit where all or nearly all patients receive telemetry monitoring.
- "*Step-down Unit*"
  Include: Progressive Care Units, & Intermediate Care Units
- "*Intensive/Critical Care Unit*"
  Include: Medical ICU, Surgical ICU, Cardiac ICU, Neuro ICU, etc.
- "*Universal/Flexible Bed Unit*"
  Include: Acuity-adaptable units, units that can adapt to a variety of patient needs and accommodate patients with different levels of care (general inpatient to intensive care).
- "*Unknown*"

Vital Signs

Exclude: Vital signs recorded during a procedure & pre-encounter vital signs.

1. Indicate the highest temperature value on [DATE]
Instructions: Review the medical record to determine the highest temperature in degrees Celsius (C) on the specified date. Enter the numeric value that represents the highest temperature for the date provided using the free text data entry box.
Note: Enter "999" if a temperature is not reported on the date indicated above.

2. Indicate the lowest temperature value on [DATE]
Instructions: Review the medical record to determine the lowest temperature in degrees Celsius (C) on the specified date. Enter the numeric value that represents the lowest temperature for the date provided using the free text data entry box.
Note: Enter "999" if a temperature is not reported on the date indicated above.

3. Indicate the highest heart rate value on [DATE]
Instructions: Review the medical record to determine the highest heart rate (BPM) on the specified date. Indicate the range that appropriately includes the highest heart rate.
Note: The default value for this field is "60-89 BPM". The selection in the drop down menu should be changed if the default value is incorrect.

- *"Less than 60BPM"*
- *"60-89 BPM"*
- *"90-100 BPM"*
- *"101-124 BPM"*
- *"Greater than 124 BPM"*
- *"Not available"* if a heart rate is not reported on the date indicated above.

4. Indicate the lowest heart rate value on [DATE]
Instructions: Review the medical record to determine the lowest heart rate (BPM) on the specified date. Indicate the range that appropriately includes the lowest heart rate.
Note: The default value for this field is "60-89 BPM". The selection in the drop down menu should be changed if the default value is incorrect.

- *"Less than 60 BPM"*
- *"60-89 BPM"*
- *"90-100 BPM"*
- *"101-124 BPM"*
- *"Greater than 124 BPM"*
- *"Not available"* if a heart rate is not reported on the date indicated above.

5. Indicate the highest respiratory rate value on [DATE]
Instructions: Review the medical record to determine the highest respiratory rate on the specified date. Indicate the range that appropriately includes the highest respiratory rate.
Note: The default value for this field is 'Normal (Less than 20)'. The selection in the drop down menu should be changed if the default value is incorrect.

- *"Normal (less than 20)"*
- *"Abnormal (20)"*
- *"Abnormal (21)"*
- *"Abnormal (22-24)"*
- *"Abnormal (25-30)"*
- *"Abnormal (greater than 30)"*
- *"Not available"* if a respiratory rate is not reported on the date indicated above.

6. Indicate the lowest respiratory rate value on [DATE]
Instructions: Review the medical record to determine the lowest respiratory rate on the specified date. Indicate the range that appropriately includes the lowest respiratory rate.

Note: The default value for this field is 'Normal (Less than 20)'. The selection in the drop down menu should be changed if the default value is incorrect.

- *"Normal (less than 20)"*
- *"Abnormal (20)"*
- *"Abnormal (21)"*
- *"Abnormal (22-24)"*
- *"Abnormal (25-30)"*
- *"Abnormal (greater than 30)"*
- *"Not available"* if a respiratory rate is not reported on the date indicated above.

7. Indicate the highest recorded pulse oximetry on [DATE]
Instructions: Review the medical record to determine the patient's highest recorded pulse oximetry on the specified date. Indicate the range that appropriately includes the highest pulse oximetry.

- *"70% or less"*
- *"71-80%"*
- *"81-90%"*
- *"91-95%"*
- *"96-100%"*
- *"Not available"* if a pulse ox is not reported on the date indicated above.

