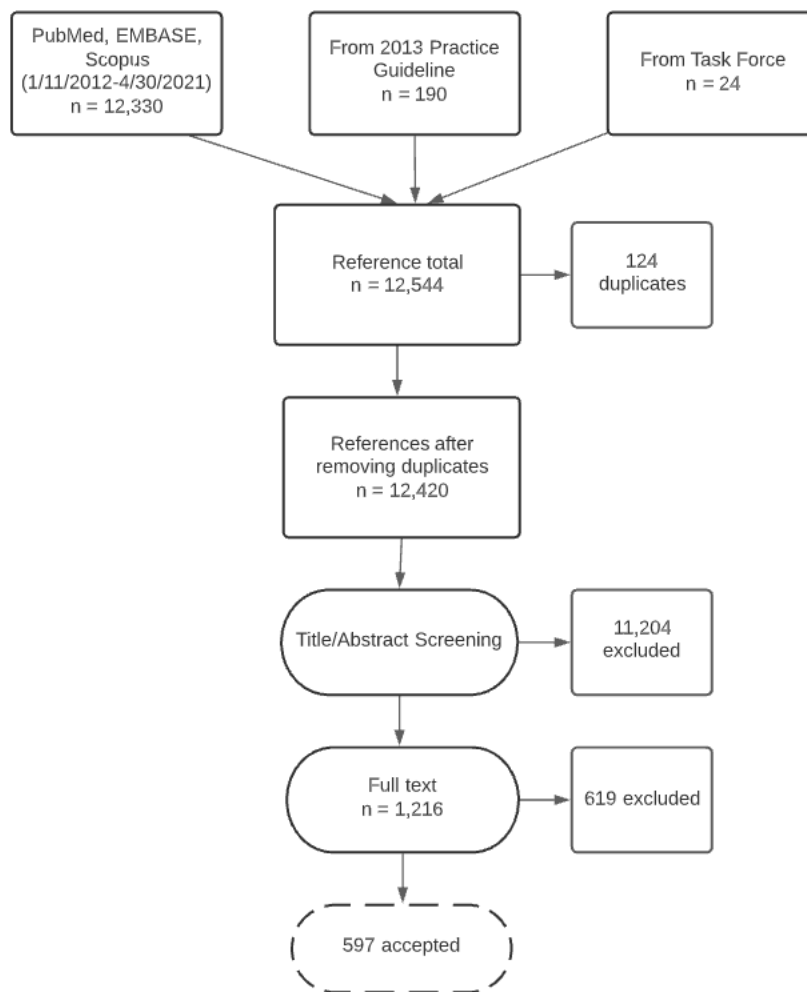


## 2022 American Society of Anesthesiologists Practice Guidelines for Management of the Difficult Airway: Supplement 2 - PRISMA Diagram and Literature Search Summary

### PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) Diagram



<b>N</b>	<b>Full-text Exclusion Reason (first listed)</b>
12	Review, letter, editorial, descriptive paper, guideline, or meta-analysis/SR with no original data
105	Non-English article
23	Article or abstract not peer-reviewed
187	Subjects excluded from or not identified by evidence model
192	Interventions excluded from or not identified by evidence model (or no relevant intervention or wrong comparators)
98	Outcomes excluded from or not relevant to evidence model
1	Duplicate data or secondary analysis of data presented in original article
1	Article retracted by journal
619	Total

**Literature Search Strategy:** Terms and limits used to generate the search is detailed below. Limits as indicated in the search strategies.

