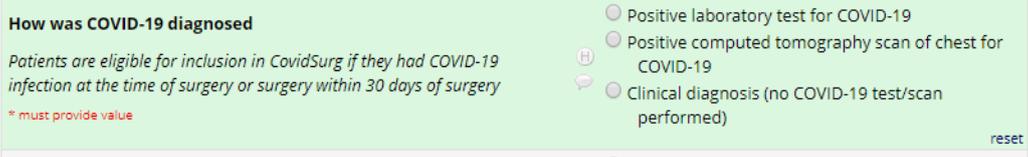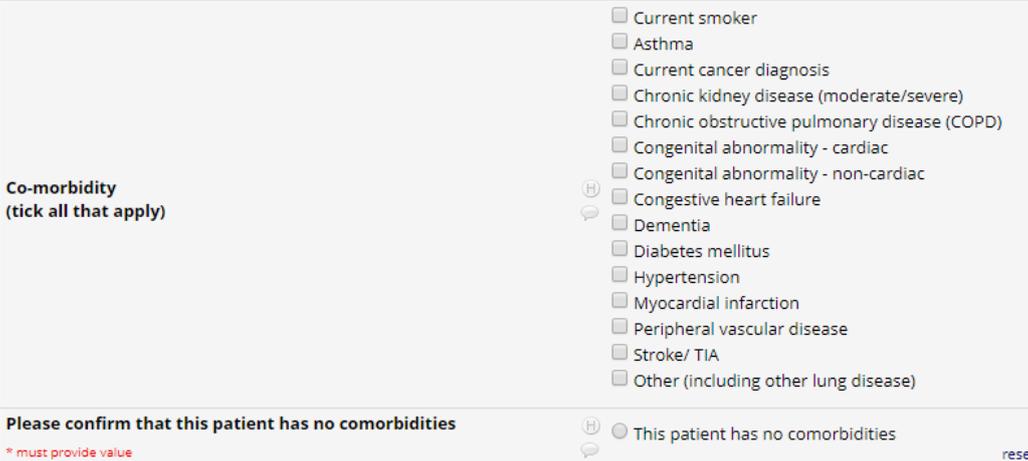# CovidSurg Data Completion Guide

- The following pages will guide you through data entry for the key data fields for CovidSurg. Please complete **all** fields that appear on each REDCap record. However, the data fields highlighted below are particularly crucial as they will be used in the initial data analyses. In order to provide high quality data to inform the global surgical community, it is essential that all data is as complete as possible.

- To help you ensure that your data is complete, we will intermittently send 'data completion request' emails. A spreadsheet will be attached to the email you receive. In this spreadsheet:
    - Each case entered from your centre is on a separate row.
    - The first column indicates the REDCap ID number that can be used to identify the patient on the REDCap database.
    - Each column in the spreadsheet relates to a different critical data item. The guide below indicates how the headings on the columns the spreadsheet match to data fields on the online REDcap database.
    - If 'missing' is written in a cell, this denotes this specific data item is missing for that patient.
- Please examine each case/row and note the missing and required fields per case.
- To enter any missing data on to the online REDCap database:
    - Log into REDCap
    - Selected the CovidSurg project
    - Navigate to 'Add/ Edit Records' in the left hand side menu under 'Data Collection'.
    - Under the 'select record' dropdown list, select the record ID you need to edit

- Please note, we are using the same REDCap project for both CovidSurg and CovidSurg-Cancer studies for which patients may be eligible for either or both. Therefore, if a patient is included in both studies (CovidSurg and CovidSurg-Cancer) you may not see slightly differe cancer-specific fields.

