SECURE

Service Evaluation of Cross-Specialty UK Rapid Sequence Intubation Events

Activity Survey

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Please only complete the survey if:
· RSI or modified RSI (as judged by the intubating team)
· Patient ≥18 years old (adult)
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Do NOT include if patient had tracheostomy in situ.

1 Situation & site

Site name (hospital): _____

Day of RSI: Weekday ☐ Weekend (including bank holidays) ☐

Timing of RSI: Daytime (8am-6pm) ☐ Evening (6pm-8pm) ☐ Night (8pm-8am) ☐

Hospital Area:

Theatre (non-obstetric) / anaesthetic room	☐	Interventional radiology / hybrid theatre	☐
Obstetric theatre / anaesthetic room	☐	Radiology suite (e.g. CT / MRI)	☐
Recovery area / PACU	☐	Endoscopy	☐
ICU / HDU	☐	Psychiatric unit for ECT	☐
Emergency Department	☐	Non-clinical area	☐
Ward	☐	Other	☐
Cardiac catheter laboratory	☐	Please indicate: _____	

2 Patient Factors

2.1 Baseline Characteristics

(i) Age (years - actual or estimated)

18-25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ 56-65 ☐ 66-75 ☐ 76-85 ☐ 85-95 ☐ >95 ☐

(ii) Sex (as assigned at birth)

Male ☐ Female ☐ Other ☐ Unknown ☐

↪(iii) **IF '<56' option in Q2.1 (i) AND 'Female' option in Q2.1(ii),** pregnant or postpartum?

If not please go to Q2.1 (iv)

No ☐ 1st trimester ☐ 2nd trimester ☐ 3rd trimester ☐ Postpartum (within 24hrs of delivery) ☐ Pregnant but trimester unknown ☐ Unknown ☐

(iv) Ethnicity (groups from ONS Census classification 2011)

White (including Roma, Gypsy, Irish Traveller) ☐ Asian, or Asian British ☐ Black, Black British, Carribbean or African ☐ Mixed or Multiple Ethnicity ☐

Other ☐ Unknown ☐

(v) Actual or estimated BMI (kg/m²)

<18.5 Underweight	☐	**18.5-24.9** Healthy weight	☐	**25.0 - 29.9** Overweight	☐
30.0-34.9 Class 1 Obesity	☐	**35.0 - 39.9** Class 2 Obesity	☐	**≥40.0** Class 3 Obesity	☐

(vi) ASA Physical Status - at point of RSI (during current illness/admission):

(Note: ASA 1 must be non-smoker, no alcohol, normal BMI and non-pregnant)

ASA 1 Normal healthy patient	☐	**ASA 2** Mild systemic disease	☐	**ASA 3** Severe systemic disease	☐
ASA 4 Severe systemic disease, constant threat to life	☐	**ASA 5** Moribund patient, not expected to survive without intervention	☐		

2 Patient Factors (Continued)

(vii) Clinical Frailty Score (actual or estimated)

Frail 1 - Very Fit Robust and exercises regularly	☐	**Frail 2 - Well** Well - no active symptoms; exercises occasionally	☐	**Frail 3 - Managing Well** Routine walking only	☐
Frail 4 - Vulnerable Independent but slowed by symptoms or fatigue	☐	**Frail 5 - Mildly Frail** Needs help with heavy housework	☐	**Frail 6 - Moderately Frail** Needs help with some personal care	☐
Frail 7 - Severely Frail Completely dependent for personal career	☐	**Frail 8 - Very Severely Frail** Completely dependent and approaching end of life	☐	**Frail 9 - Terminally Ill** Life expectancy <6 months	☐
Unknown	☐				

2.2 Assessment

(i) Indication for RSI

Select at least one

Critical Illness:		**Anaesthesia for:**		**Other:**	
Airway compromised or impending compromise	☐	Surgical procedure (including obstetric interventions)	☐	Please indicate: _____	
Respiratory failure	☐	Non-operative procedure or investigation	☐		
CVS instability	☐				
Neurological impairment	☐				
Post-ROSC care excluding intubation during cardiac arrest	☐				
Major trauma including burns	☐				

↪(ii) **IF any 'Critical Illness' option selected in Q2.2 (i) - Indication**, please indicate urgency of intubation:

If not please go to Q2.2 (iv)

Without any delay ☐ < 1 hour ☐ ≥ 1 hour ☐ Unknown ☐

↪(iii) **IF 'Neurological impairment' option in Q2.2 (i) - Indication**, please select all that apply:

If not please go to Q2.2 (iv)

Low GCS / low consciousness ☐ Severe agitation ☐ Seizure / status epilepticus ☐ Suspected raised intracranial pressure (ICP) ☐

Unknown ☐ Other ☐ Please indicate: _____

↪(iv) **IF any 'Anaesthesia for:...' option selected in Q2.2 (i) - Indication**, please indicate urgency of surgery/procedure/investigation (following decision to operate):

If not please go to Q2.2 (v)

Immediate Within minutes ☐ **Urgent** Within hours ☐ **Expedited** Within days ☐ **Elective** Planned ☐

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2 Patient Factors (Continued)

(v) Aspiration risks
Select those considered to be relevant to this case

Patient Factors		*Delayed Gastric Emptying*		*Surgical/trauma*	
Not fasted	☐	Acute pain	☐	Acute abdomen **without** obstruction	☐
Nausea	☐	Opioid	☐	Gastric outlet obstruction	☐
Vomiting	☐	GLP-1 agonist within the last 1 week	☐	Small bowel obstruction	☐
Gastro-oesophageal disorder (e.g. GORD, hiatus hernia, stricture)	☐	Chronic gastroperesis (e.g. diabetes mellitus)	☐	Large bowel obstruction	☐
Ileus/pseudo-obstruction (excluding mechanical obstruction)	☐	Any other cause of delayed gastric emptying	☐	Previous upper GI surgery / procedure	☐
Bleeding from airway or upper GI	☐			Previous bariatric surgery / procedure	☐
High BMI	☐				
Pregnancy or recent miscarriage / postpartum (within 24 hours of delivery)	☐			*No risks identified*	☐

(vi) Predicted or known anatomically difficult airway?

Yes ☐ No ☐ Airway not assessed ☐ Unknown ☐

↪(Vii) **IF 'Yes' for Q2.2 (Vi)**, were any of the following were anticipated to be difficult?
If any of the other options selected then go to Q2.2(viii)

Maintaining oxygen saturations during apnoea Short safe apnoea time	Yes	☐	No	☐	Unknown	☐
Facemask ventilation	Yes	☐	No	☐	Unknown	☐
Supraglottic airway ventilation	Yes	☐	No	☐	Unknown	☐
Laryngoscopy and/or intubation	Yes	☐	No	☐	Unknown	☐
eFONA Emergency front of neck airway	Yes	☐	No	☐	Unknown	☐

2 Patient Factors (Continued)

(viii) Was gastric point of care ultrasound performed pre-RSI?

Yes ☐ No ☐ Unknown ☐

↪(ix) **If 'Yes' for Q2.2 (viii)**, did gastric ultrasound alter the planned conduct of the RSI?

