DESIGN OF THIS CASE RECORD FORM (CRF)
This CRF is divided into a “CORE” form and a “DAILY” form for daily laboratory and clinical data.

Complete the CORE CRF + complete the DAILY CRF on the first day of hospital admission and daily up to discharge or death.

ADMINISTRATION GUIDANCE

- The CRF is designed to collect data obtained through examination, interview and review of hospital notes for the period from hospital admission to discharge, transfer, death, or continued hospitalization without possibility of continued data collection. Data may be collected retrospectively if the patient is enrolled after the admission date.

- Participant Identification Numbers consist of a 3 digit site code and a 4 digit participant number. You can obtain a site code and registration on the data management system by contacting ncov@isaric.org. Participant numbers should be assigned sequentially for each site beginning with 0001. In the case of a single site recruiting participants on different wards, or where it is otherwise difficult to assign sequential numbers, it is acceptable to assign numbers in blocks or incorporating alpha characters. E.g. Ward X will assign numbers from 0001 or A001 onwards and Ward Y will assign numbers from 5001 or B001 onwards. Enter the Participant Identification Number at the top of every page.

- Data are entered on the central electronic REDCap database at https://ncov.medsci.ox.ac.uk or to your site/network’s independent database. Printed paper CRFs may be used for later transfer of the data onto the electronic database.

- In the case of a participant transferring between sites, it is preferred to maintain the same Participant Identification Number across the sites. When this is not possible, space for recording the new number is provided.

- Complete every section. Questions marked ‘If yes, …’ should be left blank when they do not apply (i.e. when the answer is not yes).

- Selections with square boxes (☐) are single selection answers (choose one answer only). Selections with circles (○) are multiple selection answers (choose as many answers as are applicable).

- Mark ‘Unknown’ for any data that are not available, not applicable or unknown.

- Avoid recording data outside of the dedicated areas. Sections are available for recording additional information.

- If using paper CRFs, we recommend writing clearly in ink, using BLOCK-CAPITAL LETTERS.

- Place an (X) when you choose the corresponding answer. To make corrections, strike through (-------) the data you wish to delete and write the correct data above it. Please initial and date all corrections.

- Please keep all the sheets for a single participant together, e.g. with a staple or participant-unique folder.

- Please transfer all paper CRF data to the electronic database. All paper CRFs can be stored by the institution responsible for them. All data should be transferred to the secure electronic database.

- Please enter data on the electronic data capture system at https://ncov.medsci.ox.ac.uk. If your site would like to collect data independently, we are happy to support the establishment of locally hosted databases.

- Please contact us at ncov@isaric.org If we can help with databases, if you have comments and to let us know that you are using the forms.
GENERAL GUIDANCE AND DEFINITIONS

Comorbidities
Comorbidities present before the onset of COVID-19 and are still present. Do not include those that developed following the onset of COVID-19 symptoms. More detailed guidance is provided.

Hospital admission
For patients who were admitted to hospital with COVID-19 or symptoms consistent with possible COVID-19 infection, please enter details for the date of hospital admission. For patients with a clear alternative diagnosis leading to admission who subsequently acquired COVID-19, original admission date should be provided, but all subsequent references to admission should be taken as referring to day COVID-19 was first clinically suspected (or within the first 24 hours after first day of suspected or confirmed COVID-19 infection).

Where a patient was admitted via multiple hospital departments, count admission from the time they came to the first department during the visit that led to their admission (e.g. arrival at the Emergency Department).

Oxygen therapy
Include any form of supplemental oxygen received using any methods.

Invasive ventilation
Please include any mechanical ventilation delivered following intubation or via a tracheostomy. Do not include patients who are breathing independently via a tracheostomy.

Non-invasive ventilation
Please include any positive-pressure treatment given via a tight-fitted mask. This can be continuous positive pressure (CPAP) or bi-level positive pressure (BIPAP).

Renal replacement therapy or dialysis
Please include any form of continuous renal replacement therapy or intermittent haemodialysis.

Worst result
References to ‘worst result’ refer to those furthest from the normal physiological range or laboratory normal range. Results that were rejected by the clinical team (e.g. pulse oximetry on poorly perfused extremities, haemolysed blood samples, contaminated microbiology results) should not be reported.

The following measures should be considered as a single observation and entered together:
Blood gas results: Please report the measures from the blood gas with the lowest pH (most acidotic).
Blood pressure: Please report the systolic and diastolic blood pressure from the observation with the lowest mean arterial pressure (if mean arterial pressure has not been calculated, report the measurement with lowest systolic blood pressure).
Respiratory rate: If both abnormal low and high rate observed, record the abnormally high rate.
1 - CLINICAL INCLUSION CRITERIA
Suspected or proven acute COVID-19 infection as main cause for admission

Select yes if patient has either clinically suspected or laboratory-confirmed SARS-CoV-2/COVID-19 infection.

