



eCRF Completion Guidelines and Definitions

EXTUBE

[Protocol Version 3.2 19-June-2025]

EXtubation related complications - an international observational study To
Understand the impact and **BE**st practices in the operating room and intensive
care unit

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Date: _____



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Page/Section		Comment
Pages 01-02		PROLOGUE
1 [Page 01]		ELIGIBILITY FORM
1.	Case Report Form	Data Abstraction Tool – Source Data Worksheet
2.	Study #	Record study specific patient’s ID. This is based from the unique REDCap group code provided by the Lead Study Coordinator to the Site. <ul style="list-style-type: none"> Format: [Group Code-Consecutive and Sequential Extubated Patient #] Example: 9999-1
3.	Data Abstractor	Record name(s) and signature(s) of individual(s) who completed the Case Report Form (CRF)
4.	Date	Record the date of CRF completion
2 [Page 02]		SCREENING
1.	Welcome	Record your study site
2.	Eligibility - Inclusion	Select “YES” if the inclusion criteria has been met and confirmed by the study investigator If “NO” is selected, exclude the patient
3.	Eligibility - Exclusion	Select “NO” if the patient does not meet any of the exclusion criteria and confirmed by the study investigator If “YES” is selected, exclude the patient

Commented [WS1]: Please note throughout the database, you have the option of choosing “Not available” for a field. Use this option sparingly, as will be indicated in the document. You can access this by clicking the “M” button. Please see below:

The screenshot shows a REDCap form titled 'Editing existing Study ID 4656-1. Reimbursement Status: No'. Under 'INCLUSION CRITERIA', there is a question: '1. Adult (≥18 years old) patients undergoing extubation of an endotracheal tube after general anesthesia in the OR, out of OR anesthesia location or ICU'. Below the question are radio buttons for 'Yes' and 'No'. A dropdown menu is open, showing options: 'M', 'Clear value', and 'Not available (NAVU)'. The 'Not available (NAVU)' option is selected.

Commented [WM2]: Please note that this is not present in REDCap. To be used for your own reference.

Pages 03-08		PATIENT CHARACTERISTICS AND COMPLICATIONS CRF
3 [Page 03]		I. Patient Demographic and Clinical Characteristics
1.	Sex	Biological identification of patient
2.	Age	More than or equal to 18 years of age. Record to the nearest whole number.
3.	Height	Record height in either: 1. Inches to the nearest one decimal place 2. Centimeters to the nearest whole number
4.	Weight	Record weight in pounds or kilograms to the nearest one decimal place
5.0	Comorbidities (check all that apply)	Record comorbidity by checking off the appropriate boxes; may need to search the Electronic Medical Record (EMR)/Electronic Patient Record (EPR) using full forms and/or abbreviations Immunocompromised will be defined by any of the following:



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		<p>1. Solid neoplasm (or solid tumour): is an abnormal mass of tissue that grows uncontrollably</p> <ul style="list-style-type: none"> - Metastatic: cancer that spreads to another part(s) of the body - Non-metastatic: cancer that has not spread from original location - Unknown <p>2. Hematologic malignancy - cancers that develop from blood-forming tissues, such as the bone marrow, or from immune system cells</p> <p>3. Bone marrow transplant</p> <p>Immunosuppression is characterized by being on any of these medications below:</p> <ul style="list-style-type: none"> - Corticosteroids such as prednisone - Biologics such as adalimumab (Humira®) and infliximab (Remicade®) - Calcineurin inhibitors such as tacrolimus (Envarsus XR® or Protopic®) and cyclosporine (Gengraf®, Neoral® or Sandimmune®) - Inosine monophosphate dehydrogenase (IMDH) inhibitors such as mycophenolate mofetil (CellCept®), that affect cell growth, - Janus kinase inhibitors such as (Xeljanz®) - Mechanistic target of rapamycin (mTOR) inhibitors such as sirolimus (Rapamune®) - Monoclonal antibodies such as basiliximab (Simulect®) <p>Pulmonary Hypertension is defined as Pulmonary Arterial Systolic Pressure (PASP) of > 30 mmHg</p> <p>Renal Failure is defined as an eGFR less than 15 or on dialysis</p>
5.1	Other, please specify:	Record all other comorbidities in full form , separated by comma(s)
5.2	None of the above	Please choose this option if there are no comorbidities present
4 [Pages 04 to 06]		II. Initial Intubation Information
1.0	MAIN Reason for intubation	Identify and record the main reason for intubation
1.1	Other, specify:	Write in full form the reason for intubation, if not mentioned already
2.	Date and Time of Intubation	Record the date of intubation in DD-MM-YYYY Record the time of intubation in military time [24 HR HH:MM]
3.0	Type of surgery (select all that apply) [<i>only pops up if "Emergency surgical procedure or "Elective surgical procedure" are selected</i>]	Record the major body system(s) under which the surgery is being done. Select all that apply: <ul style="list-style-type: none"> • Abdominal: part of the body between the chest and the hips that contains the pancreas, stomach, intestines, liver, gallbladder, and other organs • Cardio-thoracic: part of the body relating to, involving, or specializing in the heart and chest



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		<ul style="list-style-type: none"> • Colorectal: part of the body relating to the colon and the rectum • ENT (ear, nose and throat): part of the body relating to the ear, nose, and throat • Head and Neck: part of the body relating to the head and neck • Musculoskeletal: part of the body having to do with muscles, bones, tendons, ligaments, joints, and cartilage • Neurological: of, relating to, or affecting the nervous system/nerves in the body • ObGyn (Obstetrics and Gynecology): where Gynecology involves care of a woman's reproductive organs and Obstetrics involves treatment of pregnant women (including delivery of babies) • Ophthalmology: part of the body relating to the eyes • Urogenital: part of the body relating to the urinary and genital system (organs of excretion and reproduction) • Vascular: made up of the vessels that carry blood and lymph fluid through the body
3.1	Other, specify	Write in full form any other major body system not mentioned in the list under which the surgery is being done
4.	Specify Surgical Procedure <i>[only pops up if "Emergency surgical procedure" or "Elective surgical procedure" are selected]</i>	Write in full form the name of the surgical procedure
5.	Start Date and Time of Surgery <i>[only pops up if "Emergency surgical procedure" or "Elective surgical Procedure" are selected]</i>	Record the start date of surgery in DD-MM-YYYY Record the start time of surgery in military time [24 HR HH:MM] Typically stated as Procedure Start (or may also be stated as Skin incision)
6.	End Date and Time of Surgery <i>[only pops up if "Emergency surgical procedure" or "Elective surgical procedure" are selected]</i>	Record the end date of surgery in DD-MM-YYYY Record the end time of surgery in military time [24 HR HH:MM] Typically stated as Procedure End (or may also be stated as Skin closure)
7.	Duration of surgery <i>[only pops up if "Emergency surgical procedure" or "Elective surgical procedure" are selected]</i>	AUTOCALCULATED BY REDCap Calculated by [End Date and Time of Surgery] MINUS [Start Date and Time]
8.0	Surgical Position <i>[only pops up if "Emergency surgical procedure" or</i>	Record the position the surgical procedure was done in