### Medline

1. (("Airway" or "Airways" or "Intubate" or "Intubates" or "Intubation" or "Intubations" or "Intubating" or "intubated" or "laryngeal mask" or "laryngeal masks" or "Face mask" or "Facemask" or "Face masks" or "mask ventilation" or "Facemasks" or "Supraglottic" or "laryngoscopy" or "laryngoscopies" or "bronchoscopy" or "bronchoscopies") adj2 ("abnormal" or "Difficult" or "Difficulty" or "Fail" or "Failing" or "Failed" or "failure" or "Challenge" or "Challenging" or "Challenged" or "complex" or "Complicate" or "Complicating" or "Complicated" or "Emergency" or "emergent" or "critical")).ab,ti.
2. ((can\$t intubate and can\$t ventilate) or (can\$t intubate and can\$t oxygenate)).mp. or "CICO".ti,ab. or "CICV".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
3. 1 or 2
4. "Intubation, Intratracheal"/ or "Intubate".ti,ab. or "Intubation".ti,ab. or "Intubated".ti,ab. or "Intubating".ti,ab.
5. exp "Anesthesia, General"/ or "anesthetics"/ or "Anesthetic".ti,ab. or "anesthetics".ti,ab. or "anaesthetic".ti,ab. or "anaesthetics".ti,ab. or "anesthetized".ti,ab. or "anaesthetized".ti,ab.
6. exp high-frequency ventilation/ or exp positive-pressure respiration/ or (("jet ventilation" or "positive pressure respiration" or "positive pressure ventilation" or high) adj1 frequency adj1 ventilation) or "mask ventilation" or "spontaneous ventilation").ti,ab.
7. ("Rapid sequence" or "Cricoid pressure" or "Sellick maneuver").ti,ab.
8. "Succinylcholine"/ or "Rocuronium"/ or "Sugammadex"/ or "Succinylidicholine".ti,ab. or "Suxamethonium".ti,ab. or "Quelicin".ti,ab. or "Myorelaxin".ti,ab. or "Listenon".ti,ab. or "Anectine".ti,ab. or "Celocurine".ti,ab. or "Ditilin".ti,ab. or "Lysthenon".ti,ab. or "Succicuran".ti,ab. or "Esmeron".ti,ab. or "Esmerone".ti,ab. or "Zemuron".ti,ab. or "Rocuronium".ti,ab. or "Rocuxant".ti,ab. or "Roqurum".ti,ab. or "Rocuronio".ti,ab. or "Sugammadex".ti,ab. or "Bridion".ti,ab.
9. 6 or 7 or 8
10. 4 and 5 and 9
11. exp "Neuromuscular Agents"/ or "muscle relaxation"/
12. ((muscle or muscular or neuromuscular) adj2 (relax\* or block\*)).ab,ti.
13. 11 or 12
14. 4 and 13
15. "Tracheotomy"/ or (((("cricoid" or "Cricothyroidotomies" or "Cricothyroidotomy" or "Cricothyrotomies" or "Cricothyrotomy" or "FONA" or "Front") adj2 "neck") or "Intercricothyrotomies" or "Intercricothyrotomy" or "Laryngotomies" or "Laryngotomy" or "Thyrocricotomies" or "Thyrocricotomy" or "Tracheostomies" or "Tracheostomy" or "tracheotomies" or "tracheotomy").ti,ab.
16. 4 or 15
17. "Conscious Sedation"/ or "Hypnotics and Sedatives"/ or "premedication"/ or "deep sedation"/ or "Premedication".ti,ab. or "premedicate".ti,ab. or "premedicated".ti,ab. or "premedicating".ti,ab. or "sedate".ti,ab. or "sedation".ti,ab. or "sedating".ti,ab. or "sedated".ti,ab.
18. 16 and 17
19. "Posture"/ or "Patient Positioning"/ or "Posture".ti,ab. or "Postures".ti,ab. or "Position".ti,ab. or "Positions".ti,ab. or "Positioning".ti,ab. or "positioned".ti,ab. or "Maneuver".ti,ab. or "Maneuvering".ti,ab. or "Maneuvers".ti,ab. or "Maneuvered".ti,ab.
20. exp "Cannula"/ or exp "Continuous Positive Airway Pressure"/ or exp "Positive-Pressure Respiration"/ or "CPAP".ti,ab. or "Positive Airway Pressure".ti,ab. or "Positive pressure".ti,ab. or "Positive end expiratory".ti,ab. or "Airway Pressure Release Ventilation".ti,ab. or "APRV".ti,ab. or "Nasal cannula".ti,ab. or "Nasal cannulae".ti,ab. or "Nasal catheter".ti,ab. or "Nasal catheters".ti,ab. or "Nasal oxygen".ti,ab. or "SuperNOVA".ti,ab. or "ventilation".ti,ab. or "Ventilator".ti,ab. or "Ventilated".ti,ab. or "ventilators".ti,ab. or preoxygentat\*.ti,ab.