If any other option selected go to Q3.1
Select all that apply

No did not alter the plan	☐	Decided **not** safe to face-mask ventilate	☐
Informed decision to undertake RSI	☐	Chose to insert NG tube	☐
Did use cricoid force	☐	Chose **not** to insert NG tube	☐
Did **not** use cricoid force	☐	**Other**	☐
Decided safe to face-mask ventilate	☐	Please indicate: _____	

3 Technical Factors

3.1 Preparation

(i) Was a formal RSI checklist used and read aloud?

Yes ☐ No ☐ Unknown ☐

(ii) Was 'Patient wake-up' a possible airway rescue strategy?

Yes - discussed prior to induction ☐ Yes - but not explicitly discussed ☐ No - discussed prior to induction ☐ No - and not explicitly discussed ☐ Unknown ☐

(iii) Was a prokinetic / antacid administered?

Yes ☐ No ☐ Unknown ☐

↪(iv) **IF 'Yes' for Q3.1 (iii)**, what prokinetic(s) / antacid(s) were administered?

If any other option go to Q3.1(v)
Select all that apply

Proton pump inhibitor (e.g. omeprazole)	☐	**H2-receptor antagonist** (e.g. ranitidine)	☐	**Prokinetic** (e.g. metoclopramide)	☐
Sodium citrate 0.3M (oral solution)	☐	**Other**	☐	Please indicate: _____	

(v) NG tube inserted or in-situ?

Yes ☐ No ☐ Unknown ☐

↪(vi) **IF 'Yes' for Q3.1 (v)**, what type of NG tube?

If any other option go to Q3.1(viii)

Ryle's tube **in-situ**	☐	Ryle's tube **inserted**	☐	
Feeding tube **in-situ**	☐	Feeding tube **inserted**	☐	
Feeding tube **changed** to Ryle's tube	☐	Salem double lumen gastric tube	☐	
Unknown	☐	Other	☐	Please indicate: _____

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3 Technical Factors (Continued)

↪(vii) **IF 'Yes' for Q3.1 (v)**, what action(s) were performed to the NG tube?
If any other option go to Q3.1(viii)
Select all that apply

Removed before induction	☐	Suctioned	☐
Aspirated	☐	Free drainage / left open to air	☐
Spigotted	☐	Other	☐
		Please indicate: _____	

(viii) Was suction turned on and within intubator's arm reach?

Yes- 1 suction system ☐ **Yes-** 2 suction systems ☐ **No** ☐ **Unknown** ☐

(ix) Could the bed / trolley / operating able to tip immediately if required?

Yes ☐ No ☐ Unknown ☐

(x) What was the patient position for intubation?

Head-up ≥30 degrees	☐	Reverse trendelenberg ≥30 degrees	☐	Lateral	☐
Head-up <30 degrees	☐	Reverse trendelenberg <30 degrees	☐	Flat	☐
Trendelenberg	☐	Unknown	☐		
Other	☐	Please indicate: _____			

↪(xi) **IF 'Head-up ≥30 degrees' OR 'Head-up <30 degrees' in Q3.1 (x)**, was the patient in a ramped position for intubation?
Where the external auditory meatus and sternal notch are aligned in the same horizontal plane
If any other option go to Q3.1(xii)

Yes ☐ No ☐ Unknown ☐

(xii) What was the method of pre-oxygenation?
Select all that apply

Column A		Column B		Column C		Column D	
Anaesthetic circuit (e.g. circle, Bain)	☐	**Low flow nasal cannulae** <10 L/min	☐	**CPAP**	☐	**None** (not pre-oxygenated)	☐
Water's circuit Mapleson C	☐	**Non-anaesthetic mask** (e.g. Non-rebreathe, Venturi, Hudson)	☐	**NIV** (e.g. BiPAP)	☐	Unknown	☐
Bag-valve-mask (e.g. Ambu-bag)	☐	**High flow nasal oxygen** (HFNO)	☐				
Supra-glottic airway device (e.g. iGel)	☐						

↪(xiii) **IF any option from 'Column A' in Q3.1 (xii)**, pressure support during pre-oxygenation?
If any other option go to Q3.1(xiv)

Spontaneous breathing without continuous positive airway pressure	☐	Spontaneous breathing with continuous positive airway pressure	☐	**Unknown**	☐
Spontaneous breathing with manually assisted ventilation	☐	Apnoeic and manually ventilated	☐		

3 Technical Factors (Continued)

↪(xiv) **IF any option from 'Column A, B OR C in Q3.1 (xii)**, what was the endpoint prior to intubation?

Select all that apply
If any option from Column D go to Q3.1(xv)

Oxygen Saturations (SpO_2)	☐	Duration <1 minute	☐	Tidal volume breaths (set number)	☐
End tidal O_2 80-90%	☐	Duration 1-3 minutes	☐	Vital capacity breaths (set number)	☐
End tidal O_2 >90%	☐	Duration >3 minutes	☐	No specific end-point (e.g. time did not allow)	☐

(xv) What were the oxygenation saturations (SpO_2 %) pre-induction (after any pre-oxygenation given)?

90-100% ☐ 80-89% ☐ <80% ☐ Unknown ☐

3.2 Role Allocation

(i) Please provide details of individual team members and the roles they were allocated.
(Note: each person may be allocated multiple roles and roles can be unallocated; select one number per team member, with >1 number if performed by same person)

	Role not allocated	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
Team Leader This refers to the airway-trained practitioner who decides on the conduct of the RSI	☐	☐	☐	☐	☐	☐	☐
Drug administration	☐	☐	☐	☐	☐	☐	☐
Airway assistant	☐	☐	☐	☐	☐	☐	☐
Cricoid force	☐	☐	☐	☐	☐	☐	☐
1st Intubator	☐	☐	☐	☐	☐	☐	☐
2nd intubator	☐	☐	☐	☐	☐	☐	☐

(ii) What was the occupation / grade of the following team members?

	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
Doctor Consultant	☐	☐	☐	☐	☐	☐
Doctor Associate Specialist	☐	☐	☐	☐	☐	☐
Doctor SAS (or equivalent)	☐	☐	☐	☐	☐	☐
Doctor ST5-7 (or fellow / equivalent)	☐	☐	☐	☐	☐	☐
Doctor ST3-4 (or fellow / equivalent)	☐	☐	☐	☐	☐	☐
Doctor CT1-2 (or fellow / equivalent)	☐	☐	☐	☐	☐	☐
Doctor F1-F2 (or fellow / equivalent)	☐	☐	☐	☐	☐	☐

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3 Technical Factors (Continued)

(ii) Continued…

	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
Medical Student	☐	☐	☐	☐	☐	☐
Anaesthesia Associate / Physician assistant in	☐	☐	☐	☐	☐	☐
Student Anaesthesia Associate / Physician	☐	☐	☐	☐	☐	☐
ODP (Operating Department Practitioner)	☐	☐	☐	☐	☐	☐
Student ODP	☐	☐	☐	☐	☐	☐
Anaesthetic Nurse	☐	☐	☐	☐	☐	☐
ACCP Or equivalent	☐	☐	☐	☐	☐	☐
Student ACCP	☐	☐	☐	☐	☐	☐
ICU Nurse	☐	☐	☐	☐	☐	☐
Physicians Associate	☐	☐	☐	☐	☐	☐
Specialist Nurse / ANP	☐	☐	☐	☐	☐	☐
ED Nurse Any band	☐	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐	☐

↪(iii) **IF the person is a 'Doctor CT1 [or above] ' in Q3.2 (ii)**, what is their training background(s)?
If any other option go to Q3.3(i)

	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
Anaesthesia	☐	☐	☐	☐	☐	☐
Intensive Care Medicine (ICM)	☐	☐	☐	☐	☐	☐
Emergency Medicine (EM)	☐	☐	☐	☐	☐	☐
ICM and Anaesthesia	☐	☐	☐	☐	☐	☐
ICM and EM	☐	☐	☐	☐	☐	☐
ICM and Internal Medicine	☐	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐	☐

3.3 Induction / Drugs

(i) Was an arterial line in-situ and working prior to induction?