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	<i>"Elective surgical procedure" are selected]</i>	
8.1	Other (Specify)	Record any other position the patient may have been in during intubation
9.0	Location of Intubation	Record the location of intubation
9.1	Other, Specify	Record any other location of intubation not already mentioned
10.	Anticipated ("anatomical") difficult airway management prior to intubation	Pre-anesthetic physical examination to identify potential difficult airway management Select "YES" if there was anticipated difficult airway management prior to intubation
11.0	Clinical Predictors of a Difficult Intubation	Methods to identify potentially difficult airway
11.1	Mallampati Score	The size of the tongue is measured relative to the oral cavity and mouth opening Class I: visible tonsils, tonsillar pillars and uvula Class II: visible uvula, soft palate Class III: visible soft palate only Class IV: visible hard palate only Select "YES" if this evaluation was performed and the appropriate class
11.2	Thyromental Distance	A measurement taken when the head is tilted upwards (extended) from the thyroid notch to the chin - estimates the mandibular space Select "YES" if this evaluation was performed and the relevant distance
11.3	Upper Lip Bite Test	Mandibular range of movement is determined by having the patient bite their upper lip with their lower incisors Class I: the mucosa/vermillion of the upper lip totally invisible Class II: a partially visible mucosa/vermillion Class III: the lower incisors fail to bite the upper lip Select "YES" if this evaluation was performed and the appropriate class
11.4	Inter-incisor Gap	The distance measured in cm between the upper and lower incisor when the mouth is opened maximally *Please note that inter-incisor gap may be written as "Mouth opening" and a gap of ≥ 3 cm may be stated as "Normal" or "Within normal". If these are not stated than it would be < 3 cm. Select "YES" if this evaluation was performed and the relevant distance
11.5	Cervical Spine Mobility	Ability of the neck to be moved in a range of direction: tilted forward and backward, turn from side to side, and bend to one side *Please note that this may be stated as Neck Range of Motion, >90 degrees may be written as "Full", and <90 degrees may be written as "Limited".



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		Select "YES" if this evaluation was performed and the relevant degree range
11.6	Retrognathia	Visual appearance of the lower jaw to be set further back than the upper jaw (subjective) Select "YES" if this evaluation was performed and the relevant subjective appearance
11.7	Prominent Incisors	Subjective appearance of the front teeth Select "YES" if this evaluation was performed and the relevant subjective appearance
11.8	Other Predictors of Difficult Airway Management	Other methods of predicting difficult airway Select the appropriate option, if applicable
11.8.1	Other, specify	Record any other predictors not mentioned in the list: age, height, subluxation, sternocricoid distance
11.8.2	Not applicable	Select this option if there are no other predictors of difficult airway management present
12.0	Initial technique for intubation	Select the technique used for the first attempt of intubation *Please note C-MAC is Videolaryngoscopy DO NOT record technique used in subsequent attempts here, if any
12.0.1	Other, specify	Specify any other method used for 1 st attempt of intubation not listed
12.0.2	Use of intubation adjunct	Additional instruments required in association for intubation in the 1 st attempt Select "YES" if an intubation adjunct was used
12.0.2.1	Other, specify	Specify any other instruments used in adjunct not listed
12.1	Successful intubation technique	Select the technique which yielded in successful intubation – final attempt (or in the case of ONLY 1 attempt, both this section and the "initial technique for intubation" section will be filled the same) *Please note C-MAC is Videolaryngoscopy
12.1.1	Other, specify	Specify any other method used for intubation not listed
12.1.2	Use of intubation adjunct	Additional instruments required in association for intubation in the final attempt Select "YES" if an intubation adjunct was used
12.1.2.1	Other, specify	Specify any other instruments used in adjunct not listed
13.	Total number of intubation attempts	Defined as the number of times a laryngoscope or flexible bronchoscope was introduced and expelled from the patient's mouth Record the total number of intubation attempts in whole numbers



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14.0	Endotracheal intubation finally obtained?	Select "YES" if endotracheal intubation was finally obtained
14.1	If YES	Identify if Orotracheal or Nasotracheal
15.0	Endotracheal intubation performed	Determine if intubation was performed while the patient was: <ol style="list-style-type: none"> 1. Asleep 2. Sedated but breathing spontaneously 3. Awake <p>*Please note that "Standard Sequence" usually means it was done Asleep. "Rapid Sequence Induction" usually indicates it was done Asleep with Rapid Sequence Induction. "Modified Sequence" usually indicates it was Asleep with Rapid Sequence Induction applied.</p>
15.1	If Asleep	Record if Rapid sequence induction was applied
16.	Esophageal intubation during at least 1 attempt?	Select "YES" if there was esophageal intubation during at least 1 attempt
17.	Lowest oxygen saturation recorded during the intubation attempt (within 10 minutes before)	Record the lowest oxygen saturation in % to the nearest whole number within 10 minutes before intubation
18.	Duration of mechanical ventilation	Record the duration of intubation in Days, Hours, and Minutes in whole numbers (e.g., if the intubation lasted 3 days 7 hours and 0 minutes, each field would have the specified number entered) <p>*Please note this it should be the difference between "Placement" and "Removal" time of the Endotracheal Tube (ETT)</p>
5 [Page 06]		III. Clinical Status after Intubation
1.	Ventilator Settings	Record the ventilator settings post intubation (immediately after intubation, first value available) within 1 hour time limit with the specified units to the nearest whole number; may need to search by individual terms: <p>Ventilator Mode (choose the appropriate below):</p> <ul style="list-style-type: none"> • Pressure Support (PS) • Pressure Control (PC) • Volume Control (VC) • Other, Specify (<i>specify in full form</i>) <p>Driving Pressure ($P_{plat} - PEEP$) is recorded in cmH_2O Positive End-Expiratory Pressure (PEEP) is recorded in cmH_2O Plateau pressure (P_{plat}) is recorded in cmH_2O Fraction of Inspired Oxygen (FiO_2) is recorded in %</p> <p>*Please note if a value from any of the four above is not available, select "M" and mark the field as "Not available". DO NOT leave it blank.</p>