21. exp high-frequency ventilation/ or exp positive-pressure respiration/ or (((("jet ventilation" or "positive pressure respiration" or "positive pressure ventilation" or high) adj1 frequency adj1 ventilation) or "mask ventilation" or "spontaneous ventilation").ti,ab.
22. Laryngoscopes/ or Bronchoscopes/ or exp Laryngoscopy/ or exp Bronchoscopy/ or "Laryngoscope".ti,ab. or "Laryngoscopic".ti,ab. or "Laryngoscopes".ti,ab. or "laryngoscopy".ti,ab. or "Bronchoscope".ti,ab. or "Bronchoscopes".ti,ab. or "bronchoscopy".ti,ab. or "Nasopharyngoscope".ti,ab. or "nasopharyngoscopes".ti,ab. or "videolaryngoscope".ti,ab. or "videolaryngoscopes".ti,ab. or "videolaryngoscopic".ti,ab. or "Airtraq".ti,ab. or "Benjamin".ti,ab. or "Bullard".ti,ab. or "C-mac".ti,ab. or "ETView".ti,ab. or "GlideScope".ti,ab. or "Kingvision".ti,ab. or "King Vision".ti,ab. or "Macintosh".ti,ab. or "McCoy".ti,ab. or "McGrath".ti,ab. or "Miller".ti,ab. or "Pentax".ti,ab. or "Shikani".ti,ab. or "Trachlight".ti,ab. or "TruView".ti,ab. or "Blade".ti,ab. or "blades".ti,ab.
23. exp "Laryngeal Masks"/ or "Supraglottic".ti,ab. or "glottis".ti,ab. or "Laryngeal Mask".ti,ab. or "Laryngeal Masks".ti,ab. or "Combitube".ti,ab. or "Laryngeal tube".ti,ab. or "Laryngeal tubes".ti,ab. or "Pharyngeal tube".ti,ab. or "Pharyngeal tubes".ti,ab. or "Face mask".ti,ab. or "Face masks".ti,ab. or "Facemask".ti,ab. or "mask ventilation".ti,ab. or "Facemasks".ti,ab. or "Portex Soft Seal".ti,ab. or "AuraStraight".ti,ab. or "i-gel".ti,ab. or "air-Q".ti,ab. or "SGA".ti,ab. or "SAD".ti,ab. or "SGD".ti,ab. or "EGD".ti,ab. or "LMA".ti,ab. or "ILMA".ti,ab. or "bite blocks".ti,ab. or "esophageal vent".ti,ab. or "esophageal vents".ti,ab. or "Teleflex".ti,ab. or "Proseal".ti,ab. or "Ambu Aura".ti,ab. or "Ambu Aura".ti,ab. or "Tru-Cuff".ti,ab. or "fastrach".ti,ab. or ("streamlined liner" and "pharynx airway").ti,ab. or "SLIPA".ti,ab. or "Perilaryngeal Airway".ti,ab. or (("cuffed" or "uncuffed") and ("sealer" or "sealers")).ti,ab.
24. ("Stylet" or "stylets" or "bougie" or "bougies" or "light wand" or "light wands" or "retrograde" or "ventrain" or "ventilation" or "transnasal humidified rapid insufflation ventilatory exchange" or "THRIVE" or "VORTEX").ti,ab.
25. (((("Tracheotomy"/ or "cricoid".mp. or "Cricothyroidotomies".mp. or "Cricothyroidotomy".mp. or "Cricothyrotomies".mp. or "Cricothyrotomy".mp. or "FONA".mp. or Front.mp.) adj2 neck.mp.) or "Intercricothyrotomies".mp. or "Intercricothyrotomy".mp. or "Laryngotomies".mp. or "Laryngotomy".mp. or "Thyrocricotomies".mp. or "Thyrocricotomy".mp. or "Tracheostomies".mp. or "Tracheostomy".mp. or "tracheotomies".mp. or "tracheotomy".mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
26. "Extracorporeal Membrane Oxygenation"/ or (((("ECMO" or "membrane oxygenation" or "extracorporeal oxygenation" or extracorporeal) adj1 life adj1 support) or Extracorporeal) adj1 Life adj1 Supports) or "oxygenator").ti,ab.
27. ("Reintubate" or "Reintubation" or "Reintubated" or "Reintubating").ti,ab.
28. 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27
29. 4 and 28
30. exp "Ultrasonography"/ or exp "Radiography, Thoracic"/ or exp "Magnetic Resonance Imaging"/ or "ultrasound".ti,ab. or "ultrasounds".ti,ab. or "ultrasonic".ti,ab. or "ultrasonography".ti,ab. or "chest radiography".ti,ab. or "chest radiograph".ti,ab. or "thorax radiography".ti,ab. or "thorax radiograph".ti,ab. or "chest radiogram".ti,ab. or "chest radiology".ti,ab. or "chest roentgenogram".ti,ab. or "chest roentgenography".ti,ab. or "thorax roentgenography".ti,ab. or "ct scan".ti,ab. or "chest ct".ti,ab. or "CAT scan".ti,ab. or "cat scanning".ti,ab. or "computed tomographic".ti,ab. or "computer tomography".ti,ab. or "computerized tomography".ti,ab. or "computerised tomography".ti,ab. or "computerized axial tomography".ti,ab. or "computerised axial tomography".ti,ab. or "fMRI".ti,ab. or "Magnetic Resonance Imaging".ti,ab. or "Magnetization Transfer Contrast Imaging".ti,ab. or "MR Tomography".ti,ab. or "NMR Imaging".ti,ab. or "NMR Tomography".ti,ab. or "Proton Spin Tomography".ti,ab. or "Spin Echo Imaging".ti,ab. or "Spin Echo Imagings".ti,ab. or "Zeugmatography".ti,ab.
31. "Oximetry"/ or "Capnography"/ or "Colorimetry"/ or "Pulse oximetries".ti,ab. or "Pulse oximetry".ti,ab. or "Capnography".ti,ab. or "Capnographies".ti,ab. or "Capnogram".ti,ab. or "Capnometry".ti,ab. or