2 - EPIDEMIOLOGICAL FACTORS
A history of travel to **or residence in** an area with documented cases of COVID-19 infection: This refers to travel to another part of the country or abroad to another country within 14 days before symptoms relating to the current illness began.

If YES, you can optionally complete section 15 to provide additional details.
3 – DEMOGRAPHICS

Enrolment date: Date of enrolment into the study or for in-patients the date COVID-19 was first assessed as suspected or confirmed by a clinician.

Ethnic group:

Please enter all that apply of the following choices which best describe the patient’s ethnicity or major ethnic group at birth. Please exclude nationality as nations often include many different ethnic groups (For example, Singaporean is the nationality but the ethnic grouping within Singapore could be East Asian, South Asian etc.) Cross (X) all that apply. If ‘Other’ write the full name of the ethnic group of the patient. Please do not enter a letter or number corresponding to a local/national ethnicity coding system.

If the patient’s ethnicity is not known, please place a cross (X) in the ‘Unknown’ box.

Post-partum: Defined as within six week of delivery.

If the baby is positive for COVID-19 please complete a separate form for the baby as well.
4 - CO-MORBIDITIES
Please record if any of these comorbidities existed prior to admission.
In general, do not include past comorbidities that are no longer ongoing. Additional details are given below. Where example conditions are given, these are not intended to be exhaustive and other conditions of equivalent severity should be included.

**Chronic cardiac disease (not hypertension)**
Please include any of coronary artery disease, heart failure, congenital heart disease, cardiomyopathy, rheumatic heart disease.

**Chronic pulmonary disease (not asthma)**
Please include any of chronic obstructive pulmonary disease (chronic bronchitis, emphysema), cystic fibrosis, bronchiectasis, interstitial lung disease, pre-existing requirement for long term oxygen therapy. Do not include asthma.

**Asthma (physician diagnosed)**
Clinician-diagnosed asthma

**Chronic Kidney Disease**
Please include any of clinician-diagnosed chronic kidney disease, chronic estimated glomerular filtration rate < 60 mL/min/1.73m$^2$, history of kidney transplantation

**Moderate or severe liver disease**
This is defined as cirrhosis with portal hypertension, with or without bleeding or a history of variceal bleeding.

**Mild liver disease**
This is defined as cirrhosis without portal hypertension or chronic hepatitis

**Chronic neurological disorder**
Please include any of cerebral palsy, multiple sclerosis, motor neurone disease, muscular dystrophy, myasthenia gravis, Parkinson’s disease, stroke, severe learning difficulty

**Malignant neoplasm**
Current solid organ or haematological malignancy. Please do not include malignancies that have been declared ‘cured’ ≥5 years ago with no evidence of ongoing disease. Do not include non-melanoma skin cancers. Do not include benign growths or dysplasia.

**Chronic hematologic disease**
Any long-term disorder of the red or white blood cells, platelets or coagulation system requiring regular or intermittent treatment. Do not include leukaemia, lymphoma or myeloma, which should be entered under malignancy. Do not include iron-deficiency anaemia which is explained by diet or chronic blood loss.

<table>
<thead>
<tr>
<th>Co-morbidities and risk factors – Charlson index will be calculated for each patient at analysis.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic cardiac disease, including congenital heart disease (not hypertension)</td>
</tr>
<tr>
<td>Chronic pulmonary disease (not asthma)</td>
</tr>
<tr>
<td>Asthma (physician diagnosed)</td>
</tr>
<tr>
<td>Chronic kidney disease</td>
</tr>
<tr>
<td>Moderate or severe liver disease</td>
</tr>
<tr>
<td>Mild liver disease</td>
</tr>
<tr>
<td>Chronic neurological disorder</td>
</tr>
<tr>
<td>Malignant neoplasm</td>
</tr>
<tr>
<td>Chronic hematologic disease</td>
</tr>
<tr>
<td>Other relevant risk factor</td>
</tr>
</tbody>
</table>

| Obesity (as defined by clinical staff) |
| Diabetes with complications |
| Rheumatologic disorder |
| Dementia |
| Malnutrition |
| Smoking |
| Never smoked |
| Other relevant factor |

| AIDS / HIV |
| Admit date: | |
| Transfer from other facility: | |
| Travel in the 14 days prior to first symptom onset? | |
| Travel in the 14 days prior to first symptom onset? | |
| Contact with animals, raw meat or insects in the 14 days prior to symptom onset? | |

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
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<td>N/A</td>
</tr>
</tbody>
</table>

nCoV CRF V1.3 24Feb2020_guidance.docx
4 - CO-MORBIDITIES, continued

AIDS/HIV
History of laboratory-confirmed HIV infection.

Obesity (as defined by clinical staff)
This refers to patients for whom an attending clinician has assessed them to be obese - ideally but
not necessarily with an objective measurement of obesity, such as calculation of the body mass
index (BMI of 30 or more) or measurement of abdominal girth.