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		*Please note the Operating Room (OR) may not record all values, particularly Driving Pressure and Plateau Pressure. FiO ₂ may be written as "InO ₂ ".
2.	Did the patient experience a loss of pulse between intubation and 30 minutes post intubation?	Defined as cardiac arrest between intubation and within 30 minutes post intubation Select "YES" if there was a loss of pulse within 30 minutes of intubation
6 [Pages 07 and 08]		IV. Patient Parameters and Gas Exchange before Extubation
1.	Parameters before extubation (specify all the available within 1 hour)	Select and record the most proximal vital signs with the specified units to the nearest whole number prior to extubation, last available within 1 hour time limit: Systolic Blood Pressure (SBP) is recorded in mmHg Diastolic Blood Pressure (DBP) is recorded in mmHg Heart Rate (HR) is recorded in beats per minute (bpm) Respiratory Rate (RR) is recorded in breaths per minute Oxygen Saturation (SpO ₂) is recorded in % *Please note if none of the values are available, select "M" and mark this field as "Not available".
2.0	Need of vasopressor/inotrope support (within 30 minutes)	Identify the most proximal need of vasopressor/inotrope support prior to extubation *Please note we are looking for values within a 30-minute time limit before extubation, with the closest prior to or at the time of extubation as the reference if there are multiple rates over the preceding 30 minutes. Select "YES" if there was a need of vasopressor/inotrope support
2.1	Specify (rates of infusion) of all inotropes/vasopressors that apply	Select and record all values as applicable: Norepinephrine is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number Epinephrine is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number Dopamine is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number Dobutamine is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places



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		<ul style="list-style-type: none"> • mcg/min to the nearest whole number <p>Milrinone is recorded in mcg/kg/min to the nearest two decimal places</p> <p>Phenylephrine is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number • mcg/hr to the nearest whole number <p>Vasopressin is recorded in International Units (IU)/hour to the nearest two decimal places</p>
2.1.1	Other, please specify	<p>Identify and record any other vasopressors/inotropes used before extubation in</p> <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • Other unit to the nearest whole number or two decimal places (as relevant)
3.0	Arterial Blood Gas (ABG) Analysis (within 1 hour)	Select "YES" if there was ABG analysis done
3.0.1	[Date and Time]	<ol style="list-style-type: none"> 1. Record the date of ABG collection most proximal pre-extubation in DD-MM-YYYY within a 1-hour time limit 2. Record the time of ABG collection most proximal pre-extubation in military time [24 HR HH:MM] within a 1-hour time limit 3. Record the date of ABG collection most proximal post-extubation in DD-MM-YYYY within a 1-hour time limit 4. Record the time of ABG collection most proximal post-extubation in military time [24 HR HH:MM] within a 1-hour time limit
3.1	Before Extubation	<p>Record the specified ABG values with the specified units most proximal before extubation within a 1-hour time limit:</p> <p>FiO₂ is recorded in % to the nearest whole number</p> <p>PaO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>PaCO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>pH is recorded in pH (is its own unit) to the nearest two decimal places</p> <p>HCO₃ (or Bicarbonate) is recorded in mmol/L to the nearest whole number</p> <p>Base Excess (BE) is recorded in mmol/L to the nearest one decimal place</p> <p>Lactate is recorded in mmol/L to the nearest one decimal place</p> <p>*Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".</p>
3.2	After Extubation	<p>Record the specified ABG values with the specified units most proximal after extubation within a 1-hour time limit:</p> <p>FiO₂ is recorded in % to the nearest whole number</p>

Commented [WM3]: Please bear in mind that on REDCap, the after extubation values of this table will be entered within the "EXTUBATION DETAILS" instrument.



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		<p>PaO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>PaCO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>pH is recorded in pH (is its own unit) to the nearest two decimal places</p> <p>HCO₃ (or Bicarbonate) is recorded in mmol/L to the nearest whole number</p> <p>BE is recorded in mmol/L to the nearest one decimal place</p> <p>Lactate is recorded in mmol/L to the nearest one decimal place</p> <p>*Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".</p>
4.0	Venous Blood Gas (VBG) Analysis (within 1 hour)	Select "YES" if there was VBG analysis done
4.0.1	[Date and Time]	<ol style="list-style-type: none"> 1. Record the date of VBG collection most proximal pre-extubation in DD-MM-YYYY within a 1-hour time limit 2. Record the time of VBG collection most proximal pre-extubation in military time [24 HR HH:MM] within a 1-hour time limit 3. Record the date of VBG collection most proximal post-extubation in DD-MM-YYYY within a 1-hour time limit 4. Record the time of VBG collection most proximal post-extubation in military time [24 HR HH:MM] within a 1-hour time limit
4.1	Before Extubation	<p>Record the specified VBG values with the specified units most proximal before extubation within a 1-hour time limit:</p> <p>FiO₂ is recorded in % to the nearest whole number</p> <p>PvO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>PvCO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>pH is recorded in pH (is its own unit) to the nearest two decimal places</p> <p>HCO₃ (or Bicarbonate) is recorded in mmol/L to the nearest whole number</p> <p>BE is recorded in mmol/L to the nearest one decimal place</p> <p>Lactate is recorded in mmol/L to the nearest one decimal place</p> <p>*Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".</p>
4.2	After Extubation	<p>Record the specified VBG values with the specified units most proximal after extubation within a 1-hour time limit:</p> <p>FiO₂ is recorded in % to the nearest whole number</p> <p>PvO₂ is recorded in (please choose applicable unit)</p>

Commented [WM4]: Please bear in mind that on REDCap, the after extubation values of this table will be entered within the "EXTUBATION DETAILS" instrument.