Yes ☐ No ☐ Unknown ☐

If yes, please use the arterial line values for all subsequent entries in this CRF

3 Technical Factors (Continued)

(ii) What was the baseline systolic BP (mmHg) immediately before induction?

Including where vasoactive / fluid therapy has been instigated

≤50 ☐ 51-60 ☐ 61-70 ☐ 71-80 ☐ 81-90 ☐ 91-100 ☐ 101-110 ☐ 111-120 ☐ 121-130 ☐
131-140 ☐ 141-150 ☐ 151-160 ☐ 161-170 ☐ 171-180 ☐ 181-190 ☐ 191-200 ☐ >200 ☐ Unknown ☐

(iii) Were vasopressors / inotropes ALREADY given / running before induction?

Yes ☐ No ☐ Unknown ☐

↪ (iv) **IF 'Yes' in Q3.3 (iii)**, which agent was administered?
Select all that apply
If any other option go to Q3.3(v)

Metaraminol bolus(es) ☐ Ephedrine ☐ Peripheral Noradrenaline ☐ Adrenaline bolus(es) ☐ Vasopressin ☐
Metaraminol infusion ☐ Phenylephrine ☐ Central noradrenaline ☐ Adrenaline infusion ☐ Other ☐ Please indicate: _____

(v) Was a delayed sequence induction performed?
Sedation assisted pre-oxygenation

Yes ☐ No ☐ Unknown ☐

↪(vi) **IF 'Yes' in Q3.3 (v)**, which agent(s) were used?
Select all that apply
If any other option go to Q3.3(vii)

Propofol ☐ Ketamine ☐ Midazolam ☐ Etomidate ☐ Opioid ☐
Other ☐ Please indicate: _____

(vii) Which IV opioid(s) were used for induction?
Select all that apply

Fentanyl bolus ☐ Alfentanil bolus ☐ Morphine bolus ☐ Remifentanil TCI ☐ Other ☐
Fentanyl infusion ☐ Alfentanil infusion ☐ Morphine infusion ☐ Remifentanil infusion (non-TCI) ☐ Please indicate: _____
None ☐

(viii) Was processed EEG applied before induction?

Yes ☐ No ☐ Unknown ☐

↪(ix) **IF 'Yes' in Q3.3 (viii)**, did this affect the conduct of the RSI?
If any other option go to Q3.3(xi)

Yes ☐ No ☐ Unknown ☐

↪(x) **IF 'Yes' in Q3.3 (ix)**, how did this affect conduct of the RSI?
Select all that apply. If any other option go to Q3.3(xi)

Guided titration of induction agent (including with TCI / TIVA) ☐ Timing of neuromuscular blockade ☐ Timing of laryngoscopy ☐ Unknown ☐
Other ☐ Please indicate: _____

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3 Technical Factors (Continued)

(xi) Which induction agent(s) were used?

Propofol ☐ Ketamine ☐ Midazolam ☐ Thiopentone ☐ Etomidate ☐
Other ☐ Please indicate: _____
None ☐

↪(xii) **IF 'Propofol' for Q3.3 (xi)**, how was the propofol administered for the RSI?

If any other option go to Q3.3(xiii)

Manual bolus from syringe (no target controlled infusion TCI) ☐ Manual bolus using a syringe followed by initiation of a TCI pump ☐
Bolus administered using a TCI pump: using a syringe and 3-way tap ☐ Bolus administered directly using a TCI pump (not using a syringe and 3-way tap) ☐

(xiii) How much induction agent was administered?

Predetermined dose (Given as rapid IV bolus) ☐ Titrated to effect ☐ Unknown ☐ Other ☐ Please indicate: _____

(xiv) Were vasopressors / inotropes GIVEN OR INCREASED PRE-EMPTIVELY **with** induction?

Yes ☐ No ☐ Unknown ☐

↪(xv) **IF 'Yes' to Q3.3 (xiv)**, which agents were administered?

Select all that apply. If any other option go to Q3.3(xvi)

Metaraminol bolus(es) ☐ Ephedrine ☐ Peripheral Noradrenaline ☐ Adrenaline bolus(es) ☐ Vasopressin ☐
Metaraminol infusion ☐ Phenylephrine ☐ Central noradrenaline ☐ Adrenaline infusion ☐ Other ☐ Please indicate: _____

(xvi) Was a neuromuscular blocking agent (NMBA) administered for the RSI?

Rocuronium <1mg/kg ☐ Suxamethonium ☐ Vecuronium ☐ Other ☐ Please indicate: _____
Rocuronium ≥1mg/kg ☐ Atracurium ☐ Unknown ☐ None ☐

↪(xvii) **IF rocuronium (any dose) in Q3.3 (xvi) AND IF 'patient wake-up' was possible strategy in Q 3.2 (ii)**, did any member of the team check if sugammadex reversal was immediately available in an appropriate dose prior to induction? (e.g. 16mg/kg for rocuronium doses ≥1mg/kg)

If any other option go to Q3.3(xviii)

Yes ☐ No ☐ Unknown ☐

(xviii) What was the time period between induction agent administration and the neuromuscular blocking agent (NMBA)?

Immediate No latency ☐ **Delayed** Some latency ☐ **Other** ☐ Please indicate: _____
Unknown ☐

3 Technical Factors (Continued)

3.4 Airway / Intubation

1st Laryngoscopy / Tracheal Intubation attempt

(i) Oxygenation techniques between induction and 1st attempt laryngoscopy

Select all that apply

Airway Patency		Oxygenation Delivery			
Simple airway manoeuvres (e.g. jaw thrust, head tilt/chin lift)	☐	**Anaesthetic circuit** (e.g. circle, Bain)	☐	**Non-anaesthetic mask** (e.g. Venturi, Hudson, non-rebreathe)	☐
Oropharyngeal airway (Guedel)	☐	**Waters' circuit** Mapleson C	☐	**High-flow nasal oxygen**	☐
Nasopharyngeal airway (NP)	☐	**Bag-valve-mask - BVM** (e.g. Ambu-bag)	☐	**CPAP**	☐
Supra-glottic airway device (e.g. iGel)	☐	**Low-flow nasal cannulae** (< 10 L/min)	☐	**NIV** (e.g. BiPAP)	☐

↪(ii) **IF 'supra-glottic airway device' selected for Q3.4 (i)**, was ventilation attempted via the supra-glottic airway (SGA) prior to intubation attempt?

Yes - Ventilation Successful		Yes - Ventilation Unsuccessful		No	
SGA in-situ prior to induction of anaesthesia	☐	Ventilation attempted via SGA but unsuccessful	☐	Ventilation not attempted	☐
SGA inserted in 1 attempt	☐			**Unknown**	☐
SGA required >1 attempt at insertion	☐				

↪(iii) **IF 'Anaesthetic circuit, Waters' circuit, or Bag-valve-mask' selected for Q3.4 (i)**, was facemask ventilation attempted prior to intubation attempt?

