

Confirmation of eligibility

Study ID _____

The questions in this instrument will confirm whether the patient is eligible

Once all questions have been answered in an instrument, change the status from "incomplete" to "complete".

Supplemental instructions, FAQ, and tips can be downloaded here. Please read this document carefully before you begin entering data. Note, the FAQ section of this document will be updated every 1-2 days.

[Attachment: "REDCap instructions & FAQ 4-6-20.pdf"]

Lab value converter can be downloaded here (to convert the units for CRP, D-Dimer, and lactate, if needed)

[Attachment: "STOP-COVID Lab Value Converter -v2.xlsx"]

Adult aged 18 or older?

- Yes
 No

STOP, THIS PATIENT IS NOT ELIGIBLE

Laboratory-confirmed diagnosis of COVID-19?

- Yes
 No

STOP, THIS PATIENT IS NOT ELIGIBLE

Date the positive COVID-19 test was obtained
-Refers to the date the patient was tested, not the date the result came back
-If multiple tests were sent, provide the date of the initial positive test, even if it was obtained at an outside facility
-Ok to use an estimate if exact date unavailable

Hospitalized in the ICU for illness related to COVID-19?

- Yes
- No

Do not include patients admitted to the ICU for reasons unrelated to COVID-19 who later tested positive on "routine surveillance" only and never showed signs or symptoms consistent with COVID-19.

Patients in non-ICU rooms that have been "converted" into ICU rooms for surge capacity are eligible under any of the following conditions:

- a) being treated by an ICU team
- b) receiving invasive mechanical ventilation or ECMO
- c) receiving continuous renal replacement therapy (e.g., CVVH)
- d) receiving vasopressors/inotropes or mechanical cardiac support (e.g., LVAD) in a room where this would traditionally not be permitted

STOP, THIS PATIENT IS NOT ELIGIBLE

THIS PATIENT IS ELIGIBLE, PROCEED WITH DATA ENTRY

Additional Notes (if any)

Institutional Data

Enter your name

The name of the person entering data, not the name of the patient

Enter your email address

Was the patient admitted to the main hospital within your medical center, or to a satellite/affiliate of the main hospital?

- Main Hospital
 Satellite/affiliate

If admitted to one hospital and then transferred to another, please review the answer to Question7 in the FAQ section of the REDCap instructions document

Enter name of the main hospital

Enter name of satellite/affiliate

How many regular adult ICU beds does this hospital have?

-Do not include surge capacity beds

-If the patient was admitted to a satellite/affiliate hospital, only enter the #ICU beds at that specific site

Indicate the state (2-letter abbreviation) in which the hospital is located

Additional Notes (if any)

Demographics, Symptoms, Comorbidities, Home Medications

Age (in years)

Gender

- Male
 Female

Ethnicity

- Hispanic or Latino
 Not Hispanic or Latino
 Unknown / Not Reported

Race

Do not select, "Unknown / Not Reported" unless this information is truly unavailable

- White
 Black or African American
 Asian
 American Indian/Alaska Native
 Native Hawaiian or Other Pacific Islander
 More Than One Race
 Unknown / Not Reported

Pregnant at the time of ICU admission?

- Yes
 No

How many weeks pregnant on ICU admission?

(Round up or down to the nearest integer value)

Enter the outcome of the fetus by the end of the hospitalization (e.g., "both the mother and fetus survived the hospitalization", or "fetus terminated at week XXX due to XXX", etc.)

Source of admission to the ICU

- Emergency department
 Hospital ward
 Transfer from another hospital
 Other

Suspected setting in which COVID-19 infection occurred

*Healthcare worker is defined as a doctor, nurse, technician, or other medical professional who provides direct care to patients (do not include ancillary staff such as clerks, pharmacists, or kitchen/cleaning staff)

- Community-acquired
 Nosocomial
 Occupational (healthcare worker)*
 Unknown

Type of healthcare worker

- Doctor
 Nurse
 Other

Date symptoms first began?

Ok to use an estimate if exact date is unavailable

Symptom(s) that began prior to ICU admission (select all that apply)
Include symptoms that began at home as well as those that began in the hospital prior to ICU admission

- Cough
- Sputum production
- Hemoptysis
- Sore throat
- Nasal congestion
- Headache
- Fever
- Chills
- Shortness of breath
- Nausea or vomiting
- Diarrhea
- Myalgia or arthralgia
- Confusion or altered mental status
- Fatigue or malaise
- None of the above

Other symptom(s) that began prior to ICU admission?
Examples include chest pain/tightness, dizziness, and anosmia (lack of smell)

Cardiovascular and pulmonary comorbidities prior to ICU admission

*CAD includes any history of angina, myocardial infarction, or coronary artery bypass graft surgery

**CHF includes both HF_rEF and HF_pEF

- Diabetes mellitus
- Hypertension
- Coronary artery disease (CAD)*
- Congestive heart failure (CHF)**
- Atrial fibrillation/flutter
- COPD
- Asthma
- Other lung disease
- None of the above

Was the diabetes insulin-dependent or non-insulin-dependent?

- Insulin-dependent
- Non-insulin-dependent

Enter the other lung disease

Tobacco smoking status
Do not include vaping or smoking of non-tobacco products

- Non-smoker
- Former smoker
- Current smoker
- Unknown

How many pack-years of smoking history?
If not available enter, "N/A"

History of alcohol abuse

- Yes
- No
- Unknown

Currently homeless

- Yes
- No
- Unknown

Additional comorbidities prior to ICU admission

*Chronic Kidney Disease (CKD) is defined as a baseline eGFR < 60 on at least two consecutive values at least 12 weeks apart prior to hospital admission. If not available, defined as per medical history

**Chronic liver disease includes cirrhosis, alcohol-related liver disease, nonalcoholic fatty liver disease, autoimmune hepatitis, hepatitis B or hepatitis C, primary biliary cirrhosis, and others

***Active malignancy is defined as any malignancy (other than non-melanoma skin cancer) that was treated in the prior year

- CKD*
- ESRD on hemodialysis or peritoneal dialysis
- Chronic liver disease**
- HIV/AIDS
- Active malignancy***
- Solid organ transplant
- Bone marrow transplant
- Other immunodeficiency
- None of the above

Dialysis modality prior to hospital admission

- In-center hemodialysis
- Home hemodialysis
- Peritoneal dialysis

Type of vascular access used prior to hospital admission

- Catheter
- Arteriovenous fistula (AVF)
- Arteriovenous graft (AVG)

How long had the patient been receiving maintenance dialysis therapy prior to ICU admission?