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		<ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places PvCO ₂ is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places pH is recorded in pH (is its own unit) to the nearest two decimal places HCO ₃ (or Bicarbonate) is recorded in mmol/L to the nearest whole number BE is recorded in mmol/L to the nearest one decimal place Lactate is recorded in mmol/L to the nearest one decimal place *Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".
5.0	Glasgow Coma Scale (GCS-T) Prior to Extubation (within 1 hour)	Measurement of consciousness As we are looking at the Score prior to extubation, the scale will be out of 10 . *Please note that we are looking for prior to Extubation, within a 1-hour time limit. Select "YES" if Glasgow Coma Scale was used
5.1	Eye opening response	4 – One can open one’s eyes and keep them open on their own. 3 – One only open one’s eyes when someone tells one to do so. One’s eyes stay closed otherwise. 2 – One’s eyes only open in response to feeling pressure. 1 – One’s eyes do not open for any reason. Select the appropriate score
5.2	Best motor response	6 – One follows instructions on how and when to move. 5 – One intentionally moves away from something that presses on one. 4 – One only move away from something pressing on you as a reflex. 3 – One flexes muscles (pull inward) in response to pressure. 2 – One extend muscles (stretch outward) in response to pressure. 1 – One do not move in response to pressure. Select the appropriate score
5.3	Verbal response	T – Endotracheal tube in place
5.4	Total Score (T)	AUTOCALCULATED BY REDCap Calculation done by adding [Eye opening Response], [Best motor response], and [Verbal Response] together
6.0	Bloodwork: Before Extubation (check all)	Select and record the values with the specified units of the most proximal panel of blood work prior to extubation: Hemoglobin is recorded in (please choose applicable unit)



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	that apply up to 30 days)	<p>1. g/L to the nearest whole number or 2. g/dL to the nearest one decimal place</p> <p>Platelet is recorded in $\times 10^9/L$ to the nearest whole number</p> <p>Bilirubin (Total) is recorded in (please choose applicable unit)</p> <p>1. umol/L to the nearest whole number or 2. mg/dl to the nearest two decimal place</p> <p>Creatinine is recorded in (please choose applicable unit)</p> <p>1. umol/L to the nearest whole number or 2. mg/dl to the nearest two decimal places</p> <p>Sodium is recorded in mmol/L to the nearest whole number</p> <p>Potassium is recorded in mmol/L to the nearest one decimal place</p> <p>*Please note that not all the values will be available. Only select those that are available. We are looking for the closest available blood test (e.g., CBC, Biochemistry) before extubation. ABG values last available from prior to extubation can be used for Sodium, Potassium, and Hemoglobin (and can be used over the blood tests if they are closer). Preadmission and other intraoperative tests/values can be used in place of the specified blood tests if they are not available. The limit is up to 30 days before extubation.</p> <p>*Please note if none of the values are available, select "M" and mark this field as "Not available".</p>
7.	Total Urine Output [24 hours before extubation]	Record the cumulative urine output value 24 hours before extubation in milliliters to the nearest whole number

Pages 09-14		EXTUBATION TECHNIQUE CRF
7 [Pages 09 to 12]		V. Extubation Details
1.0	Was the extubation accidental?	Select "YES" if the extubation was accidental/unintentional
1.1	If YES	Determine the source of accidental/unintentional extubation: 1. Patient self extubated 2. Accidental removal during patient care 3. Accidental removal during patient transfer
2.	Was the patient transferred from another location to perform extubation?	Select "YES" if the patient was transferred from another location into the facility to perform extubation
3.	Did the team performing extubation	High risk extubation may be identified on the basis of post-extubation complications such as: extubation failure, noisy breathing, damage to



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	identify this as a high risk extubation?	larynx/vocal cords/other parts of the airway, forceful coughing leading to laryngospasm or aspiration Select "YES" if the extubation was identified as a high risk extubation
4.0	Location of extubation	Identify and record the area of the hospital where extubation was performed; it may be in the ward or in the Intensive Care Unit (ICU)
4.1	Other, specify	Record location not mentioned on the list
5.0	IF ICU, Admission source for extubation performed in the ICU <i>[this option will only pop up only if ICU is selected in 4.0]</i>	Record the admission source of the patient for extubation being performed in the ICU
5.1	Other, specify	Record location not mentioned on the list
6.	Was the extubation done for a planned tube exchange?	Planned tube exchange is defined as the replacement of the endotracheal tube in the event of a cuff leak Select "YES" if the extubation was done for a planned tube exchange
7.	Was any local anesthetic applied to cords or trachea prior to extubation?	Any local anesthetic applied (typically an Intra-cuff lidocaine spray) to prevent post-extubation complications Select "YES" if any local anesthetic was applied to cords or trachea just prior to extubation
8.	Was the extubation performed under deep anesthesia?	Deep anesthesia or Deep sedation refers to a drug-induced depression of consciousness, during which patients cannot be easily aroused but respond purposeful following repeated or painful stimulation. This is typically accomplished by doses of IV anesthetics or sedatives (e.g., Midazolam, Propofol, Lidocaine, or Fentanyl). Select "YES" if extubation was performed under deep anesthesia
9.0	Spontaneous breathing trial	Method of weaning off of ventilator before extubation *Please note the trial is usually not done for Anesthesia Locations/OR. It is usually present for ICU. The trial can be either be relatively short or last a few hours. Select "YES" if a spontaneous breathing trial was performed
9.1	If YES, Duration	Record duration in minutes in whole numbers
9.2	If YES, Type of Trial - Other, specify	Record any other method of spontaneous breathing trial
10.0	Was a cuff leak test performed?	Assess post-extubation stridor in high risk intubated patients *Please note we are looking for values around 1-2 minutes right after extubation. This test is usually not done for Anesthesia Locations/OR. It is usually present for ICU.



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		Select "YES" if a cuff leak test was performed
10.1	If YES, was a leak present?	Select "YES" if a leak was present
10.1.1	Qualitative	Determines audible leak around a deflated endotracheal tube
10.1.1.1	Other, specify	Record any other qualitative method of detecting audible leak
10.1.2	Quantitative	Cuff leak determined by using tidal volumes with the cuff inflated and deflated
10.1.2.1	Exhaled tidal volume prior to cuff deflation	Record exhaled tidal volumes pre cuff deflation in milliliters to the nearest whole number
10.1.2.2	Exhaled tidal volume after cuff deflation	Record exhaled tidal volumes post cuff deflation in milliliters to the nearest whole number
11.0	Monitoring selected during the extubation procedure (check all that apply)	Monitoring for post-extubation complication Select/check off the appropriate monitoring option(s) that was/were used during the extubation procedure *Please note if none of the values are available, select "M" and mark this field as "Not available".
11.1	Neuromuscular Monitoring	The process of measuring and assessing the degree of neuromuscular blockade Select "YES" if Neuromuscular Monitoring was done and specify the type done
11.1.1	Quantitative Neuromuscular Monitoring - Other, specify	Record any other location of quantitative neuromuscular monitoring
11.2	Other, specify	Record any other methods of monitoring during extubation
12.0	Patient position during extubation	Record the position of the patient during extubation
12.1	Other, specify	Record any other position the patient may have been in during extubation
13.	Date and Time of extubation	Record the date of extubation in DD-MM-YYYY Record the time of extubation in military time [24-HR HH:MM]
14.	Duration of mechanical ventilation	AUTOCALCULATED BY REDCAP Calculated by [Extubation Date and Time] MINUS [Intubation Date and Time]
15.0	Adjuncts utilized at extubation	Record source of additional instruments used during extubation
15.1.1	Airway Exchange catheter (AEC) - Other, specify	Record size of AEC not mentioned
15.1.2	Date and Time of removal	Record date of removal of AEC in DD-MM-YYYY Record time of removal of AEC in military time [24-HR HH:MM]