If any other option go to Q3.4(vi)

Yes - planned ☐ Yes - unplanned ☐ No ☐ Unknown ☐

↪(iv) **IF 'Anaesthetic circuit' for Q3.4(i) AND IF 'Yes' for Q3.4 (iii),** was "low-pressure" (<15-20cmH_2O limit) facemask ventilation used?

Yes ☐ No ☐ Unknown ☐

↪(v) **IF 'Yes' for Q3.4 (iii)**, to what degree was facemask ventilation successful?

Effective / adequate ☐ **Difficult** (no plateau, end tidal CO_2 ≤1.3kPa) ☐ **Impossible** (no end tidal CO_2 detected, no ventilation) ☐ **Unknown** ☐

(vi) Was the C-spine immobilised?

Yes ☐ No ☐ Unknown ☐

↪(vii) **IF 'Yes' for Q3.4 (vi)**, what was the method of immobilisation?

If any other option go to Q3.4(viii)

Manual in-line stabilisation (MILS) ☐ Rigid collar on ☐ Rigid collar partially on ☐ Immobilised with fixed device ☐ Unknown ☐ Other ☐ Please indicate: _____

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3 Technical Factors (Continued)

(viii) Choice of laryngoscope

Videolaryngoscope		**Direct Laryngoscope**		**Unknown**	
Macintosh blade	☐	Macintosh blade	☐	**Other**	☐
Hyper-angulated blade	☐			Please indicate: _____	

↪(ix) **IF 'videolaryngoscope' selected for Q3.4 (viii)**, which videolaryngoscope manufacturer?
If any other option then go to Q3.4(x)

Heine	☐	Storz CMAC - single use	☐	Unknown	☐
Glidescope	☐	Storz CMAC - reusable	☐	Other	☐
McGrath	☐			Please indicate: _____	

(x) What was the best intubation view obtained (with or without manipulation)?
Intubation grade: modified Cormack-Lehane [POGO: % of glottic opening]

Grade 1 View of most of glottis [POGO 51-100%]	☐	**Grade 2a** Partial view of glottis [POGO 1-50%]	☐	**Grade 2b** View of arytenoids or posterior commissure [POGO 0%]	☐
Grade 3a Epiglottis seen and liftable	☐	**Grade 3b** Epiglottis not liftable	☐	**Grade 4** Neither glottis nor epiglottis seen	☐
Unknown	☐				

(xi) Intubation adjuncts
Select all that apply

Bougie (standard)	☐	Stylet (mouldable)	☐	None	☐
Bougie (dynamic with steerable tip)	☐	Stylet (preformed hyperangulated supplied with video laryngoscope)	☐	Other	☐
Bronchoscope	☐			Please indicate: _____	

(xii) Cricoid force applied
*If unknown selected here **go straight to Q3.4 (xxii) - Other measures to aid view at laryngoscopy***
Yes ☐ No ☐ Unknown ☐

↪(xiii) **IF cricoid 'No' to Q3.4 (xii)**, reason for NOT using cricoid force?
*Select all that apply and **go straight to Q3.4 (xxii) - Other measures to aid view at laryngoscopy***

Unknown	☐	Concern about worsening intubation view	☐	Do not believe that it works	☐
Risk of aspiration not deemed to warrant use	☐	Departmental policy	☐	Lack of trained assistant	☐
Other	☐	Please indicate: _____			

↪(xiv) **IF cricoid 'Yes' to Q3.4 (xii)**, how was cricoid position located?

Unknown	☐	Second skin crease	☐	Point of care ultrasound	☐
Structures palpated	☐	Middle of neck	☐	Other	☐ Please indicate: _____

↪(xv) **IF cricoid 'Yes' to Q3.4 (xii)**, when was cricoid force applied?

Before loss of consciousness (LOC)	☐	At point of loss of consciousness (LOC)	☐
At some point later	☐	Unknown	☐

↪(xvi) **IF cricoid 'Yes' to Q3.4 (xii)**, was cricoid force maintained during 1st intubation attempt (until tube position confirmed in the trachea and cuff inflated)?
Yes ☐ No - reduced ☐ No - removed ☐ Unknown ☐

3 Technical Factors (Continued)

↪(xvii) **IF cricoid 'reduced' OR 'removed' to Q3.4 (xvi)**, reason for cricoid force adjustment?
Select all that apply

Interfering with laryngoscope insertion	☐	Difficult facemask ventilation (FMV)	☐	Rescue supra-glottic airway	☐
Distorting larynx	☐	Vomiting	☐	Other	☐
Difficult laryngeal view	☐	Regurgitation	☐	Please indicate: _____	

↪(xviii) **IF cricoid 'before LOC' to Q3.4 (xv)**, what force did the assistant intend to apply before LOC?
If any other options selected for Q3.4(xv) then go to Q3.4(xix)

Unknown- survey respondent does not know	☐	Firm pressure	☐	1-2.5kg (10-25 Newtons)	☐
Unknown- person applying cricoid force does not know	☐	<1kg (< 10 Newtons)	☐	2.5-4kg (25-40 Newtons)	☐
Light/moderate pressure	☐	1kg (10 Newtons)	☐	>4kg (>40 Newtons	☐

↪(xix) **IF 'Yes' to Q3.4 (xii)** what force did the assistant intend to apply after LOC?

Unknown- survey respondent does not know	☐	Firm pressure	☐	1-2.5kg (10-25 Newtons)	☐
Unknown- person applying cricoid force does not know	☐	<1kg (< 10 Newtons)	☐	2.5-4kg (25-40 Newtons)	☐
Light/moderate pressure	☐	1kg (10 Newtons)	☐	>4kg (>40 Newtons	☐

↪(xx) **IF 'Yes' to Q3.4 (xii)**, was the person applying cricoid force formally trained in it?
Yes ☐ No ☐ Unknown ☐

↪(xxi) **IF 'Yes' to Q3.4 (xii)**, had they practiced applying cricoid force?
Yes within the last 3 months ☐ Yes over 3 months ago ☐ No ☐ Unknown ☐

(xxii) Other measures to aid view at laryngoscopy?
Select all that apply

None	☐	MILS/C-spine immobilisation removed	☐	Asleep fiberoptic intubation	☐
Backwards-upward-rightward pressure (BURP) to thyroid cartilage	☐	Additional dose of muscle relaxant	☐	External laygneal manipulation	☐
Patient position optimised (e.g.: pillow placed under shoulder)	☐	Video assisted flexible optical intubation (VAFI)	☐	Other	☐ Please indicate: _____

(xxiii) Was 1st intubation attempt successful?
Note: Select next airway strategy used - all 'No' options include situations were tube was removed as part of the 1st attempt (Supra-glottic airway insertion and facemask ventilation between attempts can be entered later in the survey)

Yes		**No**			
Proceeded to successfully confirm tube position	☐	Undertook 2nd attempt (includes change of blade or intubator)	☐	Intubation via supra-glottic airway attempted	☐
		Patient wake up attempted	☐	eFONA (cricothyroidotomy or tracheostomy)	☐
		Proceeded without intubation (facemask ventilation / supra-glottic airway)	☐	Patient died (none of the other options)	☐

If 1st intubation attempt was successful please go to section 3.5 'Intubation confirmation' on page 10.
*If the 1st intubation attempt was unsuccessful please complete the following questions on **Additional Airway Strategies:***
If "Undertook 2nd attempt" go to Q3.4.1 (i) on page 7.
If "Patient wake up attempted" go to Q3.4.2 (i) on page 8.
If "Proceeded without intubation" OR "Intubation via supra-glottic airway attempted" go to Q3.4.3 (i) on page 8.
If "eFONA" please go to Q3.4.4 (i) on page 9.