Diabetes with complications
This is defined as diabetes mellitus (type I or type II) with evidence of one or more organ or tissue
damage due to diabetes mellitus, irrespective of the need for current treatment of diabetes.
Examples of chronic complications include: diabetic cardiomyopathy; diabetic nephropathy;
diabetic neuropathy; diabetic retinopathy; diabetic myonecrosis; peripheral vascular disease;
coronary artery disease; stroke (other examples exist).

Rheumatologic disorder
This is defined as an inflammatory and degenerative diseases of connective tissue structures. It
includes chronic arthropathies and arthritis, connective tissue disorders and vasculitides.

Dementia
This is defined as clinical diagnosis of dementia

Malnutrition
Any clinically identified deficiency in intake, either of total energy or of specific nutrients that led
to a dietetic intervention or referral prior to the onset of COVID-19 symptoms. Do not include
people who needed supplementary nutrition solely due to reduced intake during their current
illness episode.

Smoking
Smoking at least one cigarette, cigar, pipe or equivalent per day before the onset of the current
illness. Do not include smoke-free tobacco products such as chewed tobacco or electronic
nicotine delivery devices.

Other relevant risk factor List any significant risk factors or comorbidities that existed prior to
admission, are ongoing, that are not already listed.
5 - ONSET & ADMISSION

Onset date of first/earliest symptom
Please provide the date of patient reported onset of the first symptom that you clinically believe was related to this episode of COVID-19 infection.

Admission date at this facility
Where a patient was admitted via multiple hospital departments, count admission from the time they came to the first department during the visit that led to their admission (e.g. arrival at the Emergency Department).

Transfer from other facility?
This refers to when the patient was initially receiving care at another clinical or medical facility (hospital) for the same illness and then transferred to the current facility.

If YES: Name of transfer facility
If the patient was transferred from another facility, please enter the name of the facility. This is in case further clinical details about the case are required from that centre.

If YES: Admission date at transfer facility
If the patient was transferred from another facility, please enter the calendar date on which the patient was admitted to the other clinical or medical facility.

If YES-Study Site: Participant ID# at transfer facility
If the patient was transferred from another facility participating in the study, please place a cross (X) in the appropriate box and enter the participant ID assigned at the previous site, if known.
6 - SIGNS AND SYMPTOMS AT HOSPITAL ADMISSION
Please provide details of clinical observations made as close to presentation/admission, or within 24 hours of admission. For observations not made immediately at admission, please record the first available data (patient reported and/or from medical records) within 24 hours of admission. For patients with a clear alternative diagnosis leading to admission who subsequently acquired COVID-19, provide dates as they occurred but complete observations for the 24 hours after onset of symptoms of suspected or confirmed COVID-19 infection.

Temperature
Please enter the peripheral body temperature (rectal if < 3 months) in the space provided and indicate the unit of measurement, either degrees Celsius (°C) or Fahrenheit (°F).

Heart rate (HR)
Enter the heart rate measured in beats per minute. This may be measured manually or by electronic monitoring.

Respiratory rate (RR)
Enter the respiratory rate in breaths per minute. Manual rather than electronic measurement is preferred where possible (this is achieved by counting the number of breaths for one minute, counting how many times the chest rises within this time period). Record the highest respiratory rate documented on admission.

Systolic BP
Please enter the systolic blood pressure measured in millimetres of mercury (mmHg), in the relevant sections. For example, if the blood pressure is 120/85 mmHg, enter 120 in the section marked ‘systolic BP’. Use any recognised method for measuring blood pressure.

Diastolic BP
Please enter the diastolic blood pressure measured in millimetres of mercury (mmHg), in the relevant sections. For example, if the blood pressure is 120/85 mmHg, enter 85 in the section marked ‘diastolic BP’. Use any recognised method for measuring blood pressure.

Severe dehydration?
Signs of severe dehydration include thirst, dry mucous membranes, low volumes of dark-coloured urine, sunken eyes, reduced skin elasticity.

Sternal capillary refill time > 2 seconds?
Sternal capillary refill time is measured by pressing on the sternum for five seconds with a finger or thumb until the underlying skin turns white and then noting the time in seconds needed for the colour to return once the pressure is released.

Oxygen saturation
For all patients, irrespective of ventilation or supplemental oxygen requirement, please enter the percentage oxygen saturation (the percentage of haemoglobin binding sites in the bloodstream occupied by oxygen) at the time of admission. This may be measured by pulse oximetry or by arterial blood gas analysis.
8 - PATHOGEN TESTING:

Pathogen testing
If laboratory testing was done, complete the section
Select YES – Confirmed if the test was positive, Yes – Probable if there was a clinical diagnosis but no positive lab test and NO if the lab test was negative. If the lab test was not done or there is no clinical diagnosis please leave blank.