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15.2	Other, specify	Record any additional instruments used during extubation not mentioned on the list
15.3	Not applicable	Choose this if no adjunct was utilized at extubation
16.0	Post Extubation Oxygenation	Oxygen given immediately after extubation Select "YES" if there was post extubation oxygenation
16.1	If YES, Device used for oxygenation	Record the type of device used (if any) and the corresponding values with the specified units to the nearest whole number: FiO ₂ is recorded in % O ₂ Flow is recorded in L/min Total Flow is recorded in L/min PAP is recorded in cmH ₂ O CPAP is recorded in cmH ₂ O PS is recorded in cmH ₂ O PEEP is recorded in cmH ₂ O
16.1.1	Continuous positive airway pressure (CPAP) - Other, specify	Record any other CPAP method not mentioned
16.1.2	Non invasive positive pressure ventilation - Other, specify	Record any other Non invasive positive pressure ventilation method not mentioned
16.1.3	O ₂ Reservoir Available [Only pops up if Bag valve mask or Standard facemask selected]	Refers solely to the type of Bag Valve Mask or Standard Facemask. Specifically, if it is a model with reservoir. Select "YES" if it is a model with an O ₂ reservoir.
17.0	Extubation performed by	Identify the healthcare provider who carried out extubation
17.1.1	Staff Physician – Other, specify	Record any other team/department not mentioned that the Staff Physician is primarily a part of
17.2.1	Fellow – Other, specify	Record any other team/department not mentioned that the Fellow is primarily a part of
17.3.1	Resident – Other, specify	Record any other team/department not mentioned that the Resident is primarily a part of
17.4	Other, specify	Identify any other personnel who carried out extubation
18.0	Team members present at bedside at the time of extubation	Identify and select any team members that apply of the health care team present at bedside during extubation, other than the person doing the extubation. *Please note that the person who did the extubation (in <i>Extubation performed by</i>) is not included here. Example: 1. If the Extubation was performed by Staff Physician Dr. X, they would not be counted again as one of the Team Members present at bedside at the time of extubation.



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		2. If the Extubation was performed by Staff Physician Dr. X, but a Staff Physician Dr. Y was present at bedside, then Dr. Y would count as one of Team Members present at bedside at the time of extubation.
18.1.1	Staff Physician – Other, specify	Record any other team/department not mentioned that the Staff Physician is primarily a part of
18.2.1	Fellow – Other, specify	Record any other team/department not mentioned that the Fellow is primarily a part of
18.3.1	Resident – Other, specify	Record any other team/department not mentioned that the Resident is primarily a part of
18.4	Other, specify	Identify any other team members of the health care team present at bedside during extubation
18.5	No One	Choose this if no team member was present at bedside at the time of extubation
19.0	Was there a previous failed extubation preceding this mechanical ventilation episode (within 14 days)?	Identify if there was any extubation made preceding this current intubation within a 14-day time limit. Select "YES" if there was a previous failed extubation preceding this mechanical ventilation episode
19.1	If YES, Date & Time of extubation	Record the date of failed extubation in DD-MM-YYYY Record the time of failed extubation in military time [24-Hour HH:MM]
19.2	If YES, Length of time between previous extubation and the need for reintubation	AUTOCALCULATED BY REDCAP Calculated by [Intubation Date and Time] MINUS [Failed extubation Date and Time]
20.0	Was extubation previously considered and decision was made to postpone extubation?	Extubation may be postponed if complication is anticipated Common reasons why a patient's extubation can be postponed (*Please note this is not an exhaustive list, if not clearly documented ask your site PI): <ul style="list-style-type: none"> o Are not alert (GCS <8); <ul style="list-style-type: none"> ▪ In order to be extubated, the patient's mental status should be alert, awake, and able to follow commands. There should be no other neurologic abnormality impairing the patient's ability to breathe spontaneously o Are unable to pass a successful spontaneous breathing trial (i.e. breathe on their own) <ul style="list-style-type: none"> ▪ PaO₂/FiO₂ ratio less than 150 ▪ FiO₂ > 0.4 ▪ PEEP >10 (vent setting) ▪ Minute ventilation >15L per minute o Do not have stable vitals <ul style="list-style-type: none"> ▪ Tachycardia; HR>140 bpm ▪ In shock and require high vasopressor support

Commented [W55]: For further information about extubation being postponed and delayed please refer to this article:
[https://www.ncbi.nlm.nih.gov/books/NBK539804/#:~:text=The%20patient%20should%20be%20able,expectoration%20\(a%20cronym%2C%20MOVE\)](https://www.ncbi.nlm.nih.gov/books/NBK539804/#:~:text=The%20patient%20should%20be%20able,expectoration%20(a%20cronym%2C%20MOVE))