- < 6 months
- Between 6 and 12 months
- Between 1 and 2.9 years
- Between 3 and 4.9 years
- 5 or more years
- Unknown

Does the patient have a history of a failed kidney transplant?

- Yes
- No
- Unknown

Type of chronic liver disease

- Alcohol-related
- Non-alcoholic fatty liver disease/NASH
- Hepatitis B virus
- Hepatitis C virus
- Autoimmune hepatitis
- Primary biliary cirrhosis
- Other

Enter other chronic liver disease

Type of malignancy

- Lung cancer
- Breast cancer
- Colorectal cancer
- Prostate cancer
- Gastric cancer
- Pancreatic cancer
- Melanoma
- Ovarian cancer
- Brain cancer
- Other cancer

Enter the other malignancy

Type of solid organ transplant

- Kidney
 Liver
 Heart
 Lung
 Other

Enter the other solid organ transplant type

Enter the other immunodeficiency

At least one baseline serum creatinine value available?
 Defined as a value between 365 to 7 days PRIOR to hospitalization

- Yes
 No

Baseline serum creatinine (mg/dl)
 Defined as the LOWEST value within 365 to 7 days prior to hospital admission

Serum creatinine (mg/dl) on HOSPITAL admission

Anti-hypertensive meds prior to hospital admission (select all that apply)
 ACE-Is include lisinopril, fosinopril, captopril, and others
 ARBs include losartan, valsartan, irbesartan, and others
 MRAs include spironolactone and eplerenone

- ACE-I
 ARB
 Mineralocorticoid receptor antagonist (MRA)
 Beta-blocker
 Other anti-hypertensive
 None of the above

Enter the other anti-hypertensive(s)
 If entering more than one, separate with commas

Other meds prior to hospital admission (select all that apply).

Note: only refers to home meds (don't include meds started at an outside hospital)

Statins include atorvastatin, pravastatin, rosuvastatin, and others

NSAIDs include ibuprofen (Advil, Motrin), naproxen (Aleve), and others

For vitamins C and D, do not include if the only source was a multivitamin

*Include these meds if any were taken within 1 week prior to hospital admission

- Statin
 NSAID
 Aspirin
 Vitamin C
 Vitamin D
 Chloroquine*
 Hydroxychloroquine*
 Azithromycin*
 None of the above

Therapeutic anticoagulants prior to admission
Do not include anti-platelet agents such as aspirin
or clopidogrel (Plavix) as "other anticoagulant"

- Warfarin (Coumadin)
- Lovenox (Enoxaparin)
- Apixaban (Eliquis)
- Rivaroxaban (Xarelto)
- Other anticoagulant
- None of the above

Select if the patient received any of the following
immunosuppressive medications in the 30 days prior
to ICU admission

*Do not include immunotherapy, such as immune
checkpoint inhibitors (e.g., nivolumab)
**CNIs include tacrolimus and cyclosporine; do not
include CNIs applied topically (i.e., as an ointment)

- Chemotherapy*
- Corticosteroids >10mg prednisone/day (or
equivalent)
- Calcineurin inhibitor (CNI)**
- Mycophenolate mofetile (Cellcept)
- Azathioprine (Imuran)
- Rituximab
- Other major immunosuppressive therapy
- None of the above

Enter the other major immunosuppressive medication(s)
the patient was taking

Additional Notes (if any)

Please do not use this space to enter additional
medications or comorbidities

Vital Signs And Severity-of-Illness On ICU Day 1

Unless otherwise specified, the timing of the data below refers to ICU Day1, defined as the 24h period from midnight PRIOR to ICU admission to midnight AFTER ICU admission. For example, if a patient is admitted to an ICU at 10pm, 22 of the 24 hours for ICU Day1 would actually be from prior to ICU arrival (e.g., from the ED or hospital ward). See timeline in the "REDCap instructions" PDF for additional details.

Weight on ICU Day1 (or closest value prior)

-Can enter in either kg or lbs

-If none available, enter, "N/A"

Units for weight

Be sure to select the correct unit

Kilograms

Pounds

Height

-Can enter in either cm or inches

-If not available, enter, "N/A"

Units for height

Be sure to select the correct unit

Centimeters

Inches

Date of hospital admission

If hospitalized elsewhere and then transferred to your hospital, enter the date of the initial hospitalization (e.g., if initially at "Hospital A" and then transferred to "Hospital B", enter the date admitted to Hospital A)

Date of ICU admission

-If admitted to an outside/satellite/affiliate ICU and then transferred to an ICU at your hospital, enter the date admitted to the ICU at your hospital
-If the patient had multiple ICU admissions at your hospital during their overall admission for COVID-19, enter the date of the initial ICU admission at your hospital

Admitted to a COVID-specific ICU?

Defined as an ICU where all patients have suspected or confirmed COVID-19

Yes

No

Type of ICU

A non-ICU bed qualifies as a having been "converted" to an ICU bed for surge capacity if any of the following are present:

- a) being treated by an ICU team
- b) receiving invasive mechanical ventilation or ECMO
- c) receiving continuous renal replacement therapy (e.g., CVVH)
- d) receiving vasopressors/inotropes or mechanical cardiac support (e.g., LVAD) in a room where this would traditionally not be permitted

- Medical ICU
- Cardiac ICU
- Surgical/Trauma/Burn ICU
- Neuro ICU
- Non-ICU bed converted into an ICU bed for surge capacity

Highest temperature on ICU Day1

Can enter in either F or C

Units for temperature

- Fahrenheit
- Celsius

Lowest systolic blood pressure on ICU Day1

Irrespective of whether on pressors or not

Highest heart rate on ICU Day1

Highest respiratory rate on ICU Day1

Irrespective of whether on ventilator not

What type of mechanical ventilation/oxygen delivery did the patient require on ICU Day1?

-Invasive mechanical ventilation refers to mechanical ventilation delivered via endotracheal or tracheal tube

-If more than one, select the highest level of support

-If nasal cannula or regular facemask only, select "none of the above"

- Invasive mechanical ventilation
- BiPaP or CPAP
- High-flow nasal cannula or non-rebreather mask
- None of the above

Did the patient have any confirmed or suspected infection(s) on ICU Day1 other than COVID-19?