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Service Evaluation of Cross-Specialty UK Rapid Sequence Intubation Events

Activity Survey

Thank you for taking part in SECURE, we value your time.
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· Patient ≥18 years old (adult)
· RSI in-hospital (within hospital grounds including ED)

*Do NOT include if intubated during cardiac arrest – unless **after ROSC** (return of spontaneous circulation) or unless cardiac arrest occurred **after RSI induction**.*
Do NOT include if patient had tracheostomy in situ.

3 Technical Factors (Continued)

Intubation Attempt Number: _____

3.4.1 Airway / Intubation - OPTIONAL Additional Airway Strategies
2nd/3rd/4th/5th Laryngoscopy / Tracheal Intubation attempt

Please print and complete this section multiple times as necessary for 2nd, 3rd, 4th and up to maximum of 5th attempt

(i) Was the person performing intubation changed (between previous intubation attempt and this attempt)

Yes ☐ No ☐ Unknown ☐

(ii) Oxygenation techniques between previous attempt and this laryngoscopy attempt:
Select all that apply

Airway Patency		Oxygenation Delivery			
Simple airway manoeuvres (e.g. jaw thrust, head tilt/chin lift)	☐	**Anaesthetic circuit** (e.g. circle, Bain)	☐	**Non-anaesthetic mask** (e.g. Venturi, Hudson, non-rebreathe)	☐
Oropharyngeal airway (Guedel)	☐	**Waters' circuit** Mapleson C	☐	**High-flow nasal oxygen**	☐
Nasopharyngeal airway (NP)	☐	**Bag-valve-mask - BVM** (e.g. Ambu-bag)	☐	**CPAP**	☐
Supra-glottic airway device (e.g. iGel)	☐	**Low-flow nasal cannulae** (< 10 L/min)	☐	**NIV** (e.g. BiPAP)	☐

↪(iii) **IF 'supra-glottic airway device' selected for Q3.4.1 (ii)**, was ventilation attempted via the supra-glottic airway (SGA) prior to this intubation attempt?

Yes - Ventilation Successful		**Yes - Ventilation Unsuccessful**		**No**	
SGA inserted in 1 attempt	☐	Ventilation attempted via SGA but unsuccessful	☐	Ventilation not attempted	☐
SGA required >1 attempt at insertion	☐			**Unknown**	☐

↪ (iv) **IF 'Anaesthetic circuit, Waters' circuit, or Bag-valve-mask' selected for Q3.4.1 (ii)**, was facemask ventilation attempted prior to intubation attempt?
If any other option go to Q3.4.1(vii)

Yes - planned ☐ Yes - unplanned ☐ No ☐ Unknown ☐

↪(v) **IF 'Anaesthetic circuit' for Q3.4.1(ii) AND IF 'Yes' for Q3.4.1 (iv),** was "low-pressure" (<15-20cmH_2O limit) facemask ventilation used?

Yes ☐ No ☐ Unknown ☐

↪(vi) **IF 'Yes' for Q3.4.1 (iv)**, to what degree was facemask ventilation successful?

Effective / adequate ☐ **Difficult** (no plateau, end tidal CO_2 ≤1.3kPa) ☐ **Impossible** (no end tidal CO_2 detected, no ventilation) ☐ **Unknown** ☐

(vii) Was the laryngoscope changed for the 2nd/3rd/4th/5th attempt? *If no selected please go to Q3.4.1 (x)*

Yes ☐ No ☐ Unknown ☐

↪(viii) **IF 'Yes' for Q3.4.1 (vii)**, what was the choice of laryngoscope?

Videolaryngoscope		**Direct Laryngoscope**		**Unknown**	☐
Macintosh blade	☐	Macintosh blade	☐	**Other**	☐
Hyper-angulated blade	☐			Please indicate: _____	

3 Technical Factors (Continued)

↪(ix) **IF 'videolaryngoscope' selected for Q3.4.1 (viii)**, which videolaryngoscope manufacturer?

Heine ☐ Storz CMAC - single use ☐ McGrath ☐ Unknown ☐
Glidescope ☐ Storz CMAC - reusable ☐ Other ☐ Please indicate: _____

(x) What was the best intubation view obtained (with or without manipulation)?
Intubation grade: modified Cormack-Lehane [POGO: % of glottic opening]

Grade 1 View of most of glottis [POGO 51-100%]	☐	**Grade 2a** Partial view of glottis [POGO 1-50%]	☐	**Grade 2b** View of arytenoids or posterior commissure [POGO 0%]	☐
Grade 3a Epiglottis seen and liftable	☐	**Grade 3b** Epiglottis not liftable	☐	**Grade 4** Neither glottis nor epiglottis seen	☐
Unknown	☐				

(xi) Was the size of the tracheal tube changed from the 1st attempt?

Yes - size increased ☐ **Yes** - size decreased ☐ **No** - same tube ☐ **Unknown** ☐ Other ☐

(xii) Intubation adjuncts
Select all that apply

Bougie (standard)	☐	Stylet (mouldable)	☐	None	☐
Bougie (dynamic with steerable tip)	☐	Stylet (preformed hyperangulated supplied with video laryngoscope)	☐	Other	☐
Bronchoscope	☐			Please indicate: _____	

↪(xiii) **IF cricoid force 'Yes' to Q3.4 (xii) on page 6 and not removed during previous attempt,** was it maintained during this attempt?
If 'No' or 'Unknown' to Q3.4(xii) then go to Q3.4.1(xv)

Yes ☐ **No** - reduced pressure ☐ **No** - removed ☐

↪(xiv) **IF 'No' to Q3.4.1 (xiii)**, reason for cricoid force adjustment?
Select all that apply

Interfering with laryngoscope insertion	☐	Difficult facemask ventilation (FMV)	☐	Rescue supra-glottic airway	☐
Distorting larynx	☐	Vomiting	☐	Other	☐
Difficult laryngeal view	☐	Regurgitation		Please indicate: _____	

(xv) Other measures to aid view at laryngoscopy?
Select all that apply

None	☐	MILS/C-spine immobilisation removed	☐	Asleep fiberoptic intubation (without	☐
Backwards-upward-rightward pressure (BURP) to thyroid cartilage	☐	Additional dose of muscle relaxant	☐	External laygneal manipulation	☐
Patient position optimised (e.g.: pillow placed under shoulder)	☐	Video assisted flexible optical intubation (VAFI)	☐	Other	☐ Please indicate: _____

(xvi) Was 2nd/3rd/4th/5th intubation attempt successful?