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		<ul style="list-style-type: none"> ▪ The patient should not have any active ischemia or pulmonary edema ○ Are unable to protect their airway/ maintain airway patency, don't have a strong cough, or don't have minimal secretions <ul style="list-style-type: none"> ▪ I.e. in order to extubate the CXR should be clean ○ Are on a paralytic agent <p>Select "YES" if extubation was previously considered and decision was made to postpone extubation</p>
20.1	If YES, Reason for postponing	Provide the reason for postponing extubation
21.	Was a plan made before extubation?	<p>A plan or work flow to address monitoring, complications etc. post extubation</p> <p>*Please note for Anesthesia Locations/OR usually there is a plan made. For ICU, there is usually no plan.</p> <p>Select "YES" if there was a plan made before extubation</p>
22.	Assessment of airway risk factors was made?	<p>Select "YES" if an assessment of airway risk factors was made</p> <p>*Please note that the airway assessment may be stated as "Easy" or "Difficult", which means it was done</p>
23.	Assessment of general risk factors was made?	Select "YES" if an assessment of general risk factors was made
8 [Pages 13 and 14]		VI. Complications of Extubation
1.0	Primary Outcome	<p>Identify primary complications within 60 minutes of extubation:</p> <ol style="list-style-type: none"> 1. Hypoxemia (oxygen saturation as measured by pulse oximetry below SpO₂ < 80%) 2. Cardiac arrest: return of spontaneous circulation or death 3. Need for airway management: re-intubation, insertion of supraglottic airway, bag-mask ventilation
1.1	None of the above	Choose this if none of the primary complications were present within 60 minutes of extubation
2.0	Secondary Outcome	Identify secondary complications within 60 minutes of extubation
2.1	Other, please specify	Record any other complications not mentioned on the list
2.2	None of the above	Choose this if none of the secondary complications were present within 60 minutes of extubation
3.0	Need of new vasopressor/inotrope support within 60 minutes of extubation?	<p>Disregard vasopressors already on a drip.</p> <p>Account for NEW vasopressors added within 60 minutes of extubation.</p> <p>Select "YES" if there was a need of new vasopressor/inotrope support within 60 minutes of extubation</p>
3.1	If YES, Specify (initial rate of infusion) of all	<p>Select and record all values as applicable:</p> <p>Norepinephrine is recorded in (please choose applicable unit)</p>



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	inotropes/vasopressors that apply	<ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number <p>Epinephrine is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number <p>Dopamine is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number <p>Dobutamine is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number <p>Milrinone is recorded in mcg/kg/min to the nearest two decimal places</p> <p>Phenylephrine is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • mcg/min to the nearest whole number • mcg/hr to the nearest whole number <p>Vasopressin is recorded in International Units (IU)/hour to the nearest two decimal places</p>
3.1.1	Other, please specify	Identify and record any other vasopressors/inotropes used within 60 minutes of extubation in (please choose applicable unit): <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • Other unit to the nearest whole number or two decimal places
4.0	Fluid load administered within 60 minutes of extubation?	Explore nursing notes or intake and output to chart, and correlate with date and time of extubation to identify fluid boluses administered within 60 minutes of extubation. Typically they are IV fluids (e.g., normal saline, ringers lactate, plasmalyte, and albumin), which will be collected as a whole. <p>*Please note we are only recording a cumulative volume administered that is > 250 mL. If it is less ≤ 250 mL, it does not count and will be selected as a “NO”.</p> <p>Select “YES” if there was fluid load administered within 60 minutes of extubation</p>
4.1	If YES, Total Volume	Record total volume in milliliters to the nearest whole number
5.	Lowest oxygen saturation recorded within 60 minutes of extubation	Record the lowest oxygen saturation within 60 minutes after extubation in % to the nearest whole number



Pages 14-20		OTHER OUTCOMES CRF
9 [Page 14]		VII. Patient Status
1.0	Status within 7 days of extubation	Indicate if the patient is still alive or not after 7 days post-extubation. If alive, indicate if patient is still in the hospital
1.1	If Dead, Date of death	Record the date of death in DD-MM-YYYY
2.	Was airway management (re-intubation, insertion of a supraglottic airway, or bag mask ventilation) within 48h after extubation required?	Post-extubation due to complication, leading to airway management. This includes any of the following within 48 hours after extubation: re-intubation, insertion of a supraglottic airway, or bag-mask ventilation. Select "YES" if airway management within 48 hours after extubation was required
3.0	Was re-intubation within 48h after extubation required?	Indicate if re-intubation was needed within 48 hours after the extubation. Typically, this can occur due to consequence of complication or the patient having another operation/procedure. Select "YES" if re-intubation within 48 hours after extubation was required
3.1	If YES, Preoxygenation	Identify if pre-oxygenation was applied at the moment of re-intubation
3.1.1	If YES, please specify the method	Select the appropriate method/device used for pre-oxygenation
3.1.1.1	Other, please specify	Any method/device not listed
10 [Pages 14 to 19]		VIII. Re-intubation Information
1.0	How was re-intubation confirmed?	Select the confirmation method used to confirm re-intubation
1.1	Other, specify	Specify any method of confirmation not listed
2.0	Oxygen administration during laryngoscopy /flexible bronchoscopy (apneic oxygenation)?	Device used in oxygenation during laryngoscopy/ flexible bronchoscopy Select "YES" if there was oxygen administration during laryngoscopy/flexible bronchoscopy
2.1	If YES, please specify the method	Select the appropriate method/device used for the administration of oxygen
2.1.1	Other, please specify	Any other method/device not listed
3.0	Vital Signs (within 30 minutes)	Record the most proximal before or after re-intubation values within a 30 minute time limit
3.1	Before re-intubation	Record most proximal values with the specified units before re-intubation within a 30 minute time limit: SBP is recorded in mmHg to the nearest whole number DBP is recorded in mmHg to the nearest whole number HR is recorded in beats per minute to the nearest whole number



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		<p>RR is recorded in breaths per minute to the nearest whole number SpO₂ is recorded in % to the nearest whole number FiO₂ is recorded in % to the nearest whole number Lactate is recorded in mmol/L to the nearest one decimal place</p> <p>*Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".</p>
3.2	After re-intubation	<p>Record values with the specified units at or most proximal post re-intubation within a 30 minute time limit: SBP is recorded in mmHg to the nearest whole number DBP is recorded in mmHg to the nearest whole number HR is recorded in beats per minute to the nearest whole number RR is recorded in breaths per minute to the nearest whole number SpO₂ is recorded in % to the nearest whole number FiO₂ is recorded in % to the nearest whole number Lactate is recorded in mmol/L to the nearest one decimal place</p> <p>*Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".</p>
4.0	ABG Analysis (within 1 hour)	Select "YES" if there was ABG analysis done before or after re-intubation within a 1-hour time limit
4.1	If YES, Before re-intubation	<p>Record most proximal values with the specified units before re-intubation within a 1-hour time limit: pH is recorded in pH (is its own unit) to the nearest two decimal places PaCO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>PaO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>HCO₃ is recorded in mmol/L to the nearest whole number</p> <p>*Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".</p>
4.2	If YES, After re-intubation	<p>Record values with the specified units at or most proximal post re-intubation within a 1-hour time limit: pH is recorded in pH (is its own unit) to the nearest two decimal places PaCO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>PaO₂ is recorded in (please choose applicable unit)</p> <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places <p>HCO₃ is recorded in mmol/L to the nearest whole number</p>