*Only select bacterial pneumonia if the patient had positive cultures (e.g., sputum or blood), a positive urine antigen for pneumococcus or legionella, or a new infiltrate on chest imaging (CXR or CT) suspected to be separate from COVID-related pneumonia

- Bacterial Pneumonia*
- Viral respiratory infection**
- Urosepsis
- Biliary sepsis
- Cellulitis
- Bacteremia or endocarditis***
- Other
- None of the above

**Examples of viral respiratory infections include influenza, parainfluenza, and RSV

***Only if confirmed by blood cultures and/or cardiac imaging

Enter the viral respiratory infection

Enter the other infection

Enter the number of antibiotics the patient was treated with on ICU Day1

-Do not include antivirals, antifungals, or antimalarials (e.g., chloroquine or hydroxychloroquine).

-Commonly used antibiotics include vancomycin, piperacillin-tazobactam (Zosyn), azithromycin, cephalosporins, quinolones, etc.

0
 1
 2
 3
 4
 5 or more

Was the patient treated with oseltamivir (Tamiflu) on ICU Day1?

Includes patients who were started on Tamiflu PRIOR to ICU Day1, as long as they continued to receive it on ICU Day1

Yes
 No

Enter procalcitonin level (ng/ml) if checked within 24h before or 24h after admission to the ICU

-If more than one available, enter the value closest to ICU admission

-If none available, enter "N/A"

-If < assay, enter 0

-If > assay, enter the upper limit of the assay and do not include the ">" symbol

Enter CPK level (U/L) if checked within 24h before or 24h after admission to the ICU

-If more than one available, enter the value closest to ICU admission

-If none available, enter "N/A"

-If < assay, enter 0

-If > assay, enter the upper limit of the assay

Enter sodium level (mEq/L) if checked within 24h before or 24h after admission to the ICU

-If more than one available, enter the value closest to ICU admission

-If none available, enter "N/A"

Altered mental status on ICU Day1?

For patients who are intubated/sedated, use the most recent exam prior to intubation/sedation

Yes
 No
 Data not available

Additional notes (if any)

Longitudinal Data On Labs And Physiologic Parameters in the First 14 Days following ICU Admission

The questions below refer to the first 14 days following ICU admission. Even if the patient was in the ICU for less than 14 days and was transferred to the hospital floor, continue to enter data for the full 14 days or until discharged from the hospital or death (whichever occurs first). We highly recommend waiting to fill out this instrument (and future instruments) until the first of death, hospital discharge, at least 14 days of survival data is available.

Each ICU Day is a discrete 24h period, from midnight to midnight. ICU Day1 refers to the 24h period from the midnight PRIOR to ICU admission to the midnight AFTER ICU admission. For example, if a patient was admitted to an ICU at 10pm, 22 of the 24 hours for ICU Day1 would actually be from prior to arrival in the ICU. See timeline in the "REDCap instructions" PDF for additional details.

If more than one lab value is available on any given day, use the first one. If there is no value available that day, leave the field blank (i.e., do NOT write, "N/A" here)

-If a lab is below assay (e.g., Troponin < 6), enter 0

-If a lab is above assay (e.g., IL-6 > 3,000), enter the upper limit of the assay (e.g., "3,000")

-Do not include any units or "%" in these fields; only enter numbers

-If both an arterial and venous lactate are available on the same day, enter the arterial value, otherwise enter the venous value

Please pay close attention to the units, particularly for CRP, D-dimer, and troponin, and convert to the units we are using if needed. For example, if your lab reports troponin in ng/ml, multiply the values by 1,000 to convert to ng/L

Labs

Physiologic parameters

Labs 2

Physiologic parameters 2

Mechanical support dates

	ICU Day1	Day2	Day3	Day4	Day5	Day6	Day7
Invasive Mechanical Ventilation*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECMO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Renal Replacement Therapy (RRT)**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical Cardiac Support***	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Check the box if the patient received any of the associated therapies on that day

*If a patient received any invasive mechanical ventilation that day, check the box, even if they were extubated that day.

**For patients who received RRT intermittently (e.g., every other day), continue to check the box as long as they are RRT-dependent, even if they didn't actually receive RRT on that specific day

***Includes Impella, Intra-aortic balloon pump (IABP), LVAD, RVAD

Mechanical support dates 2

	Day8	Day9	Day10	Day11	Day12	Day13	Day14
Invasive Mechanical Ventilation*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECMO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Renal Replacement Therapy (RRT)**	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical Cardiac Support***	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Type of ECMO
 Venovenous (V-V)
 Venovenous (V-A)
 Venovenous-venous (V-A-V)

Was the ECMO successfully decannulated (removed) during the first 14 days following ICU admission? If the ECMO was decannulated for palliative purposes, select "no"
 Yes
 No

Date ECMO was decannulated _____

Initial mode of RRT
 Continuous (CRRT) - 24h/day
 Continuous (CRRT) - 12h/day or less
 Intermittent hemodialysis
 Peritoneal dialysis
 Other

Type of mechanical cardiac support (select all that apply)
 Impella
 Intra-aortic balloon pump (IABP)
 LVAD
 RVAD
 Other