Novel CoV
If patient diagnosed with COVID-19 either confirmed or probable per definition above mark an ‘X’ in the box for Novel CoV.

Clinical pneumonia
Diagnosed by X-ray, CT or based on clinical examination and judgement.

Details of pathogen testing per biospecimen type
If the patient had samples taken for pathogen detection testing during their hospital stay, please complete a row for every type of sample collected (e.g. nasal swab, sputum, etc.).

Where both positive and negative results for a particular sample type exist (from samples taken at different time points during the patient’s hospital stay) please record the earliest positive result.

If only multiple negative results exist for a particular sample type (from samples taken at different time points during the patient’s hospital stay), please document the earliest negative result.
9 - DAILY ASSESSMENT FORM
Please complete on day of admission (within 24 hour of admission) and on any admission to ICU/High dependency unit or critical are in any unit. In addition, complete daily depending on resources during hospital admission.

FiO2 (0.21-1.0)
If the patient has not received supplemental oxygen therapy during 00:00 to 24:00 on day of assessment, enter 0.21. If the patient received supplemental oxygen through a mask that delivers a known concentration of oxygen (e.g. a venturi mask) or is being ventilated, please provide the fraction of inspired oxygen (FiO2) delivered. For patients receiving oxygen through a face mask that does not deliver a known oxygen concentration, provide the flow rate in L/min.

SaO2 (at time of FiO2)
SaO2 (oxygen saturation) as determined by arterial blood gas analysis or transcutaneous pulse oximetry. This SaO2 must correspond with the oxygen therapy documented in the FiO2 field. Please fill in the lowest value in percentage (%) recorded while receiving the oxygen therapy detailed in the FiO2 field. If the SaO2 is not known, place NA in the data field.

PaO2 (at time of FiO2)
PaO2 (partial pressure of oxygen in blood) as determined by arterial/ capillary blood gas analysis. This PaO2 must correspond with the oxygen therapy documented in the FiO2 field. Please fill in the lowest value in either mmHg or kPa depending on the output of your blood gas analyser. If the PaO2 is not known, place NA in the data field.

From the same blood gas record as PaO2, indicate the following values as requested if available:
PaCO2 is the partial pressure of carbon dioxide measured in the sample. pH is the measure of the activity of the (solvated) hydrogen ion (H+) measured in the sample. HCO3- refers to the bicarbonate measured in the blood gas sample. Base excess refers to standardised base excess (SBE). If standardised base excess is not reported, enter the base excess value presented, this can be either a positive or negative value.

AVPU
Place a cross (X) in the appropriate box for ‘Alert’, ‘Verbal’, ‘Pain’ or ‘Unresponsive’. Please select only one box. Select the worst value measured.

Glasgow Coma Score (GCS / 15)
Please state the lowest GCS recorded. For intubated patients and patients with a non-fenestrated tracheostomy, give 1 point for the voice component and calculate the total as usual. Suffixes such as t for tracheostomy cannot be entered on to the database. Glasgow Coma Score:
9 - DAILY ASSESSMENT FORM – Continued

Richmond Agitation-Sedation Scale (RASS)
RASS – If done, enter the lowest calculated value (between -5 and 4) on the date of assessment.

Riker Sedation-Agitation Scale (SAS)
SAS - If done, enter the lowest calculated value (between 1 and 7) on the date of assessment.

Non-Invasive ventilation (eg. BiPAP, CPAP)?
If the patient received non-invasive ventilation (NIV), defined as the provision of ventilatory support through the patient’s upper airway using a mask or similar device, at any time on the date of assessment, place a cross (X) in the box marked ‘yes’. If they did not, place a cross in the box marked ‘no’. If the answer is not known, place a cross the box marked ‘N/A’.

Please note that BiPAP and CPAP ventilation modes are not unique to NIV; they can also be given via invasive mechanical ventilation, so please check.

Invasive ventilation?
Invasive ventilation means that patient has undergone tracheal intubation or via tracheostomy for the purpose of mechanical ventilation. If invasive ventilation was used at any time on the date of assessment, place a cross.

Extra corporeal life support (ECLS)?
Extracorporeal Life Support (ECLS also known as extra-corporeal membrane oxygenation) is a variation of cardiopulmonary bypass, it maintains blood oxygenation in patients with life threatening respiratory or cardiac failure (or both). If the patient received ECLS at any time on the date of assessment, place a cross (X) in the relevant box (‘yes’, ‘no’, or ‘N/A’).