Note: Select next airway strategy used - all 'No' options include situations where tube was removed as part of the intubation attempt (Supra-glottic airway insertion and facemask ventilation between attempts can be entered later in the survey)

Yes		**No**			
Proceeded to successfully confirm tube position	☐	Undertook 3rd/4th/5th attempt (includes change of blade or intubator)	☐	Intubation via supra-glottic airway attempted	☐
		Patient wake up attempted	☐	eFONA (cricothyroidotomy or tracheostomy)	☐
		Proceeded without intubation (facemask ventilation / supra-glottic airway)	☐	Patient died (none of the other options)	☐

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Activity Survey

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· RSI in-hospital (within hospital grounds including ED)

*Do NOT include if intubated during cardiac arrest – unless **after ROSC** (return of spontaneous circulation) or unless cardiac arrest occurred **after RSI induction**.*
Do NOT include if patient had tracheostomy in situ.

3 Technical Factors (Continued)

3.4.2 Airway / Intubation - OPTIONAL Additional Airway Strategies
Emergency Wake Up Attempt

(i) If you attempted to wake up the patient, was this successful?

Yes Straightforward ☐ **Yes** Complicated by physiological instability ☐ No ☐ Unknown ☐

Techniques before wake-up, before spontaneous breathing achieved

(ii) Was ventilation attempted via supraglottic airway (SGA)?

Yes - Ventilation Successful	**Yes - Ventilation Unsuccessful**	**No**
SGA already in situ ☐	Ventilation attempted via SGA but unsuccessful ☐	Ventilation not attempted ☐
SGA inserted in 1 attempt ☐		**Unknown** ☐
SGA required >1 attempt at insertion		

(iii) Was facemask ventilation attempted?

Yes ☐ No ☐ Unknown ☐

↪(iii) **IF 'Yes' for Q3.4.2 (iii)**, to what degree was facemask ventilation successful?
If any other option go to Q3.4.2(iv)

Effective / adequate ☐ **Difficult** (no plateau, end tidal CO_2 ≤1.3kPa) ☐ **Impossible** (no end tidal CO_2 detected, no ventilation) ☐ **Unknown** ☐

(iv) Reversal agent(s)
Select all that apply

Sugammadex 16mg/kg ☐	Glycopyrronium / Neostigmine ☐	Other ☐
Sugammadex <16mg/kg ☐	Naloxone ☐	Please indicate: _____
Flumazenil ☐	Doxapram ☐	

(iv) Was eFONA attempted?

Yes ☐ No ☐ Unknown ☐

IF 'Yes' answer go to section Q3.4.4 eFONA attempts on page 9.
IF 'No" or 'Unknown" to eFONA attempt then please go to section 4 Immediate Complications on page 10.

3 Technical Factors (Continued)

3.4.3 Airway / Intubation - OPTIONAL Additional Airway Strategies
Proceed Without Intubation (facemask ventilation or supra-glottic airway), OR Intubation via Supra-glottic Airway Attempted

After the team decided to proceed without intubation via laryngoscopy:
(i) Was facemask ventilation attempted at any point?

Yes ☐ No ☐ Unknown ☐

↪(ii) **IF 'Yes' to Q3.4.3(i)** To what degree was facemask ventilation successful?

Effective / adequate ☐ **Difficult** (no plateau, end tidal CO_2 ≤1.3kPa) ☐ **Impossible** (no end tidal CO_2 detected, no ventilation) ☐ **Unknown** ☐

(iii) Was a supra-glottic device inserted / reinserted?

Yes ☐ No ☐

If 'No' here then proceed straight to section 4 Immediate Complications on page 10.

↪(iv) **IF 'Yes' to Q3.4.3 (iii)**, what was the first choice of supra-glottic airway (SGA)?

iGel ☐	LMA Classic ☐	Unknow ☐
iGel Plus ☐	LMA ProSeal ☐	Other ☐
Ambu Aura-i ☐	LMA Supreme ☐	Please indicate: _____
Air-Q ☐	Flexible LMA ☐	

↪(v) **IF 'Yes' to Q3.4.3 (iii)**, size of supra-glottic airway?

2.5 ☐ 3 ☐ 4 ☐ 5 ☐ Unknown ☐ Other ☐ Please indicate: _____

↪(vi) **IF 'Yes' to Q3.4.3 (iii)** was ventilation via supra-glottic airway successful?

Yes - Ventilation Successful	**No**	**Unknown** ☐
SGA in-situ prior to induction of anaesthesia ☐	Patient wake up attempted ☐	
SGA inserted in 1 attempt ☐	eFONA (cricothyroidotomy or tracheostomy) ☐	
SGA required >1 attempt at insertion ☐	Patient died ☐	

↪(vii) **IF 'Yes' to Q3.4.3 (iii)** was intubation through supra-glottic airway attempted?
*If 'No' here then proceed straight to **section 4 Immediate Complications on page 10***

Yes ☐ No ☐

↪(viii) **IF 'Yes' to Q3.4.3 (vii)** what technique was used?

Blind intubation through SGA ☐ Intubation through SGA with flexible optical bronchoscope **and** Aintree intubation catheter ☐ Intubation through SGA with flexible optical laryngoscope ☐ Other ☐ Please indicate: _____

↪(ix) IF 'Yes' to Q3.4.3 (vii) was this successful?

Yes ☐ No ☐

If "Yes" to Q3.4.3 (ix), go to section 3.5 Intubation confirmation page 10.
If "No" to Q3.4.3 (ix), please go to section 4 Immediate Complications on page 10.

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Activity Survey

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· RSI in-hospital (within hospital grounds including ED)

*Do NOT include if intubated during cardiac arrest – unless **after ROSC** (return of spontaneous circulation) or unless cardiac arrest occurred **after RSI induction**.*
Do NOT include if patient had tracheostomy in situ.

3 Technical Factors (Continued)

eFONA Attempt Number: _____

3.4.4 Airway/Intubation - OPTIONAL Additional Airway Strategies

1st/2nd/3rd emergency Front of Neck Airway (eFONA) Attempt

Please print and complete this section multiple times as necessary up to 3 eFONA attempts

(i) Was there a final attempt at facemask ventilation prior to eFONA attempt?

Yes ☐ No ☐

↪(ii) **IF 'Yes' to Q3.4.4(i)** To what degree was facemask ventilation successful?

Effective / adequate	**Difficult** (no plateau, end tidal CO_2 ≤1.3kPa)	**Impossible** (no end tidal CO_2 detected, no ventilation)	**Unknown**
☐	☐	☐	☐

(iii) Was ventilation attempted via supra-glottic airway (SGA) before this eFONA attempt?

Yes - Ventilation Successful	**Yes - Ventilation Unsuccessful**	**No**
SGA in-situ prior to induction of anaesthesia ☐	Ventilation attempted via SGA but unsuccessful ☐	Ventilation not attempted ☐
SGA inserted in 1 attempt ☐		**Unknown** ☐
SGA required >1 attempt at insertion ☐		

↪(iv) **IF 'Yes' options to Q3.4.4(iii)** was the supraglottic left in place during the eFONA attempt?

Yes ☐ No ☐ Unknown ☐

(v) How was the 1st/2nd/3rd eFONA attempt performed?

Scalpel-bougie-tube cricothyroidotomy ☐	Emergency Surgical Tracheostomy ☐	Other ☐
Narrow-bore (<4mm) cannula cricothyroidotomy (e.g. Ravussin™ VBM) ☐	Percutaneous Tracheostomy ☐	Please indicate: _____
Wide-bore (≥4mm) cannula cricothyroidotomy (e.g. Cook Melker®, Quicktrach®) ☐		

(vi) Neck position for 1st/2nd/3rd eFONA attempt

Neutral ☐ 'Sniffing morning air' ☐ Fully hyperextended ☐ Other ☐ Please indicate: _____

(vii) Who attempted 1st/2nd/3rd eFONA?