Enter other mechanical cardiac support _____

Mech support dates 1 _____

Mech support dates 2 _____

Mech support dates 3 _____

Mech support dates 4 _____

Mech support dates 5 _____

Mech support dates 6 _____

Mech support dates 7 _____

Mech support dates 8

Mech support dates 9

Mech support dates 10

Mech support dates 11

Mech support dates 12

Mech support dates 13

Mech support dates 14

Labs Date Day 1

Labs Date Day 2

Labs Date Day 3

Labs Date Day 4

Labs Date Day 5

Labs Date Day 6

Labs Date Day 7

Labs Date Day 8

Labs Date Day 9

Labs Date Day 10

Labs Date Day 11

Labs Date Day 12

Labs Date Day 13

Labs Date Day 14

White cell count day 1

White cell count day 2

White cell count day 3

White cell count day 4

White cell count day 5

White cell count day 6

White cell count day 7

White cell count day 8

White cell count day 9

White cell count day 10

White cell count day 11

White cell count day 12

White cell count day 13

White cell count day 14

Lymphocyte percentage day 1

Lymphocyte percentage day 2

Lymphocyte percentage day 3

Lymphocyte percentage day 4

Lymphocyte percentage day 5

Lymphocyte percentage day 6

Lymphocyte percentage day 7

Lymphocyte percentage day 8

Lymphocyte percentage day 9

Lymphocyte percentage day 10

Lymphocyte percentage day 11

Lymphocyte percentage day 12

Lymphocyte percentage day 13

Lymphocyte percentage day 14

Hemoglobin Day 1

Hemoglobin Day 2

Hemoglobin Day 3

Hemoglobin Day 4

Hemoglobin Day 5

Hemoglobin Day 6

Hemoglobin Day 7

Hemoglobin Day 8

Hemoglobin Day 9

Hemoglobin Day 10

Hemoglobin Day 11

Hemoglobin Day 12

Hemoglobin Day 13

Hemoglobin Day 14

Platelet count day 1

Platelet count day 2

Platelet count day 3

Platelet count day 4

Platelet count day 5

Platelet count day 6

Platelet count day 7

Platelet count day 8

Platelet count day 9

Platelet count day 10

Platelet count day 11

Platelet count day 12

Platelet count day 13

Platelet count day 14

Creatinine Day 1

Creatinine day 2

Creatinine day 3

Creatinine day 4

Creatinine day 5

Creatinine day 6

Creatinine day 7

Creatinine day 8

Creatinine day 9

Creatinine day 10

Creatinine day 11

Creatinine day 12

Creatinine day 13

Creatinine day 14

Albumin day 1

Albumin day 2

Albumin day 3

Albumin day 4

Albumin day 5

Albumin day 6

Albumin day 7

Albumin day 8

Albumin day 9

Albumin day 10

Albumin day 11

Albumin day 12

Albumin day 13

Albumin day 14

AST day 1

AST day 2

AST day 3

AST day 4

AST day 5

AST day 6

AST day 7

AST day 8

AST day 9

AST day 10

AST day 11

AST day 12

AST day 13

AST day 14

ALT day 1

ALT day 2

ALT day 3

ALT day 4

ALT day 5

ALT day 6

ALT day 7

ALT day 8

ALT day 9

ALT day 10

ALT day 11

ALT day 12

ALT day 13

ALT day 14

Total bilirubin day 1

Total bilirubin day 2

Total bilirubin day 3

Total bilirubin day 4

Total bilirubin day 5

Total bilirubin day 6

Total bilirubin day 7

Total bilirubin day 8

Total bilirubin day 9

Total bilirubin day 10

Total bilirubin day 11

Total bilirubin day 12

Total bilirubin day 13

Total bilirubin day 14

Lactate day 1

Lactate day 2

Lactate day 3

Lactate day 4

Lactate day 5

Lactate day 6

Lactate day 7

Lactate day 8

Lactate day 9

Lactate day 10

Lactate day 11

Lactate day 12

Lactate day 13

Lactate day 14

CRP day 1

CRP day 2

CRP day 3

CRP day 4

CRP day 5

CRP day 6

CRP day 7

CRP day 8

CRP day 9

CRP day 10

CRP day 11

CRP day 12

CRP day 13

CRP day 14

IL-6 day 1

IL-6 day 2

IL-6 day 3

IL-6 day 4

IL-6 day 5

IL-6 day 6

IL-6 day 7

IL-6 day 8

IL-6 day 9

IL-6 day 10

IL-6 day 11

IL-6 day 12

IL-6 day 13

IL-6 day 14

Arterial pH day 1

Arterial pH day 2

Arterial pH day 3

Arterial pH day 4

Arterial pH day 5

Arterial pH day 6

Arterial pH day 7

Arterial pH day 8

Arterial pH day 9

Arterial pH day 10

Arterial pH day 11

Arterial pH day 12

Arterial pH day 13

Arterial pH day 14

Fibrinogen day 1

Fibrinogen day 2

Fibrinogen day 3

Fibrinogen day 4

Fibrinogen day 5

Fibrinogen day 6

Fibrinogen day 7

Fibrinogen day 8

Fibrinogen day 9

Fibrinogen day 10

Fibrinogen day 11

Fibrinogen day 12

Fibrinogen day 13

Fibrinogen day 14

D dimer day 1

D dimer day 2

D dimer day 3

D dimer day 4

D dimer day 5

D dimer day 6

D dimer day 7

D dimer day 8

D dimer day 9

D dimer day 10

D dimer day 11

D dimer day 12

D dimer day 13

D dimer day 14

Ferritin Day 1

Ferritin Day 2

Ferritin Day 3

Ferritin Day 4

Ferritin Day 5

Ferritin Day 6

Ferritin Day 7

Ferritin Day 8

Ferritin Day 9

Ferritin Day 10

Ferritin Day 11

Ferritin Day 12

Ferritin Day 13

Ferritin Day 14

Troponin T day 1

Troponin T day 2

Troponin T day 3

Troponin T day 4

Troponin T day 5

Troponin T day 6

Troponin T day 7

Troponin T day 8

Troponin T day 9

Troponin T day 10

Troponin T day 11

Troponin T day 12

Troponin T day 13

Troponin T day 14

Troponin I day 1

Troponin I day 2

Troponin I day 3

Troponin I day 4

Troponin I day 5

Troponin I day 6

Troponin I day 7

Troponin I day 8

Troponin I day 9

Troponin I day 10

Troponin I day 11

Troponin I day 12

Troponin I day 13

Troponin I day 14

PaO2 day 1*

PaO2 day 2*

PaO2 day 3*

PaO2 day 4*

PaO2 day 5*

PaO2 day 6*

PaO2 day 7*

PaO2 day 8*

PaO2 day 9*

PaO2 day 10*

PaO2 day 11*

PaO2 day 12*

PaO2 day 13*

PaO2 day 14*

FiO2 day 1

FiO2 day 2

FiO2 day 3

FiO2 day 4

FiO2 day 5

FiO2 day 6

FiO2 day 7

FiO2 day 8

FiO2 day 9

FiO2 day 10

FiO2 day 11

FiO2 day 12

FiO2 day 13

FiO2 day 14

PEEP day 1

PEEP day 2

PEEP day 3

PEEP day 4

PEEP day 5

PEEP day 6

PEEP day 7

PEEP day 8

PEEP day 9

PEEP day 10

PEEP day 11

PEEP day 12

PEEP day 13

PEEP day 14

24h Urine Output Day 1

24h Urine Output Day 2

24h Urine Output Day 3

24h Urine Output Day 4

24h Urine Output Day 5

24h Urine Output Day 6

24h Urine Output Day 7

24h Urine Output Day 8

24h Urine Output Day 9

24h Urine Output Day 10

24h Urine Output Day 11

24h Urine Output Day 12

24h Urine Output Day 13

24h Urine Output Day 14

Max #vasopressors/inotropes day 1

Max #vasopressors/inotropes day 2

Max #vasopressors/inotropes day 3

Max #vasopressors/inotropes day 4

Max #vasopressors/inotropes day 5

Max #vasopressors/inotropes day 6

Max #vasopressors/inotropes day 7

Max #vasopressors/inotropes day 8

Max #vasopressors/inotropes day 9

Max #vasopressors/inotropes day 10

Max #vasopressors/inotropes day 11