Dialysis / Hemofiltration?
Dialysis or renal replacement therapy includes haemodialysis, peritoneal dialysis (PD), intermittent haemodialysis (IHD), on-line intermittent haemofiltration (IHIF), on-line haemodiafiltration (IHDF), continuous haemofiltration (CHF) and continuous haemodiafiltration (CHDF), continuous venovenous haemofiltration (CVH), continuous venovenous haemodialysis(CVHHD), continuous venovenous haemofiltration (CVVHDF), slow continuous ultrafiltration (SCUF), continuous arteriovenous haemofiltration (CAVHD) and sustained low-efficiency dialysis (SLED).
10 – DAILY LABORATORY RESULTS

Please state all laboratory results from the day of follow-up, remembering to cross (X) the appropriate unit of measurement after entering the value. If the unit of measurement is not shown on the paper form it will likely appear in the dropdown list in the eCRF. If you cannot find the correct unit on the eCRF please use a unit converter, such as: http://unitslab.com/ or equivalent or email ncov@isaric.org to let us know.

The day of assessment-up for this form should correspond to the date of sample collection, not the date when the laboratory reported the result. If more than one measurement was recorded on the day please enter the most abnormal value recorded. The most abnormal value may come from different samples taken on the same day, e.g. the most abnormal WBC and the most abnormal Hb might come from a different sample collected on the same day.

Haemoglobin (Hb or Hgb) refers to haemoglobin concentration measurement in blood.

WBC count is the total white blood cell count in blood.

Lymphocyte count is the total lymphocyte count in blood.

Neutrophil count is the total neutrophil count in blood.

Haematocrit (Ht or HCT), also known as packed cell volume (PCV) or erythrocyte volume fraction (EVF), is the volume percentage (%) of red blood cells in blood.

Platelets refers to the platelet count in blood.

APTT/APTR: APTT is the activated partial thromboplastin time, measured in seconds. APTR is the activated partial thromboplastin ratio. Enter the value and circle the test used (‘APTT’ or ‘APTR’).

PT is the prothrombin time.

INR is the international normalised ratio.

ALT/SGPT: ALT is alanine transaminase (also called serum glutamic pyruvate transaminase, SGPT).

Total Bilirubin refers to total bilirubin measured in the blood.

AST/SGOT is aspartate transaminase (also called serum glutamic oxaloacetic transaminase, SGOT).

Glucose refers to blood glucose.

Blood urea nitrogen is also known as ‘urea’, measured in a blood sample.

Lactate refers to blood lactate.

Creatinine refers to serum creatinine.

Sodium refers to blood sodium.

Potassium refers to blood potassium.

Procalcitonin or PCT refers to blood procalcitonin.

CRP is C-reactive protein and refers to the blood (serum or plasma) CRP level.

Chest X-Ray performed? This section refers only to any chest x-rays that were routinely performed at the time that the patient stayed in the clinical centre (hospital) and collected on the date of assessment.
**11 - COMPLICATIONS**

Please select all that were clinically identified at any time during the hospital admission.

Do not include known comorbidities (e.g. previous atrial fibrillation should not be included but new onset during this admission should)

**Viral pneumonitis/pneumonia**
Clinically or radiologically diagnosed viral pneumonitis/pneumonia.

**Bacterial pneumonia**
Clinically or radiologically diagnosed bacterial pneumonia (including community, hospital and ventilator acquired) managed with antimicrobials. Bacteriological confirmation not required.

**Acute Respiratory Distress Syndrome (ARDS)**

Defined according to Berlin criteria as:
- Occurring within 1 week of a known clinical insult or worsening respiratory symptoms
- Bilateral radiological opacities not fully explained by effusions, lobar/lung collapse, or nodules
- Respiratory failure not fully explained by cardiac failure or fluid overload

The severity of the hypoxaemia defines the severity of the ARDS:

- **Mild ARDS:** The PaO2/FiO2 is >200 mmHg, but ≤300 mmHg, on ventilator settings that include positive end-expiratory pressure (PEEP) or continuous positive airway pressure (CPAP) ≥5 cm H2O.
- **Moderate ARDS:** The PaO2/FiO2 is >100 mmHg, but ≤200 mmHg, on ventilator settings that include PEEP ≥5 cm H2O.
- **Severe ARDS:** The PaO2/FiO2 is ≤100 mmHg on ventilator settings that include PEEP ≥5 cm H2O.

To determine the PaO2/FiO2 ratio, the PaO2 is measured in mmHg and the FiO2 is expressed as a decimal between 0.21 and 1. As an example, if a patient has a PaO2 of 60 mmHg while receiving 60% oxygen, then the PaO2/FiO2 is 60/0.6 = 100 mmHg.

**Pneumothorax**

Is defined as the abnormal presence of air in the pleural cavity (between the lungs and the chest wall), causing collapse of the lung. It may be diagnosed clinically, usually with radiological confirmation.

**Pleural effusion**

Is defined as increased amounts of fluid within the pleural cavity. It may be diagnosed clinically, with or without radiological or interventional confirmation.

**Bronchiolitis**

This is a clinical diagnosis.
11 – COMPLICATIONS, continued

**Meningitis / Encephalitis**
Inflammation of the meninges or the brain parenchyma. Select yes if diagnosed clinically, radiologically or microbiologically.