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		*Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".
5.0	VBG Analysis (within 1 hour)	Select "YES" if there was VBG analysis done before or after re-intubation within a 1-hour time limit
5.1	If YES, Before re-intubation	Record most proximal values with the specified units before re-intubation within a 1-hour time limit: pH is recorded in pH (is its own unit) to the nearest two decimal places PvCO ₂ is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places PvO ₂ is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places HCO ₃ is recorded in mmol/L to the nearest whole number *Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".
5.2	If YES, After re-intubation	Record values with the specified units to the nearest whole number at or most proximal post re-intubation within a 1-hour time limit: pH is recorded in pH (is its own unit) to the nearest two decimal places PvCO ₂ is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places PvO ₂ is recorded in (please choose applicable unit) <ul style="list-style-type: none"> • mmHg to the nearest whole number • kPa to the nearest two decimal places HCO ₃ is recorded in mmol/L to the nearest whole number *Please note that not all values will be available. If a certain value is not available, select "M" and mark the specified value as "Not available".
6.0	Fluid administered as boluses (within 30 minutes)	New crystalloid infusion as bolus around the time of re-intubation Select "YES" if there was fluid administered as boluses before or after re-intubation within a 30 minute time limit
6.1	If YES, Before re-intubation	Select the most proximal value before re-intubation within a 30 minute time limit
6.2	If YES, After re-intubation	Select the value at or most proximal post re-intubation within a 30 minute time limit
7.0	Vasopressor Boluses (within 30 minutes)	New vasopressors administered around the time of re-intubation Select "YES" if there were vasopressor boluses administered before or after re-intubation within a 30 minute time limit
7.1	If YES, Before re-intubation	Record most proximal values before re-intubation within a 30 minute time limit in (please choose applicable unit): <ul style="list-style-type: none"> • mcg to the nearest whole number

Commented [WS6]: Please bear in mind that on REDCap, the after re-intubation values of this table will be entered within the "CLINICAL STATUS AFTER RE-INTUBATION" instrument.

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		<ul style="list-style-type: none"> IU to the nearest whole number Other unit to the nearest whole number or two decimal places (as relevant) <p>*Please note that Drug 2 may not be available. If it is not available, select "M" and mark the specified value as "Not available".</p>
7.2	If YES, After re-intubation	<p>Record values to the nearest whole number at or most proximal post re-intubation within a 30 minute time limit in (please choose applicable unit):</p> <ul style="list-style-type: none"> mcg to the nearest whole number IU to the nearest whole number Other unit to the nearest whole number or two decimal places (as relevant) <p>*Please note that Drug 2 may not be available. If it is not available, select "M" and mark the specified value as "Not available".</p>
8.0	Vasopressor Infusions (within 30 minutes)	<p>Continuous infusion of new vasopressor started around the time of re-intubation</p> <p>Select "YES" if there were vasopressor infusions administered before or after re-intubation within a 30 minute time limit</p>
8.1	If YES, Before re-intubation	<p>Record most proximal values before re-intubation within a 30 minute time limit in (please choose applicable unit):</p> <ul style="list-style-type: none"> mcg/kg/min to the nearest two decimal places IU/hr to the nearest two decimal places Other unit to the nearest whole number or two decimal places (as relevant) <p>*Please note that Drug 2 and Drug 3 may not be available. If they are not available, select "M" and mark the specified value as "Not available".</p>
8.2	If YES, After re-intubation	<p>Record values at or most proximal post re-intubation within a 30 minute time limit in (please choose applicable unit):</p> <ul style="list-style-type: none"> mcg/kg/min to the nearest two decimal places IU/hr to the nearest two decimal places Other unit to the nearest whole number or two decimal places (as relevant) <p>*Please note that Drug 2 and Drug 3 may not be available. If they are not available, select "M" and mark the specified value as "Not available".</p>
9.0	Boluses of sedatives/ neuromuscular blockers (within 30 minutes)	<p>New sedatives / neuromuscular blockers administered around the time of re-intubation</p> <p>Select "YES" if there were boluses of sedatives/neuromuscular blockers administered before or after re-intubation within a 30 minute time limit</p>

Commented [WM8]: Please bear in mind that on REDCap, the after re-intubation values of this table will be entered within the "CLINICAL STATUS AFTER RE-INTUBATION" instrument.

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9.1	If YES, Before re-intubation	<p>Select and record most proximal values with the specified units before re-intubation within a 30 minute time limit:</p> <p>Midazolam is recorded in mg to the nearest two decimal places Fentanyl is recorded in mcg to the nearest whole number Propofol is recorded in mg to the nearest whole number Ketamine is recorded in mg to the nearest whole number Rocuronium is recorded in mg to the nearest whole number Succinylcholine is recorded in mg to the nearest whole number Remifentanyl is recorded in mcg to the nearest whole number Cisatracurium is recorded in mg to the nearest whole number Etomidate is recorded in mg to the nearest whole number Other, please specify is recorded in (please choose applicable unit):</p> <ul style="list-style-type: none"> • mcg to the nearest whole number or two decimal places (as relevant) • mg to the nearest whole number or two decimal places (as relevant)
9.2	If YES, After re-intubation	<p>Record values with the specified units at or most proximal post re-intubation within a 30 minute time limit:</p> <p>Midazolam is recorded in mg to the nearest two decimal places Fentanyl is recorded in mcg to the nearest whole number Propofol is recorded in mg to the nearest whole number Ketamine is recorded in mg to the nearest whole number Rocuronium is recorded in mg to the nearest whole number Succinylcholine is recorded in mg to the nearest whole number Remifentanyl is recorded in mcg to the nearest whole number Cisatracurium is recorded in mg to the nearest whole number Etomidate is recorded in mg to the nearest whole number Other, please specify is recorded in (please choose applicable unit):</p> <ul style="list-style-type: none"> • mcg to the nearest whole number or two decimal places (as relevant) • mg to the nearest whole number or two decimal places (as relevant)
10.0	Infusion of sedatives (within 30 minutes)	<p>Continuous infusion of sedatives after re-intubation</p> <p>Select "YES" if there were infusion of sedatives administered after re-intubation within a 30 minute time limit</p>
10.1	If YES, After re-intubation	<p>Record values at or most proximal post re-intubation within a 30 minute time limit in (please choose applicable unit):</p> <ul style="list-style-type: none"> • mcg/kg/min to the nearest two decimal places • Other unit to the nearest whole number or two decimal places (as relevant) <p>*Please note that Drug 2 and Drug 3 may not be available. If they are not available, select "M" and mark the specified value as "Not available".</p>