8. Indicate the lowest recorded pulse oximetry on [DATE]
Instructions: Review the medical record to determine the patient's lowest recorded pulse oximetry on the specified date. Indicate the range that appropriately includes the lowest pulse oximetry.

- *"70% or less"*
- *"71-80%"*
- *"81-90%"*
- *"91-95%"*
- *"96-100%"*
- *"Not available"* if a pulse ox is not reported on the date indicated above.

9. Was the patient on supplemental oxygen at the time of the lowest pulse oximetry reading?
Instructions: Review the medical record to determine if the patient was on supplemental oxygen at the time of the lowest pulse oximetry reading on the specified date. If information on supplemental oxygen is not reported with the lowest reading, capture the most recently documented amount of oxygen support. If there is no previous documentation of oxygen support, then select, "Unknown".
Note: If there is more than one recording with the same lowest pulse oximetry reading during this time frame, utilize the reading with the highest level of respiratory support.
Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.

- *"Yes"*
  Answer question 9.1
- *"No"*

- *"Unknown"*

9.1. Indicate the route which supplemental oxygen was delivered.
Instructions: Review the medical record to determine the route with which the supplemental oxygen was delivered at the time of the lowest pulse oximetry reading on the specified date.
Note: If there is more than one recording with the same lowest pulse oximetry reading during this time frame, utilize the reading with the highest level of respiratory support.

- *"Heated high-flow nasal cannula"*
  Include: Optiflow
- *"Intubated on ventilator"*
  Include: Tracheostomy on ventilator
- *"Nasal cannula"*
  Include: Nasal Pendant
- *"Non-invasive ventilation (CPAP, BiPAP)"*
  Include: AVAPS
  Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support.
- *"Oxygen mask (i.e. nonrebreather, Venturi)"*
  Include: Trach mask, T-piece
- *"Other, please specify"*

10. What was the highest level of respiratory support for the patient on [DATE]?
Instructions: Review the medical record to determine the highest level of respiratory support for the patient on the date indicated above.

	Tiering System
1	Mechanical Ventilation
2	NIPPV
3	Heated High Flow Nasal Cannula
4	Low Flow Oxygen System
5	Room Air

- *"Room air"*
- *"Low Flow Oxygen System"*
  Answer question 10.1
  Include: Nasal cannula, venti-mask, non-rebreather (NRB) mask, trach masking, T-piece, cold high flow nasal cannula
- *"Heated High Flow Nasal Cannula Oxygen"*
  Answer questions 10.2 and 10.3
  Include: HHFNC

- *"Non-Invasive Positive Pressure Ventilation"*
  Answer questions 10.4 through 10.6
  Include: CPAP, BiPAP, AVAPS, Face-Mask Ambu-Bag
  Exclude: Use of a home CPAP or BiPAP that is prescribed for sleep apnea and is used while sleeping and utilize the next highest level of respiratory support on that calendar day.
- *"Invasive Mechanical Ventilation"*
  Include: Patients with tracheostomy on ventilator
  Exclude: Mechanical ventilation that was for procedure only AND had the patient extubated within 4 hours of the procedure ending. If the patient was intubated for procedure only, but remained on invasive mechanical ventilation for >4 hours after the procedure was completed, then include this as *"Invasive Mechanical Ventilation"*.

10.1. Is the low-flow oxygen system level documented in liters or percent (%)?
Instructions: Review the medical record to determine if the highest oxygen level for the low-flow oxygen system is documented in liters or percent on the date indicated above.
Note: If no oxygen supplementation is documented with the highest level of respiratory support, use the last documented oxygen supplementation recorded.
Note: If a patient is on a trach collar for oxygen delivery, capture the FiO2 of oxygen delivered, not the number of liters.