**Seizure**
Select ‘yes’ for any seizure regardless of cause (e.g. febrile or due to epilepsy)

**Stroke / Cerebrovascular accident**
Stroke may be a clinical diagnosis, with or without supportive radiological findings.

**Congestive heart failure**
Is defined as failure of the heart to pump a sufficient amount of blood to meet the needs of the body tissues, resulting in tissue congestion and oedema.

**Endocarditis / Myocarditis / Pericarditis**
Endocarditis is an inflammation of the endocardium (inner lining of the heart). Diagnosis is according to modified Duke criteria, using evidence from microbiological results, echocardiogram and clinical signs. Myocarditis / pericarditis refers to an inflammation of the heart or pericardium (outer lining of the heart). Diagnosis can be clinical, biochemical (cardiac enzymes) or radiological.

**Cardiac arrhythmia**
If a cardiac arrhythmia is identified and there is no previous record of it, select ‘yes’.

**Cardiac ischaemia**
Is defined as diminished blood and oxygen supply to the heart muscle, also known as myocardial ischemia. It is confirmed by an electrocardiogram (showing ischaemic changes, e.g. ST depression or elevation) and/or cardiac enzyme elevation.

**Cardiac arrest**
Sudden cessation of cardiac activity.

**Bacteraemia**
Growth of bacteria on a blood culture. Select ‘no’ if the only bacteria grown were believed to be skin contaminants (e.g. coagulase negative Staphylococci or diphtheroids).

**Coagulation disorder / Disseminated Intravascular Coagulation**
Abnormal coagulation identified by abnormal prothrombin time or activated partial thromboplastin time.
Disseminated intravascular coagulation (DIC; consumption coagulopathy; defibrination syndrome) is defined by thrombocytopenia, prolonged prothrombin time, low fibrinogen, elevated D-dimer and thrombotic microangiopathy.
11 – COMPLICATIONS, continued

Anaemia
Select ‘yes’ if haemoglobin levels were lower than age- and sex-specific thresholds listed below

<table>
<thead>
<tr>
<th>Age or gender group</th>
<th>Haemoglobin threshold (g/L)</th>
<th>(mmol/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 6 months to 5 years</td>
<td>110</td>
<td>6.8</td>
</tr>
<tr>
<td>Age 5–12 years</td>
<td>115</td>
<td>7.1</td>
</tr>
<tr>
<td>Age 12–15 years</td>
<td>120</td>
<td>7.4</td>
</tr>
<tr>
<td>Age &gt; 15 years, non-pregnant women</td>
<td>120</td>
<td>7.4</td>
</tr>
<tr>
<td>Pregnant women</td>
<td>110</td>
<td>6.8</td>
</tr>
<tr>
<td>Age &gt;15 years, men</td>
<td>130</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Rhabdomyolysis / Myositis
Rhabdomyolysis is a syndrome characterised by muscle necrosis and the release of myoglobin into the blood. Muscle biopsy, electromyography, radiological imaging and the presence of myoglobinuria are not required for the diagnosis.

Myositis may be a clinical diagnosis with supporting evidence from laboratory tests e.g. elevated serum creatine kinase; histological confirmation is not required to make the diagnosis. Myositis can occur without progression to rhabdomyolysis.

Acute renal injury/Acute renal failure
Acute renal injury is defined as any of:
- Increase in serum creatinine by ≥0.3 mg/dL (≥26.5 µmol/L) within 48 hours
- Increase in serum creatinine to ≥1.5 times baseline, which is known or presumed to have occurred within the prior 7 days
- Urine volume <0.5 mL/kg/hour for 6 hours

Gastrointestinal haemorrhage
Refers to bleeding originating from any part of the gastrointestinal tract (from the oropharynx to the rectum).
11 – COMPLICATIONS, continued

Pancreatitis
Inflammation of the pancreas, diagnosed from clinical, biochemical, radiological or histological evidence.

Liver dysfunction
A finding that indicates abnormal liver function, may refer to any of the following:
- Clinical jaundice
- Hyperbilirubinaemia (blood bilirubin level twice the upper limit of the normal range)
- An increase in alanine transaminase or aspartate transaminase that is twice the upper limit of the normal range

Hyperglycaemia
For adults, is defined as an abnormally high level of glucose in the blood, blood glucose level that is consistently above 126mg/dL or 7 mmol/L. For children, is defined as a blood glucose level consistently above 8.3 mmol/L.

Hypoglycaemia
For adults, is defined as an abnormally low level of glucose in the blood, a blood glucose level that is consistently below 70mg/dL or 4 mmol/L. For children, is defined as a blood glucose level below 3 mmol/L.