Spreadsheet Field Label	REDCap Field and Notes
COVID_Diagnosis_Method	How was COVID-19 diagnosed **How was COVID-19 diagnosed** *Patients are eligible for inclusion in CovidSurg if they had COVID-19 infection at the time of surgery or surgery within 30 days of surgery* * must provide value ○ Positive laboratory test for COVID-19 ○ Positive computed tomography scan of chest for COVID-19 ○ Clinical diagnosis (no COVID-19 test/scan performed) reset • Please select the appropriate option. • A positive laboratory test can include any lab test currently in use at your hospital; this includes PCR testing and antigen testing. • A clinical diagnosis refers to a patient who did not undergo CT scan or COVID-19 lab tested, but had symptoms/signs that have been diagnosed as COVID-19 by a senior doctor (e.g. consultant/ attending).
COVID_Diagnosis_Timing	When was COVID-19 diagnosed
Month_Operation	Month operated This is the patient was operated. If your centre does not have approval to submit information on the month of operation, please select "not stated"
Patient_Age	Age
Gender	Sex
ASA_Grade	ASA at time of surgery Full definitions are available from: https://www.asahq.org/standards-and-guidelines/asa-physical-status-classification-system
Comorbidity_All	Co-morbidity **Co-morbidity** **(tick all that apply)** ☐ Current smoker ☐ Asthma ☐ Current cancer diagnosis ☐ Chronic kidney disease (moderate/severe) ☐ Chronic obstructive pulmonary disease (COPD) ☐ Congenital abnormality - cardiac ☐ Congenital abnormality - non-cardiac ☐ Congestive heart failure ☐ Dementia ☐ Diabetes mellitus ☐ Hypertension ☐ Myocardial infarction ☐ Peripheral vascular disease ☐ Stroke/ TIA ☐ Other (including other lung disease) **Please confirm that this patient has no comorbidities** * must provide value ○ This patient has no comorbidities reset • Tick **all** boxes that apply • If the co-morbidity you would like to enter is not listed, tick 'other (including other lung disease)' and a free text box will appear to enter the relevant details. • If the patient has no co-morbidities, please confirm by selecting the option 'This patient has no comorbidities' on the data field immediately below the list of comorbidities. This field will only show if no comorbidities have been ticked.

Urgency_Surgery	Urgency of surgery Full definitions are available from: https://www.ncepod.org.uk/classification.html
Symptoms_All	Symptoms on hospital admission **Symptoms on hospital admission (tick all that apply)** ☐ Abdominal pain ☐ Breathlessness (dyspnoea) ☐ Cough ☐ Diarrhoea ☐ Fatigue ☐ Fever (>38 celsius) ☐ Haemoptysis ☐ Myalgia ☐ Nausea/vomiting ☐ Sputum ☐ Other • Tick all symptoms that may apply • If no symptoms present (asymptomatic), please leave this field blank
Last available data from before surgery (e.g. recorded in anaesthetic room pre-anaesthetic induction)	
Mental_Status	Mental status
Respiratory_Rate	Respiratory Rate (breaths per minute)
Heart_Rate	Heart rate
Systolic_BloodPressure Diastolic_BloodPressure	Systolic Blood Pressure (mmHg) Diastolic blood pressure (mmHg) **Systolic blood pressure (mmHg)** * must provide value **Diastolic blood pressure (mmHg)** * must provide value • Please ensure that these are entered the correct way round (i.e. the systolic blood pressure should be greater than the diastolic blood pressure)

CONTINUE TO NEXT PAGE FOR THE PREOPERATIVE INVESTIGATIONS FORM

Spreadsheet Field Label	REDCap Field and Notes
Haemoglobin	Haemoglobin (g/L) **Haemoglobin (g/L)** * must provide value (H) [_____] If your lab reports Hb as g/dL (normal range approx 11-17) please multiply this by 10 to record value as g/L • Please ensure to enter the recorded haemoglobin in g/L. • The normal range will be approximately 110-170 g/L. • If your lab reports haemoglobin in g/dL (normal range 11-17 please multiply this value by 10 to get the value in g/L
White_Cell_Count	White cell count (10^9/L)
CRP	CRP - C-reactive protein (mg/L)
Albumin	Albumin (g/dL) Some laboratories report total protein but not albumin. If this is the case, please leave the albumin field blank.
Urea Creatinine	**Units used by lab to report serum creatinine and urea/blood nitrogen urea** (H) ○ Units are mg/dL or g/L ○ Units are mmol/L or µmol/L reset **Urea/ blood urea nitrogen (mg/dL)** (H) [_____] Typical normal range 6 to 20 mg/dL **Serum creatinine (mg/dL)** (H) [_____] Typical normal range 0.6 to 1.3 mg/dL • Select the unit used in your lab for serum urea/ blood urea nitrogen and serum creatinine and the fields to enter their values will appear • Then enter the correct values for each, according to the units you have selected
Chest imaging before surgery	
PreOp_ChestXR	Preoperative chest x-ray

PreOp_CT	Preoperative computed tomography (CT) scan of the chest
	
	Preoperative computed tomography (CT) scan of the chest
	(please tick all that apply) (H) ☐ Not performed
	* must provide value ☐ Yes - normal
	    ☐ Yes - consolidation
	    ☐ Yes - ground glass opacity
	    ☐ Yes - pulmonary infiltration
	    ☐ Yes - other abnormality
	
	• More than one option can be selected. Please tick all that apply.
	• If a CT scan was not performed tick 'not performed' only.