- *"Liters"*

  10.1.1. Low-flow oxygen level in liters
  Instructions: Review the medical record to determine the highest number of liters of oxygen that the patient received via low-flow oxygen on the date indicated above.
  Note: For oxygen partial liters of oxygen administration (Example: 3.5 liters), round down to the nearest whole number.

  - *"1-15L"*
  - *">15L"*
  - *"Not available"*
    Include: 0.5 L
- *"Percent (%)"*

  10.1.2. Low flow oxygen level in percent (%)
  Instructions: Review the medical record to determine the highest percentage of oxygen that the patient received via low-flow oxygen on the date indicated above.

  - *"21-30%"*
  - *"31-40%"*
  - *"41-50%"*
  - *"51-60%"*
  - *"61-70%"*
  - *"71-80%"*
  - *"81-90%"*
  - *"91-100%"*
  - *"Not available"*

10.2. Heated high-flow nasal cannula oxygen system level in percent (%)
Instructions: Review the medical record to determine the highest percentage of oxygen that the patient received via HHFLNC on the date indicated above.

- *"21-30%"*
- *"31-40%"*
- *"41-50%"*
- *"51-60%"*
- *"61-70%"*
- *"71-80%"*
- *"81-90%"*
- *"91-100%"*
- *"Not available"*

10.3. What was the heated high-flow nasal cannula oxygen system gas flow (L/min)?
Instructions: Review the medical record to determine the gas flow (L/min) of the heated high-flow nasal cannula oxygen system at the time of the highest oxygen requirement on the date indicated above.

- *"< 30 L/min"*
- *"30-50 L/min"*
- *"> 50 L/min"*
- *"Not Available"*

10.4. Non-invasive positive pressure ventilation oxygen level in percent (%)
Instructions: Review the medical record to determine the highest percentage of oxygen that the patient received via NIPPV on the date indicated above.
Note: If no settings are documented as having been administered (via a flowsheet), it is okay to use the settings documented in the order.

- *"21% (Room Air)"*
- *"22-30%"*
- *"31-40%"*
- *"41-50%"*
- *"51-60%"*
- *"61-70%"*
- *"71-80%"*
- *"81-90%"*
- *"91-100%"*
- *"Not available"*

10.5. What was the non-invasive positive pressure ventilation inspiratory pressure (cmH2O)?
Instructions: Review the medical record to determine the inspiratory pressure of the non-invasive positive pressure ventilation system at the time of the highest amount of support via NIPPV on the date indicated above.
Note 1: If no settings are documented as having been administered (via a flowsheet), it is okay to use the settings documented in the order.
Note 2: If patient is on CPAP, capture the pressure setting as both the inspiratory and expiratory pressure.

- *"< 6 cmH2O"*

- *"6-20 cmH2O"*
- *"> 20 cmH2O"*
- *"Not available"*

10.6. What was the non-invasive positive pressure ventilation expiratory pressure (cmH2O)?
Instructions: Review the medical record to determine the expiratory pressure of the non-invasive positive pressure ventilation system at the time of the highest amount of support via NIPPV on the date indicated above.
Note 1: If no settings are documented as have been administered (via a flowsheet), it is okay to use the settings documented in the order.
Note 2: If patient is on CPAP, capture the pressure setting as both the inspiratory and expiratory pressure.

- *"< 6 cmH2O"*
- *"6-20 cmH2O"*
- *"> 20 cmH2O"*
- *"Not available"*

11. Indicate the highest systolic blood pressure on [DATE]
Instructions: Review the medical record to determine the highest systolic blood pressure on the specified date. Enter the numeric value that represents the highest systolic blood pressure in mmHg for the date provided using the free text data entry box.
Include: Blood pressure reporting on a patient with a Left Ventricular Assist Device (LVAD) that is entered as a systolic pressure/zero. For example: enter the reading "80/0" as "80"
Note: Enter "999" if a systolic blood pressure is not reported on the date indicated above.
Exclude: Blood pressure readings where the SBP = DBP.