Max #vasopressors/inotropes day 12

Max #vasopressors/inotropes day 13

Max #vasopressors/inotropes day 14

Additional Notes (if any)

Acute Organ Injury in the First 14 Days Following ICU Admission

The questions below refer to the first 14 days following ICU admission. Even if the patient was in the ICU for less than 14 days and was transferred to the hospital floor, continue to enter data for the full 14 days or until discharged from the hospital (whichever occurs first)

Each of the acute organ injuries in this section is defined based on clinical suspicion by the treating provider(s)

Did ARDS occur within the first 14 days following ICU admission?
ARDS defined as per chart review/progress notes

- Yes
 No

Date ARDS was first confirmed/suspected
Do not enter any dates prior to ICU Day1; if ARDS started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

New congestive heart failure (CHF) in the first 14 days following ICU admission?

- Yes
 No
 N/A (CHF present at baseline)

Enter the left ventricular ejection fraction at the time of the new heart failure
-Enter as an integer (0-100) and without % sign
-If unavailable, enter, "N/A"

Date CHF was first confirmed/suspected
Do not enter any dates prior to ICU Day1; if CHF started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Arrhythmia during the first 14 days following ICU admission?
Do not enter any dates prior to ICU Day1; if arrhythmia started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

- Atrial fibrillation/flutter
 Ventricular tachycardia (VT)
 Ventricular fibrillation
 None of the above

Sustained or non-sustained VT?
Sustained is defined as requiring shocks or anti-arrhythmic therapy

- Sustained
 Non-sustained

Date atrial fibrillation/flutter first developed
Do not enter any dates prior to ICU Day1; if atrial fibrillation/flutter started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Date VT first developed

Do not enter any dates prior to ICU Day1; if VT started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Date ventricular fibrillation first developed

Do not enter any dates prior to ICU Day1; if ventricular fibrillation started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

New myocarditis and/or pericarditis in the first 14 days following ICU admission?
Defined as per chart review

- Myocarditis only
 Pericarditis only
 Both
 Neither

Date myocarditis or pericarditis first developed

Do not enter any dates prior to ICU Day1; if myocarditis or pericarditis started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Cardiac arrest in the first 14 days following ICU admission?

- Yes
 No

Was CPR administered?

*Some hospitals have prohibited CPR in COVID patients to protect healthcare workers

- Yes
 No because they were DNR
 No because of hospital policy*

Date of first cardiac arrest

New infection in the first 14 days following ICU admission?

Defined as a suspected or confirmed new infection other than COVID-19 that developed after admission to the ICU

- Yes
 No

Should be primarily based on culture data (e.g., sputum, blood, urine, and stool), though other infections can also be included (e.g., cellulitis, abscess) if there was a strong clinical suspicion, even in the absence of positive cultures

Do not enter any dates prior to ICU Day1; if the new infection started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

What infection(s)?

- Pneumonia (including ventilator-associated pneumonia)
 Urosepsis
 Biliary sepsis
 Bacteremia
 Other

Enter other infection

Date pneumonia developed

Do not enter any dates prior to ICU Day1; if pneumonia started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Date urosepsis developed

Do not enter any dates prior to ICU Day1; if urosepsis started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Date biliary sepsis developed

Do not enter any dates prior to ICU Day1; if biliary sepsis started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Date bacteremia developed

Do not enter any dates prior to ICU Day1; if bacteremia started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Date other infection developed

Do not enter any dates prior to ICU Day1; if other infection started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

New thromboembolic event in the first 14 days following ICU admission (select all that apply)

- Deep venous thrombosis (DVT)
 Pulmonary embolism (PE)
 Stroke
 Heparin-induced thrombocytopenia (H.I.T.)
 Other thromboembolic event
 None of the above

Enter other thromboembolic event

Date of DVT

Do not enter any dates prior to ICU Day1; if the DVT started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

DVT confirmed on diagnostic imaging (e.g., ultrasound)?

- Yes
 No

Location of the DVT (select all that apply)

Lower extremity PROXIMAL refers to the thigh/knee (e.g., inferior vena cava, iliac, common femoral/superficial femoral/deep femoral, or popliteal veins)

Lower extremity DISTAL refers to the calf (e.g., peroneal, tibial, gastrocnemius, soleal, calf perforator veins)

Upper extremity or neck includes the internal jugular and subclavian veins

Other includes abdominal vein thrombosis, cerebral venous sinus thrombosis, and others

Superficial Veins (if in isolation, enter as "other thrombosis" not DVT)

Great saphenous vein Small saphenous vein Reticular veins

- Lower extremity PROXIMAL
 Lower extremity DISTAL
 Upper extremity or neck
 Other

Date of Pulmonary Embolism (PE)

Do not enter any dates prior to ICU Day1; if the PE started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Was the pulmonary embolism confirmed on imaging?

- Yes - by CT scan
 Yes - by V/Q scan (or other modality)
 No, the diagnosis was based on clinical suspicion only

What was the location of the pulmonary embolism?

- Proximal (lobar or segmental pulmonary vessels)
 Distal (subsegmental pulmonary vessels)
 Both proximal and distal

Date of stroke

Do not enter any dates prior to ICU Day1; if the stroke started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Was the stroke confirmed on brain imaging?

- Yes
 No

Date HIT developed

Do not enter any dates prior to ICU Day1; if the HIT started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Thromboembolic event(s) in association with HIT?

- Yes
 No

Enter the thromboembolic event(s) in association with HIT?