CONTINUE TO NEXT PAGE FOR THE MANAGEMENT FORM

Spreadsheet Field Label	REDCap Field and Notes
COVID_TimeofSurgery	Was COVID-19 suspected at the time of surgery? Tick 'yes' if COVID-19 was suspected by the senior surgeon at the time of surgery even if the diagnosis had not been confirmed by a laboratory test.

Anaesthesia	Anaesthesia type
	
	Anaesthesia type
	Please tick all that apply
	* must provide value
	   ☐ Local
	   ☐ Regional
	   ☐ General
	
	• Please tick all that apply if more than one type of anaesthesia was used

Surgical_Diagnosis	Surgical indication
	
	Surgical indication
	* must provide value
	   ○ Benign disease
	   ○ Malignant disease (cancer)
	   ○ Obstetrics
	   ○ Trauma
	   reset
	
	Surgical diagnosis/ indication
	This field is OPTIONAL in case you wish to give additional details
	   Expand
	
	• Please select the most appropriate option for surgical indication.
	• If you want to add further details or clarificiation of the surgical diagnosis, enter this information in the 'surgical diagnosis/ indication' free text field

Surgical_Procedure	Surgical procedure completed **Main surgical procedure completed - please select closest matching procedure** *If no appropriate procedures are listed, please enter free text below* *Procedures are listed by organ/ system operated.* *Please note that this list is searchavle by keyword.* **Surgical procedure completed** *This field is OPTIONAL in case you wish to give additional details* Expand • Please choose the closest matching surgical procedure from the drop down menu. • If more than one procedure was performed, enter the primary procedure only • Please used the 'surgical procedure completed' field to add further details or clarification of the procedure

CONTINUE TO NEXT PAGE FOR THE COVID-19 TREATMENT FORM

Spreadsheet Field Label	REDCap Field and Notes
Hospital_Treatment	At any point during the index hospital admission did the patient receive **At any point during the index hospital admission did the patient receive** * must provide value ☐ None of the treatments listed below ☐ Antibiotics ☐ Antivirals Ⓗ ☐ Quinine or derivative 💬 ☐ Corticosteroids ☐ Intravenous immunoglobulins ☐ Interferon ☐ IL-6 blocker • Please tick all COVID-19 treatments listed. Tick as many as apply. • Options should be ticked regardless of the specific durg/dose administered. • Options should be ticked if the patient received them at any point in the 30 days following surgery. • If none of the treatments listed were given, tick 'None of the treatments listed below'.
Renal_Dialysis	Renal dialysis - at any point during the index hospital admission
PreOp_Resp_Support	Preoperative respiratory support
PostOp_Resp_Support	Postoperative respiratory support **Postoperative respiratory support** (please tick all that apply) * must provide value ☐ None ☐ Low-flow supplemental oxygen Ⓗ ☐ High-flow supplemental oxygen 💬 ☐ Non-invasive ventilation ☐ Invasive mechanical ventilation ☐ Extracorporeal membrane oxygenation (ECMO) • Please select the type of respiratory support given after the patient left the theatre recovery.

CONTINUE TO NEXT PAGE FOR THE SURGICAL OUTCOMES FORM

SURGICAL OUTCOMES FORM

Spreadsheet Field Label	REDCap Field and Notes
Outcome_30day	Outcome at 30 days after surgery • **Please ensure this field is completed as accurately as possible as this is the primary endpoint of the study.**
Reoperation_Reintervention	Re-operation or re-intervention This includes any **unplanned** re-operation or re-intervention, including interventional radiology, endoscopy, or surgery.
PostOp_ICU	Postoperative intensive care admission
Complications	Complications (if any) • Please tick all complications that occurred within 30 days of surgery whether directly related to the original operation or not. • Please take particular care to note **pneumonia** and **ARDS** as these are the key secondary outcomes. • If a complication occurred that is not listed, select 'other complication' and a free text field will appear to enter the relevant details • If the patient did not experience any complications, please confirm by selecting the option 'This patient has no comorbidities' on the data field immediately below the list of possible complications. This field will only show if no complication have been ticked.