1st intubator ☐	Another airway practitioner called to help (not part of the intubating team) ☐	
2nd intubator ☐	ENT doctor ☐	
Team leader ☐	Other ☐	Please indicate: _____

3 Technical Factors (Continued)

↪(viii) **IF 'Another airway practitioner' to Q3.4.4 (vii)**, Job grade and role?

If any other option go to Q3.4.4(x).

Doctor: Consultant	☐	Anaesthesia Associate / Physician Assistant in anaesthesia	☐	ACCP trainee	☐
Doctor: Associate Specialist	☐	Anaesthesia associate student / Physician assistant in anaesthesia student (or equivalent)	☐	ICU nurse	☐
Doctor: SAS (or equivalent)	☐	ODP (operating department practitioner)	☐	Physicians associate	☐
Doctor: ST5-7 (or fellow / equivalent)	☐	ODP student	☐	Specialist nurse/ ANP (or equivalent)	☐
Doctor: ST3-4 (or fellow / equivalent)	☐	Anaesthetic nurse	☐	ED nurse any band	☐
Doctor: CT1-2 (or fellow / equivalent)	☐	ACCP or equivalent	☐	Other staff member	☐

↪(ix) **IF the person is a 'Doctor' in Q3.4.4 (viii)**, what is their parent specialty?

If any other option go to Q3.4.4(x).

Anaesthesia	☐	Intensive Care Medicine (ICM)	☐	Emergency Medicine (EM)	☐
ICM and EM	☐	ICM and Internal Medicine	☐	Unknown	☐

ICM and Anaesthesia	☐
Other	☐

Please indicate: _____

(x) Was 1st/2nd/3rd eFONA successful?

Yes ☐ No - 2nd/3rd attempt at eFONA required ☐ No - eFona abandoned after 1st/2nd/3rd attempt ☐

Please complete for up to 3 eFONA attempts.

If "Yes" to Q3.4.4 (x) and eFONA was successful, please go to section 3.5 Intubation Confirmation on page 10.
If "No" to Q3.4.4 (x) and eFONA was unsuccessful, please go to section 4 Immediate Complications on page 10.

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Do NOT include if patient had tracheostomy in situ.

3 Technical Factors (Continued)

3.5 Intubation Confirmation

(i) Who performed successful intubation?

1st intubator	☐	Another airway practitioner called to help (not part of the intubating team)	☐	Other	☐ Please indicate: _____
2nd intubator	☐	ENT doctor	☐		
Team leader	☐	Unknown	☐		

↪(ii) **IF 'Another airway practitioner' to Q3.5(i)**, Job grade and role?
If any other option go to Q3.5(iii)

Doctor: Consultant	☐	Anaesthesia Associate / Physician Assistant in anaesthesia	☐	ACCP trainee	☐
Doctor: Associate Specialist	☐	Anaesthesia associate student / Physician assistant in anaesthesia student (or equivalent)	☐	ICU nurse	☐
Doctor: SAS (or equivalent)	☐	ODP (operating department practitioner)	☐	Physicians associate	☐
Doctor: ST5-7 (or fellow / equivalent)	☐	ODP student	☐	Specialist nurse/ ANP (or equivalent)	☐
Doctor: ST3-4 (or fellow / equivalent)	☐	Anaesthetic nurse	☐	ED nurse any band	☐
Doctor: CT1-2 (or fellow / equivalent)	☐	ACCP or equivalent	☐	Other staff member	☐

(iii) Was capnography used to confirm successful intubation?
If no is selected then go to Q3.5(v)
Yes ☐ No ☐

↪(iv) **IF 'Yes' to Q3.5(iii)** Was a clinically appropriate capnography trace seen (rising and falling with expiration/inspiration, and $EtCO_2$ ≥1kPa)?

Yes - consistent/increasing amplitude ≥7 breaths	☐	No	☐
Yes - consistent/increasing amplitude <7 breaths	☐	Unknown	☐

↪(v) **IF 'No' to Q3.5(iii) OR 'Yes- consistent/increasing amplitude <7 breaths'/'No'/'Unknown' to Q3.5(iv)** what did the team decide to do next?
If 'Yes - consistent/increasing amplitude ≥7 breaths' then go to Q3.5(vii)

Tube left - No further tests/checks done	☐	Unknown	☐
Tube left - while other tests/checks done	☐		

↪(vi) **IF 'Tube left - while other tests/checks done' to Q3.5(v)** What checks/tests were performed to attempt to confirm tube position?
Select all that apply

Tube seen passing through glottis on videolaryngoscopy	☐	Rise and fall of the chest	☐	Oesophageal detector device	☐
Tube seen passing through glottis on direct laryngoscopy	☐	Lung auscultation	☐	Ultrasound	☐
Misting of the tube	☐	Lung and stomach auscultation	☐	Other	☐
Bronchoscopy	☐	Colour change capnometry	☐	Please indicate: _____	

(vii) Was a '2-person check' verbalised to verify intubation?

Yes - verbalised tracheal tube seen passing through vocal cords on videolaryngoscopy	☐	No	☐
Yes - verbalised sustained exhaled CO_2	☐	Unknown	☐
Yes - verbalised both of the above	☐	Other	☐

Please go to section 4 Immediate Complications on page 10.

4 Immediate Complications

In the time period between induction and up to 10 minutes after securing the airway did any of the following complications develop?
Unless specified otherwise, the presence of each complication is a new clinical, radiological and/or bronchoscopic diagnosis, based on the judgement of the intubating team.

4.1 AIRWAY COMPLICATIONS

(i) **Airway trauma/injury** ☐ Yes ☐ No ☐ Unknown
(New injury to the nasal cavity; nasopharynx; oropharynx [excluding dental trauma]; pharynx; glottis; subglottis; or trachea)

(ii) **Dental trauma/injury** ☐ Yes ☐ No ☐ Unknown
(New physical damage to dentition)

(iii) **Endobronchial Intubation** ☐ Yes ☐ No ☐ Unknown
(Unintended placement or migration of the tracheal tube into the right or left main bronchus)

(iv) **Oesophageal placement of a tracheal tube** ☐ Yes ☐ No ☐ Unknown *If no/unknown is selected then go to Q4.2 (i)*
(Unintended placement of a tracheal tube into the oesophagus)
↪**IF 'Yes' to Q4.1(iv)** Was this an unrecognised oesophageal intubation? Note: Unrecognised means not identified by the absence of sustained exhaled carbon dioxide, or leading to a complication
☐ Yes - unrecognised
☐ No – recognised

4.2 AIRWAY / RESPIRATORY COMPLICATIONS

(i) **Hypoxaemia** ☐ Yes ☐ No ☐ Unknown. *If no/unknown is selected then go to Q4.2 (ii)*
(New decrease in oxygen saturations < 90% [SpO2] at least once after induction)
↪**IF 'Yes' to Q4.2 (i)** Severe hypoxaemia ☐ Yes ☐ No ☐ Unknown
(New decrease in oxygen saturations < 80% [SpO2] at least once after induction)

(ii) **Laryngospasm** ☐ Yes ☐ No ☐ Unknown
(Vocal cord closure leading to clinically relevant airway obstruction)