Date of other thromboembolic event
Do not enter any dates prior to ICU Day1; if the other thromboembolic event started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

New coagulopathy in the first 14 days following ICU admission
-Defined as INR>2 or PTT>40 in the absence of therapeutic anticoagulation
-If the patient was receiving therapeutic anticoagulation, select "no"

Yes
 No

Date coagulopathy developed
Do not enter any dates prior to ICU Day1; if the coagulopathy started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Peak PTT (seconds) in the absence of therapeutic anticoagulation
If none available, enter "N/A"

Upper reference limit of normal for PTT (seconds) at your hospital's lab

Peak INR in the absence of therapeutic anticoagulation
If none available, enter "N/A"

New disseminated intravascular coagulation (DIC) in the first 14 days following ICU admission?

Yes
 No

Date DIC developed
Do not enter any dates prior to ICU Day1; if the DIC started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

New major bleed in the first 14 days following ICU admission?
 Defined as bleeding in a critical area or organ (e.g., intracranial, retroperitoneal, pericardial, or intramuscular bleeding with compartment syndrome) or bleeding requiring a procedural intervention (e.g., EGD or IR embolization). "Requiring" a procedural intervention could include situations where an intervention would regularly be performed, but was not actually performed because the patient was too unstable, or because of logistical/other concerns related to COVID-19.

- Yes
 No

Blood transfusion alone does not qualify as an intervention.

Date major bleed occurred
 Do not enter any dates prior to ICU Day1; if the major bleed started prior to ICU Day1 and was still present on ICU Day1, enter the ICU Day1 date

Did the major bleed occur in the presence of therapeutic anticoagulation?
 Do not include DVT prophylaxis (e.g., unfractionated heparin 5,000 units SC or lovenox 30-40 mg SC)

- Yes
 No

Did the major bleed occur in the presence of prophylactic- or intermediate-dose anticoagulation received within 24 hours prior to the bleed?

- Yes - prophylactic dose anticoagulation
 Yes - intermediate-dose anticoagulation
 No

Prophylactic dose anticoagulation includes subcutaneous unfractionated heparin, enoxaparin (LMWH) 30-40mg once daily, or dalteparin 5,000 units once daily
 Intermediate-dose anticoagulation refers to enoxaparin (LMWH) 30-40 mg twice daily or dalteparin 5,000 units twice daily

Did the major bleed occur in the presence of any of the following antiplatelet agents received within 24 hours prior to the bleed? (select all that apply)

- Aspirin
 Clopidogrel (Plavix)
 Prasugrel
 Ticagrelor
 Ticlopidine
 None

Location of major bleeding event(s) (select all that apply)

- Bronchopulmonary
 Pleural
 Pericardial
 Peritoneal
 Retroperitoneal
 Central nervous system
 Gastrointestinal
 Genitourinary
 Musculoskeletal and soft tissue
 Other

Enter the other location of the major bleed

PT (seconds) within 24 hours prior to the major bleed
-If more than one value is available within 24 hours
prior to the bleed, use the value closest to and
prior to the bleed
-If unavailable, enter, "N/A"

PTT (seconds) within 24 hours prior to the major
bleed
-If more than one value is available within 24 hours
prior to the bleed, use the value closest to and
prior to the bleed
-If unavailable, enter, "N/A"

INR within 24 hours prior to the major bleed
-If more than one value is available within 24 hours
prior to the bleed, use the value closest to and
prior to the bleed
-If unavailable, enter, "N/A"

Did the patient require transfusion of packed red
blood cells (pRBCs) for the major bleed?
-Enter the total number of units of pRBCs received
within 48 hours following the bleed
-If no pRBCs were transfused, enter "0"

Was a procedure or invasive intervention required to
stop the major bleed? (e.g., endoscopy,
interventional radiology, or surgery)?

Yes
 No

Was the major bleed clearly fatal, an important
contributor to death, or a factor in the decision to
withdraw care?

Yes
 No

Additional Notes (if any)

Medications and Clinical Trials

The questions below refer to the first 14 days following ICU admission. Even if the patient was in the ICU for less than 14 days and was transferred to the hospital floor, continue to enter data for the full 14 days or until discharged from the hospital (whichever occurs first)

Antibiotics, antivirals, and antimalarials received at any time within 14 days following ICU admission (check all that apply)

-Only include meds received as part of a clinical trial if the patient definitely received the med (e.g., if they were in an open-label trial of chloroquine, or even a randomized double-blind trial of chloroquine at dose X versus chloroquine at dose Y, select chloroquine; however, if the patient was in a randomized, double-blind study of chloroquine versus placebo, do not select chloroquine)

- Chloroquine
- Hydroxychloroquine
- Azithromycin
- Remdesivir
- Ribavirin
- Lopinavir/ritonavir (Kaletra)
- Other antiviral*
- None of the above

*This only refers to other antivirals, not other antibiotics. We are not collecting data on antibiotics other than the ones on the checklist (chloroquine, hydroxychloroquine, and azithromycin)

Enter the date chloroquine was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date hydroxychloroquine was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date azithromycin was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date remdesivir was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date ribavirin was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date lopinavir/ritonavir (Kaletra) was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the other antiviral

Enter the date the other antiviral was initiated
If initiated prior to ICU Day1, enter the date for
ICU Day1

Anti-inflammatory medications received at any time
within 14 days following ICU admission (check all
that apply)
Include meds received as part of a clinical trial as
long as the patient definitely received the med
(i.e., do not include drug "X" if the patient was in
a randomized, double-blind study of drug "X" versus
placebo)

- Corticosteroid
- NSAID
- Aspirin
- Statin
- Tocilizumab (Actemra)
- Other IL-6 antagonist
- Other anti-inflammatory
- Vitamin C (IV or PO)
- None of the above

Do not include acetaminophen (Tylenol) as an "other
anti-inflammatory" agent

Enter the name and initial cumulative daily dose of
the corticosteroid
For example, if a patient was started on
methylprednisolone 125mg twice per day, enter,
"methylprednisolone 250 mg"

Enter the date the corticosteroid was initiated
If initiated prior to ICU Day1, enter the date for
ICU Day1

Enter the date the NSAID was initiated
If initiated prior to ICU Day1, enter the date for
ICU Day1

Enter the date the aspirin was initiated
If initiated prior to ICU Day1, enter the date for
ICU Day1