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11.	Date and Time of Re-intubation (confirmed endotracheal intubation)	Record the date of re-intubation in DD-MM-YYYY Record the time of re-intubation in military time [24-Hour HH:MM]
12.	START time of re-intubation	Record the start time of re-intubation in military time [24-Hour HH:MM] *Please note this time would be the same as the re-intubation time data point that was present above, if there was only 1 re-intubation attempt.
13.	Cricoid pressure applied?	Select "YES" if cricoid pressure was applied
14.0	Elective method/device for laryngoscopy	The elective method, technique, or device used for laryngoscopy for re-intubation
14.1	Initial technique for re-intubation	Select the technique used for the point of contact of re-intubation *Please note C-MAC is Videolaryngoscopy
14.1.1	Other, specify	Specify any other method used for re-intubation not listed
14.1.2	Use of re-intubation adjunct	Additional instruments required in association for re-intubation Select "YES" if a re-intubation adjunct was used
14.1.2.1	Other, specify	Specify any other instruments used in adjunct not listed
14.2	Successful re-intubation technique	Select the technique which yielded in successful re-intubation *Please note C-MAC is Videolaryngoscopy
14.2.1	Other, specify	Specify any other method used for re-intubation not listed
14.2.2	Use of re-intubation adjunct	Additional instruments required in association for re-intubation Select "YES" if a re-intubation adjunct was used
14.2.2.1	Other, specify	Specify any other instruments used in adjunct not listed
15.	Total number of re-intubation attempts	Defined as the number of times a laryngoscope or flexible bronchoscope was introduced and expelled from the patient's mouth Record the total number of re-intubation attempts in whole numbers
16.	Did the patient experience a loss of pulse during re-intubation attempts?	Explore nursing notes and vital signs for cardiac arrest within that time frame Select "YES" if the patient experienced a loss of pulse during re-intubation attempts
17.0	Endotracheal re-intubation finally obtained?	Select "YES" if endotracheal re-intubation was finally obtained
17.1	If YES	Identify if Orotracheal or Nasotracheal
17.2	If NO, Other, specify	Mention any other method not listed
18.0	Endotracheal re-intubation performed	Determine if re-intubation was performed while the patient was: 1. Asleep 2. Sedated but breathing spontaneously 3. Awake



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		*Please note that "Standard Sequence" usually means it was done Asleep. "Rapid Sequence Induction" usually indicates it was done Asleep with Rapid Sequence Induction. "Modified Sequence" usually indicates it was Asleep with Rapid Sequence Induction applied.
18.1	If Asleep	Record if Rapid sequence induction was applied
19.0	Confirmation of tracheal re-intubation using	Select the confirmation method used to confirm tracheal re-intubation
19.1	Other, specify	Mention any other method not listed
20.	Esophageal re-intubation during at least 1 attempt?	Select "YES" if the patient had any esophageal re-intubation during at least one attempt
21.	Preoxygenation performed between multiple laryngoscopic attempts?	Select "YES" if Preoxygenation was performed between multiple laryngoscopic attempts
22.	Lowest oxygen saturation recorded during the re-intubation attempt (within 10 minutes before)	Record the lowest oxygen saturation within 10 minutes before re-intubation to the nearest whole number
23.	END of last laryngoscopy time (i.e confirmed endotracheal intubation)	Record the time at which re-intubation was finally confirmed in military time [24-Hour HH:MM] *Please note this time would be the same as the re-intubation time and START time data points that were present above, if there was only 1 re-intubation attempt.
24.0	Was the patient subsequently extubated within 7 days?	Subsequent extubation means the extubation that occurred for this re-intubation. Select "YES" if the patient was subsequently extubated within 7 days
24.1	If YES, Date and Time of subsequent extubation	Record the date of subsequent extubation in DD-MM-YYYY Record the time of subsequent extubation in military time [24 HR HH:MM]
24.1	IF YES, Subsequent duration of mechanical ventilation	AUTOCALCULATED BY REDCAP Calculated by the difference between [Subsequent Extubation Date and Time] MINUS [Re-intubation Date and Time]
24.2	If NO, Did the patient receive a tracheostomy within 7 days of their re-intubation date?	Select "YES" if the patient received a tracheostomy within 7 days of their re-intubation date
24.2.1	IF YES, Date and Time of tracheostomy	Record the date of tracheostomy in DD-MM-YYYY Record the time of tracheostomy in military time [24 HR HH:MM]
11 [Page 20]		IX. Clinical Status After Re-Intubation



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1.	Ventilator Settings	<p>Record the ventilator setting post re-intubation (immediately after re-intubation, first value available) within a 1-hour time limit in the specified units to the nearest whole number; may need to search by individual terms:</p> <p>Ventilator Mode (choose the appropriate below):</p> <ul style="list-style-type: none"> • PS • PC • VC • Other, Specify (<i>specify in full form</i>) <p>Driving Pressure ($P_{plat} - PEEP$) is recorded in cmH₂O PEEP is recorded in cmH₂O Plateau pressure (P_{plat}) is recorded in cmH₂O FiO₂ is recorded in %</p> <p>*Please note if a value from any of the four above is not available, select "M" and mark the field as "Not available". DO NOT leave it blank.</p> <p>*Please note the Operating Room (OR) may not record all values, particularly Driving Pressure and Plateau Pressure. FiO₂ may be written as "InO₂".</p>
2.	Did the patient experience a loss of pulse between re-intubation and 30 minutes post intubation?	<p>Explore nursing notes and vital signs for cardiac arrest within that time frame</p> <p>Select "YES" if the patient experienced a loss of pulse between re-intubation and 30 minutes post re-intubation</p>

Page 21		STATEMENT ON INCLUSION & EXCLUSION OF THE EXTUBE STUDY
1.	Name and Designation	<p>Record the name and designation of the Site Principal Investigator responsible for declaring the completion of the case report form</p> <p>Name: Site Principal Investigator's Full Name Designation: Site Principal Investigator</p>
2.0	Declaration	<p>Select "YES" to indicate that the patient met the inclusion criteria and the data entered is complete and accurate</p>
2.1	If NO, please specify the reason	<p>Provide the reason why it is a no</p>
3.	Investigator's Signature	<p>Site Principal Investigator to acknowledge with signature</p>
4.	Date	<p>Site Principal Investigator to acknowledge with date in DD-MM-YYYY</p>