12. Indicate the diastolic blood pressure that corresponds with the highest systolic blood pressure on [DATE]
Instructions: Review the medical record to determine the diastolic blood pressure that corresponds with the highest systolic pressure entered on this day. Enter the numeric value that represents the highest diastolic blood pressure in mmHg for the date provided using the free text data entry box.
Note 1: If the blood pressure reading is for a patient with a Left Ventricular Assist Device (LVAD) reported as a systolic pressure/zero ("80/0"), enter "999" for the diastolic entry.
Note 2: Enter "999" if a diastolic blood pressure is not reported on the date indicated above.
Note 3: If the EMR shows multiple instances where the highest systolic is the same value, with differing diastolics, use the highest diastolic.
Exclude: Blood pressure readings where the SBP = DBP.

13. Indicate the lowest systolic blood pressure on [DATE]
Instructions: Review the medical record to determine the lowest systolic blood pressure on the specified date. Enter the numeric value that represents the lowest systolic blood pressure in mmHg for the date provided using the free text data entry box.
Include: Blood pressure reporting on a patient with a Left Ventricular Assist Device (LVAD) that is entered as a systolic pressure/zero. For example: enter the reading "80/0" as "80"
Note: Enter "999" if a systolic blood pressure is not reported on the date indicated above.
Exclude: Blood pressure readings where the SBP = DBP.

14. Indicate the diastolic blood pressure that corresponds with the lowest systolic blood pressure on [DATE]
Instructions: Review the medical record to determine the diastolic blood pressure that corresponds with the lowest systolic pressure entered on this day. Enter the numeric value that represents the lowest diastolic blood pressure in mmHg for the date provided using the free text data entry box.
Note 1: If the blood pressure reading is for a patient with a Left Ventricular Assist Device (LVAD) reported as a systolic pressure/zero ("80/0"), enter "999" for the diastolic entry.
Note 2: Enter "999" if a diastolic blood pressure is not reported on the date indicated above.
Note 3: If the EMR shows multiple instances where the lowest systolic is the same value, with differing diastolics, use the lowest diastolic.
Exclude: Blood pressure readings where the SBP = DBP.

Abstractor Notes

1. Do you have any notes?
Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer question 1.1
- *"No"* if you do not have notes that you would like to include and you do not want to exclude this form.

1.1. Abstractor Notes
Instructions: Use free text to input your notes.
IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.

Daily Entry (Days 5-14)

Instructions: For all questions in this section, "No Answer" is the default selection. This field will be considered a blank field and is interpreted as missing data. Be sure to select the appropriate answer for each question.

Enter the following information from each day of the hospital encounter using the daily entry tab. The specific date for each of the day of the hospitalization will populate according to the dates entered on the Enrollment form.

Jump to sub-sections:

Questions

1. Were any of the following documented on [DATE]?
Instructions: Review the medical record to determine if any of the following were documented on the specified date.
Exclude: Medications ordered but not administered.
Select all that apply:

- *"Antibiotics"*
  Note: If an antibiotic was scheduled for Day 3 of the hospital encounter, but was given early (i.e. on Day 2 of the hospital encounter). Please capture this antibiotic as given on Day 3 as it was scheduled.
  Exclude: Micafungin (this is an antifungal), Pentamidine (this is an antiprotozoal); Topical, optic, otic, intrabladder & irrigation antibiotics. Any antibiotic that is ordered for prophylaxis, suppression, and/or chronic therapy.
- *"Antivirals"*
- *"Diuretics"*
- *"Physical Therapy"* if the medical documentation indicates that the patient **participated** in Physical Therapy on the specified date.
  Include: Walking with a Physical Therapy Assistant or Mobility Tech. PT performing Range of Motion (ROM) on a patient who is intubated/sedated.
  Exclude: Occupational Therapy only
- *"None of the above"*

Antibiotics

1. Name of antibiotic(s)

Instructions: Review the medical record to determine the name of the antibiotic the patient received on the date indicated.