Enter the date the statin was initiated
If initiated prior to ICU Day1, enter the date for
ICU Day1

Enter the date the tocilizumab was initiated
If initiated prior to ICU Day1, enter the date for
ICU Day1

Enter the date the other IL-6 antagonist was
initiated
If initiated prior to ICU Day1, enter the date for
ICU Day1

Enter the other anti-inflammatory medication

Enter the date the other anti-inflammatory medication was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date the vitamin C was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

ARDS/hypoxemia-specific medications/interventions received at any time within 14 days following ICU admission (check all that apply)

*Includes cisatracurium (Nimbex) and others, but do not include short acting paralytics (e.g., rocuronium) used only for induction of intubation

- Neuromuscular blockade*
 Inhaled epoprostenol (Veletri or Flolan)
 Inhaled nitric oxide (iNO)
 Proned position
 None of the above

Enter the date the neuromuscular blockade was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date inhaled epoprostenol (Veletri or Flolan) was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date the inhaled nitric oxide (iNO) was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date the patient was first proned

Other medications received at any time within 14 days following ICU admission (check all that apply)
Include meds received as part of a clinical trial as long as the patient definitely received the med

- Convalescent serum
 ACE-I*
 ARB*
 tissue Plasminogen Activator (tPA)**
 None of the above

*ACE-Is include lisinopril, fosinopril, captopril, and others

*ARBs include losartan, valsartan, irbesartan, and others

**Systemic tPA only (does not apply to tPA infused into indwelling catheters or locally delivered intra-arterial tPA used for stroke)

Enter the date the convalescent serum was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date the ACE-I was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date the ARB was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Enter the date the tPA was initiated
If initiated prior to ICU Day1, enter the date for ICU Day1

Therapeutic anticoagulation received at any time within 14 days following ICU admission?
Do not include DVT prophylaxis (e.g., unfractionated heparin 5,000 units SC or lovenox 30-40 mg SC)

- Yes
 No

In patients receiving anticoagulation prior to ICU or hospital admission, continuation of this anticoagulation or conversion to an alternative therapeutic type means the answer to this question is, "Yes", and the date entered for anticoagulation initiation (for the following question) should be the date of ICU admission. Therapeutic anticoagulation includes any of the following categories:

1) Continuous drips (infusions) of heparin, argatroban, or bivalirudin

2) Subcutaneous regimens:

Enoxaparin (Lovenox) 1mg/kg twice per day
Enoxaparin (Lovenox) 1.5mg/kg once per day
Dalteparin (Fragmin) 150-200 units/kg once per day
Dalteparin (Fragmin) 100 units/kg twice per day
Fondaparinux (Aristra) at doses of 5mg or more daily

3) Oral anticoagulants: warfarin (Coumadin), apixaban (Eliquis), rivaroxaban (Xarelto), edoxaban, or dabigatran (Pradaxa)

Anticoagulation type

- Heparin drip
 Therapeutic enoxaparin (Lovenox)
 Bivalirudin (Angiomax)
 Argatroban
 Other

Enter the date therapeutic anticoagulation was started
If already on therapeutic anticoagulation on arrival to the ICU, enter the date of ICU admission here

Enter the indication(s) for anticoagulation (select all that apply)

- Atrial fibrillation/flutter
 Acute coronary syndrome/myocardial infarction
 DVT/PE
 For extracorporeal circuit (e.g., ECMO or RRT)
 Hypercoagulable state associated with COVID-19
 Other

Enrolled in a clinical trial for COVID-19?
Includes not only clinical trials of medications but any clinical trial, including devices or other interventions

- Yes
 No

Enter the ClinicalTrials.gov Identifier, if known (otherwise enter, "N/A")

-The identifier always begins with "NCT", followed by several digits (e.g., NCT12345678). Enter the entire identifier, including the "NCT". The identifier can be easily found at the top of the ClinicalTrials.gov website for the trial
-FYI, the ClinicalTrials.gov webpage for the trial is a good resource to answer the subsequent questions about study design

Was the trial single-arm?
One intervention only, with no active comparator group

- Yes
 No

What intervention did the patient receive?
Be as specific as possible (e.g., drug X at X mg BID for X days)

What intervention(s) did the patient receive? Or, if unknown, what interventions were being tested?
-Be as specific as possible (e.g., drug X at X mg BID for X days versus drug Y; or drug X versus placebo)
-Include details on study design, including whether the study was randomized, double-blinded, and placebo-controlled

Was the patient enrolled in a second clinical trial?

- Yes
 No

Enter the details of the second clinical trial
Include if the trial was single- versus double-arm, if it was randomized, double-blinded, and/or placebo-controlled, and what the intervention(s) were

Additional notes (if any)

Do not use this space to write about meds that were not asked about above

Mortality and Length of Stay

Discharged from the ICU?

-If the patient died in the ICU, select "no"

-Enter the date the patient was first discharged from the ICU, even if they were subsequently readmitted back to the ICU

- Yes
 No
 N/A because the patient was in a non-ICU bed converted into an ICU bed for surge capacity, and these patients typically do not get transferred. They either die or are discharged home directly from the "non-ICU" bed

Date of discharge from the ICU

Hospital mortality status

- Survived and discharged from the hospital
 Died during hospitalization
 Patient is still hospitalized at the time of data entry

Date of death

Cause(s) of death (select all that apply)

- ARDS/respiratory failure
 Heart failure
 Septic shock
 Kidney failure
 Liver failure
 Other

Enter the other cause(s) of death

-Do not simply write, "cardiopulmonary arrest" or "Comfort Measures Only". Rather, provide the immediate underlying cause(s) of death in addition to those already listed above (e.g., pulmonary embolism, stroke, etc.)

-Would also mention here if the patient needed life-sustaining therapy (e.g., mechanical ventilation, RRT) but that it was unavailable due to shortages

Date of last follow-up

Date discharged from the hospital

Additional Notes (if any)

Do NOT use this space to write about the cause of death. Cause of death should be provided above. Also, do not provide details about DNR/DNI status, comfort measures only, family meetings, etc.

Additional Lab Data

The questions below refer to the first 14 days following ICU admission. Even if the patient was in the ICU for less than 14 days and was transferred to the hospital floor, continue to enter data for the full 14 days or until discharged from the hospital (whichever occurs first)

Blood Type

- A+
- A-
- B+
- B-
- AB+
- AB-
- O+
- O-
- Unknown

Serum creatinine (mg/dl) on hospital discharge
If none available on the day of hospital discharge,
enter the value closest to hospital discharge

Dialysis-dependent on hospital discharge?