(iii) **Bronchospasm** ☐ Yes ☐ No ☐ Unknown
(New bronchial airway obstruction and wheeze)

(iv) **Pneumothorax / pneumomediastinum** ☐ Yes ☐ No ☐ Unknown
(New air collection in the mediastinum or pleural space, during airway management/RSI)

(v) **Pulmonary aspiration of gastric contents** ☐ Yes ☐ No ☐ Unknown *If no/unknown is selected then go to Q4.2 (vi)*
(New definite or suspected entry of gastric contents [excluding blood] into the trachea and/or lungs)
↪**IF 'Yes' to Q4.2 (v)** How certain was new aspiration of gastric contents?
☐ Definite (e.g. seen at laryngoscopy or bronchoscopy)
☐ Suspected (i.e. other clinical changes leading to suspicion)

(vi) **Pulmonary aspiration of blood** ☐ Yes ☐ No ☐ Unknown *If no/unknown is selected then go to Q4.3 (i)*
(New definite or suspected entry of blood [from any source] into the trachea and/or lungs)
↪**IF Yes to Q4.2 (vi)** How certain was new aspiration of blood?
☐ Definite (e.g. seen at laryngoscopy or bronchoscopy)
☐ Suspected (i.e. other clinical changes leading to suspicion)

4.3 CARDIOVASCULAR COMPLICATIONS

(i) **Hypotension** ☐ Yes ☐ No ☐ Unknown *If no/unknown is selected then go to Q4.3 (iii)*
(Systolic BP < 90mmHg at least once)
↪**IF 'Yes' to Q4.3 (i)** Was this sustained for ≥5 minutes? ☐ Yes ☐ No ☐ Unknown
↪**IF 'Yes' to Q4.3 (i)** Was this sustained for ≥10 minutes? ☐ Yes ☐ No ☐ Unknown

(ii) **Severe hypotension** ☐ Yes ☐ No ☐ Unknown *If no/unknown is selected then go to Q4.3 (iii)*
(Systolic BP < 70mmHg at least once)
↪**IF 'Yes' to Q4.3 (ii)** Was this sustained for ≥5 minutes? ☐ Yes ☐ No ☐ Unknown
↪**IF 'Yes' to Q4.3 (ii)** Was this sustained for ≥10 minutes? ☐ Yes ☐ No ☐ Unknown

SECURE

Service Evaluation of Cross-Specialty
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Activity Survey

Thank you for taking part in SECURE, we value your time.
Please only complete the survey if:
· RSI or modified RSI (as judged by the intubating team)
· Patient ≥18 years old (adult)
· RSI in-hospital (within hospital grounds including ED)

*Do NOT include if intubated during cardiac arrest – unless **after ROSC** (return of spontaneous circulation) or unless cardiac arrest occurred **after RSI induction**.*
Do NOT include if patient had tracheostomy in situ.

4 IMMEDIATE COMPLICATIONS continued

(iii) Profound hypotension ☐ Yes ☐ No ☐ Unknown *If no/unknown then go to Q4.3(iv)*
(Systolic BP < 50mmgHg at least once)
↳**IF 'Yes' to Q4.3 (iii)** Was this sustained for ≥5 minutes? ☐ Yes ☐ No ☐ Unknown
↳**IF 'Yes' to Q4.3 (iii)** Were chest compressions started at any point? ☐ Yes ☐ No ☐ Unknown

(iv) Severe hypertension ☐ Yes ☐ No ☐ Unknown
(Systolic BP > 160mmHg at least once)

Intervention(s) for cardiovascular instability after induction:
(v) New or increased dose of vasopressor/inotrope AFTER induction? ☐ Yes ☐ No ☐ Unknown *If no/unknown then go to Q4.3(vi)*
↳**IF 'Yes' to Q4.3 (v)** Which vasopressor(s)/inotropes(s)? *Select all that apply:*
☐ Metaraminol boluses
☐ Metaraminol infusion
☐ Ephedrine
☐ Phenylephrine
☐ Peripheral noradrenaline
☐ Central noradrenaline
☐ Adrenaline boluses
☐ Adrenaline infusion
☐ Vasopressin
☐ Any other: _____

(vi) Fluid bolus >10ml/kg required after induction? ☐ Yes ☐ No ☐ Unknown
(equivalent to 500ml if 50kg patient and 1L if 100kg patient)

(vii) Cardiac arrhythmia? ☐ Yes ☐ No ☐ Unknown *If no/unknown then go to Q4.3 (viii)*
(New onset, sustained bradycardia < 50bpm; bradyarrhythmia, or tachyarrhythmia that required intervention and did not cause cardiac arrest)
↳**IF 'Yes' to Q4.3 (vii)** Type of cardiac arrhythmia(s)? *Select all that apply*:
☐ Asystole
☐ Sinus bradycardia (sustained < 50bpm)
☐ Bradyarrhythmia
☐ Atrial fibrillation / flutter (ventricular rate >100bpm)
☐ SVT (supra-ventricular tachycardia >100bpm)
☐ Ventricular tachycardia
☐ Other _____
☐ Unknown

(viii) **Cardiac ischaemia** ☐ Yes ☐ No ☐ Unknown
(New onset, high suspicion of cardiac ischaemia based on clinical judgement and ECG interpretation)

(ix) **Cardiac arrest (including if ROSC achieved)** ☐ Yes ☐ No ☐ Unknown *If no/unknown then go to Q4.3 (x)*
(Sudden cessation of function of the heart, or loss of pulse, and the delivery of ≥5 chest compressions and/or defibrillation)
↳**IF 'Yes' to Q4.3 (ix)** Cardiac arrest rhythm(s)? *Select all that apply*:
☐ Ventricular tachycardia (VT)
☐ Ventricular fibrillation (VF)
☐ Pulseless electrical activity (PEA)
☐ Asystole
☐ Unknown
↳**IF 'Yes' to Q4.3 (ix)** Reversible causes of cardiac arrest? *Select all that apply:*
☐ Hypoxia
☐ Hypovolaemia
☐ Hypo/hyperkalaemia (and electrolytes)
☐ Hypothermia
☐ Tension pneumothorax
☐ Tamponade
☐ Thrombus
☐ Toxin(s)
☐ Unknown

4 IMMEDIATE COMPLICATIONS continued

(x) Death from any cause ☐ Yes ☐ No ☐ Unknown *If no/unknown then go to Q4.4*
(Death due to any complication, difficulty or failure of airway management)
↳**IF 'Yes' to Q4.3 (x)** Was the death airway-related? ☐ Yes ☐ No ☐ Unknown

4.4 EQUIPMENT FAILURE THAT COMPROMISED PATIENT CARE
During use, or when intended for anaesthetic use, failure of any of the following:
Only include if patient care compromised, as based on intubating team judgement

(i) Airway equipment ☐ Yes ☐ No ☐ Unknown
↳**IF 'Yes'** - please enter details: _____

(ii) Drug delivery equipment (including a pump or vascular access) ☐ Yes ☐ No ☐ Unknown
↳**IF 'Yes'** - please enter details: _____

(iii) Other equipment ☐ Yes ☐ No ☐ Unknown
↳**IF 'Yes'** - please enter details: _____

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Useful information: https://www.raftuk.org/raft-5-secure
Enquires: secure@das.uk.com
Please do not forget to transcribe the answers from this paper CRF onto REDCap
https://redcap.link/secure_activity or QR code below

Thank You