Select all that apply:

- *"Amikacin (Amikin)"*
- *"Amoxicillin (Novamox, Amoxil, Amoxicot, Dispermox, Moxatag, Moxilin, Trihydrate Trimox, Wymox)"*
- *"Amoxicillin-clavulanic acid (Augmentin, Co-Amoxiclav)"*
- *"Ampicillin (Omnipen, Principen, Totacillin)"*
- *"Ampicillin/Sulbactam (Unasyn)"*
- *"Azithromycin (Zithromax, Sumamed, Zitrocin)"*
- *"Aztreonam (Azactam)"*
- *"Bactrim (Co-Trimoxazole, Sulfamethoxazole, Sulfisoxazole, Trimethoprim, Trimethoprim Sulfamethoxazole, TMP-SMX)"*
- *"Cefaclor (Ceclor, Ceclor CD)"*
- *"Cefadroxil (Cephadroxil, Duricef)"*
- *"Cefalotin (Cephalothin)"*
- *"Cefazolin (Ancef, Kefzol, Zolicef)"*
- *"Cefdinir (Omnicef, Cefdiel)"*
- *"Cefditoren (Spectracef)"*
- *"Cefepime (Maxipime)"*
- *"Cefiderocol"*
- *"Cefixime (Suprax)"*
- *"Cefoperazone (Cefobid, Sodium)"*
- *"Cefotaxime (Cephotaxime, Claforan)"*
- *"Cefotetan (Cefotan)"*
- *"Cefoxitin (Mefoxin)"*
- *"Cefpodoxime"*
- *"Cefprozil (Cefzil)"*
- *"Ceftaroline"*
- *"Ceftazidime (Ceptaz, Fortaz, Tazicef)"*
- *"Ceftazidime-avibactam (Avycaz)"*
- *"Ceftizoxime"*
- *"Ceftolozane/Tazobactam (Zerbaxa)"*
- *"Ceftibuten (Cedax)"*
- *"Ceftriaxone (Rocephin)"*
- *"Cefuroxime (Ceftin, Kefurox, Zinacef)"*
- *"Cephalexin (Cefalexin, Keflex, Keftal, Cefanox, Biocef, Panixine, Zartan)"*

- *"Ciprofloxacin (Cipro, Ciproxin, Ciprobay)"*
- *"Clarithromycin (Biaxin)"*
- *"Clindamycin (Cleocin)"*
- *"Cloxacillin (Tegopen, Coxapen)"*
- *"Colistin (Xylistin, Polymyxin E, Colistimethate)"*
- *"Dalbavancin"*
- *"Daptomycin"*
- *"Delafloxacin (Baxdela)"*
- *"Dicloxacillin (Dycill, Dynapen)"*
- *"Doripenem (Doribax)"*
- *"Doxycycline (Doxycycline Hyclate, Doxy, Vibra, Vibramycin)"*
- *"Eravacycline"*
- *"Ertapenem (Invanz)"*
- *"Erythromycin (E-mycin, Ery-tab, Benzamycin)"*
- *"Fidaxomicin (Dificid)"*
- *"Fosfomycin (Monurol)"*
- *"Gemifloxacin"*
- *"Gentamicin (Gentamycin, Garamycin, Cidomycin, Septopal, Gentamycin Synergy)"*
- *"Imipenem (Primaxin)"*
- *"Imipenem/Relebactam"*
  Include: Recarbrio
- *"Lefamulin"*
- *"Levofloxacin (Levaquin, Quixin)"*
- *"Linezolid (Zyvox)"*
- *"Meropenem (Merrem)"*
- *"Meropenem Vaborbactam (Vabomere)"*
- *"Metronidazole (Flagyl)"*
- *"Minocycline (Minocycline hydrochloride, Minocin, Dynacin, Myrac, Solodayn, Vectrin)"*
- *"Moxifloxacin (Avelox)"*
- *"Nafcillin (Unipen, Nafcil, Nallpen)"*
- *"Nitrofurantoin (Macrobid)"*
- *"Norfloxacin (Noroxin)"*
- *"Ofloxacin (Floxin)"*
- *"Omadycycline"*
- *"Oritavancin (LY333328)"*
- *"Oxacillin (Prostaphilin, Bactocil, Prostaphlin)"*
- *"Penicillin (Benzylpenicillin, Penicillin G, Bicillin C-R/L-A, Pfizerpen, Wycellin)"*