Other
Please specify other complications in the space provided.
12 - TREATMENT

This section refers to specific levels of care or specific interventions that the patient may have received during their hospital stay with suspected or confirmed SARI-causing infection.

Please provide a response to every question.

**Intensive Care Unit (ICU) or High Dependency Unit (HDU) Admission?**
Place a cross (X) in the appropriate box: yes, (if admitted) or no (if this is not the case).
If the answer is YES, please indicate the date on which the patient was first admitted to the intensive care unit / High Dependence Unit (ICU/HDU).
Date of most recent discharge from ICU/HDU. This section may need to be revised if the patient has more than one ICU/HDU admission during a single hospital admission.
Please enter the total number of days the patient was admitted to the ICU/HDU, this should include all ICU/HDU admissions if there were more than one. Count any day in which the patient was in ICU/HDU during that 24 hour period (please note this number could be significantly shorter than indicated by the two dates indicated in the first and last day field if the patient was discharged to another ward/unit and readmitted to the ICU/HDU during their hospital stay).

**Oxygen therapy**
If oxygen (at any concentration >21%) was given by any means of delivery at any point during the patient’s hospital stay, place a cross in the box marked ‘yes’. Oxygen can be delivered by invasive or non-invasive mechanical ventilation, and supplemental oxygenation (O2) via facemask/nasal prongs/hood. If the patient received oxygen therapy at any time during the admission period, place a cross (X) in the box marked ‘no’. If the answer is not known, place a cross (X) in the box marked ‘N/A’.

**Non-invasive ventilation (eg. BIPAP, CPAP)**
If the patient received non-invasive ventilation (NIV), defined as the provision of ventilatory support through the patient’s upper airway using a mask or similar device, at any time during their hospital stay, place a cross (X) in the box marked ‘yes’. If they did not, place a cross in the box marked ‘no’. If the answer is not known, place a cross the box marked ‘N/A’.

**Invasive ventilation (Any)**
Invasive ventilation means that patient has undergone tracheal intubation, for the purpose of invasive mechanical ventilation. Invasive ventilation is a method to mechanically assist or replace spontaneous breathing in patients by use of a powered device that forces oxygenated air into the lungs. The mode of intubation may be orotracheal, nasotracheal, or via a cricothyrotomy or tracheotomy.
12 – TREATMENT, continued

Prone Ventilation
Prone ventilation refers to mechanical ventilation with the patient lying in the prone position. If the patient received prone ventilation at any time during their hospital stay, place a cross (X) in the box marked ‘yes’. If they did not, place a cross in the box marked ‘no’. If the answer is not known, place a cross in the box marked ‘N/A’.

Inhaled Nitric Oxide
If the patient received inhaled nitric oxide at any time during their hospital stay, place a cross (X) in the box marked ‘yes’. If they did not, place a cross in the box marked ‘no’. If the answer is not known, place a cross in the box marked ‘N/A’.

Tracheostomy inserted
If the patient received a tracheostomy, place a cross (X) in the box marked ‘yes’. If they did not, place a cross in the box marked ‘no’. If the answer is not known, place a cross in the box marked ‘N/A’.

Extracorporeal support?
Extracorporeal Life Support (ECLS), also known as Extracorporeal membrane oxygenation (ECMO) is a variation of cardiopulmonary bypass, it maintains tissue oxygenation for days to weeks in patients with life threatening respiratory or cardiac failure (or both). N/A’.

Renal replacement therapy (RRT) or dialysis
Renal replacement therapy includes haemodialysis, peritoneal dialysis (PD), intermittent haemodialysis (IHD), on-line intermittent haemofiltration (IHF), on-line haemodiafiltration (IHDF), continuous haemofiltration (CHF) and continuous haemodiafiltration (CHDF), continuous venovenous haemofiltration (CVVH), continuous venovenous haemodialysis (CVVHD), continuous venovenous haemodiafiltration (CVVHDF), slow continuous ultrafiltration (SCUF), continuous arteriovenous haemofiltration (CAVHD) and sustained low-efficiency dialysis (SLED).

Inotropes/vasopressors?
A vasopressor is a pharmaceutical agent that causes vasoconstriction. Agents include norepinephrine, epinephrine, vasopressin, terlipressin and phenylephrine.
An inotrope is a pharmaceutical agent that alters the force of
myocardial contractility. Commonly used ‘positive’ inotropes include dobutamine, dopamine, milrinone and adrenaline (epinephrine). If the patient received a vasopressor or inotrope for at least one hour during their hospital stay, place a cross (X) in the box marked ‘yes’. If they did not, place a cross in the box marked ‘no’. If the answer is not known, place a cross in the box marked ‘N/A’. If yes, enter the first/ start date and last/ end date of receiving an inotrope or vasopressor in the format or day/month/year, if unknown place across (X) the box marked ‘N/A’.
13 - MEDICATION - While hospitalised or at discharge, were any of the following administered?