- Yes - from AKI
- Yes - from ESRD
- No

Did the patient have a kidney biopsy performed?

- Yes
- No

Copy and paste the entire biopsy report
Be sure to remove identifiers, like name and MRN

Additional Data for ECMO Patients

This instrument is only meant for patients who initiated ECMO in the first 14 days following ICU admission. If the patient did not initiate ECMO in the first 14 days, no questions will appear below, and you may skip this section.

Was sodium bicarbonate administered intravenously (either as a drip or bolus infusion) within 24 hours prior to ECMO cannulation? Yes No

History of CNS dysfunction within 30 days prior to ECMO cannulation? Yes No
Defined as neurotrauma, stroke, encephalopathy/altered mental status, or seizure

Was peak inspiratory pressure on the ventilator ≥ 42 cm H₂O at any time during the 48 hours prior to ECMO cannulation? Yes No

Select the mode of mechanical ventilation documented closest to, but no more than 24 hours prior to ECMO cannulation Volume control Pressure control SIMV APRV HFOV

Enter the tidal volume (mL) immediately prior to ECMO cannulation _____

Enter the respiratory rate (per minute) immediately prior to ECMO cannulation _____
Enter the respiratory rate set on the mechanical ventilator, which may not necessarily be the same as the patient's actual respiratory rate _____

Enter the plateau pressure (cm H₂O) immediately prior to ECMO cannulation _____
If not available, enter "N/A"

What was the PCO₂ on the arterial blood gas immediately prior to ECMO cannulation? _____
-Do not enter values from more than 24 hours prior to ECMO cannulation
-If none available, enter "N/A"

Select the earliest documented mode of mechanical ventilation on postoperative day 1 after ECMO cannulation

Postoperative day 1 is defined as the next day (starting at midnight) after ECMO cannulation

- Volume control
 Pressure control
 SIMV
 APRV
 HFOV

Enter the earliest documented tidal volume (mL) on postoperative day 1 after ECMO cannulation

Postoperative day 1 is defined as the next day (starting at midnight) after ECMO cannulation

Enter the earliest documented respiratory rate (per minute) on postoperative day 1 after ECMO cannulation

-Postoperative day 1 is defined as the next day (starting at midnight) after ECMO cannulation

-Enter the respiratory rate set on the mechanical ventilator, which not may not necessarily be the same as the patient's actual respiratory rate

Enter the earliest documented plateau pressure (cm H2O) on postoperative day 1 after ECMO cannulation

-Postoperative day 1 is defined as the next day (starting at midnight) after ECMO cannulation

-If not available, enter "N/A"

What was the PCO2 on the first arterial blood gas on postoperative day 1 after ECMO cannulation?

-Postoperative day 1 is defined as the next day (starting at midnight) after ECMO cannulation

-If none available, enter "N/A"

Enter the earliest documented ECMO circuit blood flow (in liters per minute, LPM) on postoperative day 1 after ECMO cannulation

-Postoperative day 1 is defined as the next day (starting at midnight) after ECMO cannulation

-If not available, enter "N/A"

Was the ECMO successfully decannulated (removed) during the first 28 days following ICU admission?
If the ECMO was decannulated for palliative purposes, select "no"

- Yes
 No

Date ECMO was decannulated

Successfully liberated from ventilator? Yes
Defined as off the ventilator for at least 24 hours. No
If palliatively extubated, select "no"

Date liberated from ventilator _____

Did the patient develop a pneumothorax requiring chest tube placement at anytime following ECMO cannulation? Yes
 No

Date of pneumothorax requiring chest tube placement _____

New thromboembolic event in the 15-28 days following ICU admission (select all that apply)
-Note, this question is limited to days 15-28 following ICU admission because the same question has already been asked on an earlier instrument for days 1-14

- Deep venous thrombosis (DVT)
- Pulmonary embolism (PE)
- Stroke
- Heparin-induced thrombocytopenia (H.I.T.)
- Other thromboembolic event
- None of the above

Date of DVT _____

Date of pulmonary embolism _____

Date of stroke _____

Date of Heparin-induced thrombocytopenia (H.I.T.) _____

Date of other thromboembolic event _____

Enter the other thromboembolic event _____

New major bleed in the first 15-28 days following ICU admission?

- Yes
 No

-Note, this question is limited to days 15-28 following ICU admission because the same question has already been asked on an earlier instrument for days 1-14.

Defined as bleeding in a critical area or organ (e.g., intracranial, retroperitoneal, pericardial, or intramuscular bleeding with compartment syndrome) or bleeding requiring a procedural intervention (e.g., EGD or IR embolization). "Requiring" a procedural intervention could include situations where an intervention would regularly be performed, but was not actually performed because the patient was too unstable, or because of logistical/other concerns related to COVID-19.

Blood transfusion alone does not qualify as an intervention.

Date major bleed occurred

Location of major bleeding event(s) (select all that apply)

- Bronchopulmonary
 Pleural
 Pericardial
 Peritoneal
 Retroperitoneal
 Central nervous system
 Gastrointestinal
 Genitourinary
 Musculoskeletal and soft tissue
 Other

New infection on days 15 to 28 following ICU admission?

- Yes
 No

-Note, this question is limited to days 15-28 following ICU admission because the same question has already been asked on an earlier instrument for days 1-14.

Defined as a suspected or confirmed new infection other than COVID-19.

Should be primarily based on culture data (e.g., sputum, blood, urine, and stool), though other infections can also be included (e.g., cellulitis, abscess) if there was a strong clinical suspicion, even in the absence of positive cultures

Date new infection occurred

What infection(s)?

- Pneumonia (including ventilator-associated pneumonia)
 Urosepsis
 Biliary sepsis
 Bacteremia
 Other

Requirement for new renal replacement therapy (dialysis) at any time on days 15-28 following ICU admission?

- Yes
 No

-Note, this question is limited to days 15-28 following ICU admission because the same question has already been asked on an earlier instrument for days 1-14.

-Only answer "yes" if the patient required new renal replacement therapy on any of days 15-28 and did NOT require it on days 1-14.

Date renal replacement therapy initiated