- *"Piperacillin"*
- *"Piperacillin-tazobactam (Zosyn)"*
- *"Polymixin B"*
- *"Rifampin (Rifadin)"*
- *"Streptomycin"*
- *"Sulfasalazine (Azulfidine, Sulfazine)"*
- *"Sulfonamides"*
- *"Synercid (Quinupristin/Dalfopristin)"*
- *"Tedizolid"*
- *"Telavancin (TD-6424, Vibativ)"*
- *"Tetracycline (Ala-Tet, Panmycin, Sumycin)"*
- *"Tigecycline (Tigacyl)"*
- *"Tobramycin (Tobrex, Nebcin, Kitabis Pak, Tobi TOBI)"*
- *"Vancomycin (Vancocin, Lyphocin)"*
- *"Unknown"*
  Exclude: Rifaximin (Xifaxan)

1.1. [ANTIBIOTIC]: Route of administration

Instructions: Review the medical record to determine the route of administration for the selected antibiotic on the date indicated.

- *"Intravenous (IV)"*
- *"By mouth (PO)"*
- *"Intramuscular (IM)"*
- *"Inhalation"*
- *"PR (Per rectum)"*
- *"IV/PO"*
- *"IV/IM"*
- *"IM/PO"*
- *"IV/Inhalation"*
- *"PO/Inhalation"*
- *"IM/Inhalation"*
- *"IV/PR"*
- *"PO/PR"*
- *"IM/PR"*
- *"Inhalation/PR"*
- *"N/A"*

Antivirals

1. Name of antiviral(s) received

Instructions: Review the medical record to determine the name of the antiviral the patient received on the date indicated.

Select all that apply:

- *"Acyclovir"*
- *"Baloxavir"*
- *"Nirmatrelvir/ritonavir (Paxlovid)"*
- *"Oseltamivir"*
- *"Peramivir"*
- *"Remdesivir"*
- *"Zanamivir"*
- *"Unknown"*

Diuretics

1. Name of diuretic(s)?

Instructions: Review the medical record to determine the name(s) of the diuretic(s) the patient received on the date indicated.

Include: Combination blood pressure and diuretic medications received on the date indicated.

Select all that apply:

- *"Acetazolamide (Diamox)"*
- *"Amiloride"*
- *"Bumetanide (Bumex)"*
- *"Chlorothiazide (Diuril)"*
- *"Chlorthalidone"*
- *"Ethacrynic Acid (Edecrin)"*
- *"Eplerenone (Inspra)"*
- *"Furosemide (Lasix)"*
- *"Hydrochlorothiazide or HCTZ"*
- *"Indapamide (Lozol)"*
- *"Metolazone (Zaroxyln)"*
- *"Spironolactone (Aldactone)"*
- *"Torsemide (Demedex)"*
- *"Triamterene (Dyrenium)"*
- *"Other"*

Abstractor Notes

1. Do you have any notes?

Instructions: Indicate whether you have any notes that you would like to include regarding any of the entries in this form or if you would like to exclude this form.

- *"Yes"*
  Answer question 1.1
- *"No"* if you do not have notes that you would like to include and you do not want to exclude this form.

1.1. Abstractor Notes

Instructions: Use free text to input your notes.

IMPORTANT: Please do not enter any Protected Health Information (PHI) into this text box.