**Antiviral Agent**

‘Antiviral Agent’ refers to any agent(s) prescribed to treat or prevent viral infections by interfering with the viral replication cycle. If the patient received antivirals at any time during their hospital stay, place a cross in the box marked ‘yes’ and also indicate the type of antiviral agent.

**Antibiotic**

‘Antibiotic’ refers to any agent(s) are substances naturally produced by microorganisms or their derivatives that selectively target microorganisms not humans. These substances are used in the treatment of bacterial and other microbial infections. Topical preparations are not included.

**Corticosteroid**

‘Corticosteroids’ (commonly referred to as ‘steroids’) refers to all types of therapeutic corticosteroid, made in the adrenal cortex (the outer part of the adrenal gland). They are also made in the laboratory. Examples include: prednisolone, prednisone, methyl-prednisolone, dexamethasone, hydrocortisone, fluticasone, betamethasone (note that other examples exist). Topical preparations are not included, but inhaled preparations are included. The indication for administering corticosteroids does not need to be directly related to the treatment of COVID-19. If a corticosteroid was administered at any point during the patient’s hospital stay or was prescribed at the time of discharge from the hospital, place a cross (X) in the box marked ‘yes’ and place a cross (X) to indicate the route of administration (oral, intravenous or inhaled). Please also enter the type of corticosteroid and the dose.

**Antifungal Agent**

‘Antifungal agent’ refers to any agent(s) prescribed specifically to treat systemic or topical infections caused by fungi. Examples include fluconazole, amphotericin, caspofungin, anidulafungin, posaconazole, itraconazole (note that other examples exist). Topical preparations should not be recorded.

If an antifungal was administered at any point during the patient’s hospital stay or was prescribed at the time of discharge, place a cross (X) in the box marked ‘yes’. If not, place a cross in the box marked ‘no’. If the answer is unknown, place a cross in the box marked ‘N/A’.
14 - OUTCOME

Outcome
Please select only one outcome.

Discharged alive can mean discharge to their usual place of residence before their illness, to the home of a relative or friend, or to a social care facility, because their illness is no longer severe enough to warrant treatment in a medical facility.

Hospitalized means they are still in hospital but have recovered from COVID-19 infection and the form has been completed as the patient is in a part of the hospital for care of other conditions and where the form will not be completed at a later date.

Transfer to other facility means they have been transferred to another facility that provides medical care. This could be a specialist centre for more intensive treatment or a step-down for rehabilitation. It does not include facilities that solely provide social care (these patients should be listed as discharged alive).

Death means the patient died in the hospital.

Palliative discharge means the patient has been discharged with the expectation that they will not recover from this or other co-existing illness. This could be to a specialist hospice facility, or to their usual home address with anticipatory end of life medications.

Outcome date
Please state the date for the outcome listed above.

If Discharged Alive:

Ability to self-care at discharge versus prior to illness: the patient is able to care for themselves at discharge (in terms of activities of daily living) at the same level as before they developed illness then place a cross in the box marked ‘same as prior to illness’. If their ability to self-care has decreased or increased, then place a cross in the appropriate box (‘worse’ or ‘better’). If the answer is not known, place a cross in the box marked ‘unknown’.

Post-discharge treatment (Complete this section only if the patient is alive).

Oxygen therapy includes, NIV or home ventilation (respiratory support/treatment),

If Transferred

If the patient was transferred from the current centre (hospital) to another healthcare facility, please enter the Facility name, in the space provided. If the patient wasn’t transferred to another facility place a cross in the box marked ‘N/A’.

If yes, and the patient was transferred to a facility that is participating in the study, please Place a cross (X) in the appropriate box (‘yes’, ‘no’ or ‘N/A’).
15 - TRAVEL: Did the patient travel in the 14 days prior to first symptom onset?

This refers to travel to another part of the country or abroad to another country within 14 days before symptoms relating to the current illness began. Up to three locations can be entered. Please enter the name of the city/geographical area visited and the country.

For each place/country visited, please enter the date that they returned to their usual place of residence.

16 - ANIMAL EXPOSURES: Did the patient have contact with live/dead animals, raw meat or insect bites in the 14 days prior to first symptom onset?

Close contact with live animals refers to:

- direct physical contact with, or having been in close proximity to, live animals,
- having visited an environment containing live animals (e.g. farm, market, zoo),
- a history of insect bites (e.g. bites from ticks or fleas),
- having been involved in the slaughter or dissection of animals or having visited an environment where animals are slaughtered or dissected,
- having been involved in the veterinary care of animals

These events must have occurred within the 14 day period leading up to the onset of symptoms. Contact with household pets (e.g. cats and dogs) or other animals kept within the home should also be recorded. Place a cross (X) in one of the box options ('Yes', 'No', or 'N/A'). If YES, specify the animal/insect, type of contact and date of exposure in the format DD/MM/YYYY in the third column.