"Co2 monitoring".ti,ab. or "Carbon dioxide monitoring".ti,ab. or "Colorimetry".ti,ab. or "Colorimetric".ti,ab.

32. 30 or 31
33. 4 and 32
34. 3 or 10 or 14 or 18 or 29 or 33
35. limit 34 to (humans and yr="2012 -Current" and journal article)

## **EMBASE**

1. 'difficult airway'/exp OR ('respiratory tract intubation'/exp AND ('abnormal':ti OR 'difficult':ti OR 'difficulty':ti OR 'fail':ti OR 'failing':ti OR 'failed':ti OR 'failure':ti OR 'challenge':ti OR 'challenging':ti OR 'challenged':ti OR 'complex':ti OR 'complicate':ti OR 'complicating':ti OR 'complicated':ti OR 'emergency':ti OR 'emergent':ti OR 'critical':ti))
2. (('airway' OR 'airways' OR 'intubate' OR 'intubates' OR 'intubation' OR 'intubations' OR 'intubating' OR 'intubated' OR 'laryngeal mask' OR 'laryngeal masks' OR 'face mask' OR 'facemask' OR 'face masks' OR 'facemasks' OR 'supraglottic' OR 'laryngoscopy' OR 'laryngoscopies' OR 'bronchoscopy' OR 'bronchoscopies') NEAR/2 ('abnormal' OR 'difficult' OR 'difficulty' OR 'fail' OR 'failing' OR 'failed' OR 'failure' OR 'challenge' OR 'challenging' OR 'challenged' OR 'complex' OR 'complicate' OR 'complicating' OR 'complicated' OR 'emergency' OR 'emergent' OR 'critical')):ab,ti
3. "can\$t intubate\* can\$t ventilate":ti,ab,kw OR "can\$t intubate\* can\$t oxygenate":ti,ab,kw OR 'cico':ti,ab,kw OR 'cicv':ti,ab,kw
4. #1 OR #2 OR #3
5. (('intubate' OR 'intubation' OR 'intubated' OR 'intubating') NEAR/5 ('abnormal' OR 'difficult' OR 'difficulty' OR 'fail' OR 'failing' OR 'failed' OR 'failure' OR 'challenge' OR 'challenging' OR 'challenged' OR 'complex' OR 'complicate' OR 'complicating' OR 'complicated' OR 'emergency' OR 'emergent' OR 'critical')):ab,ti
6. 'tracheotomy'/exp OR 'cricoid':ti,ab OR 'cricothyroidotomies':ti,ab OR 'cricothyroidotomy':ti,ab OR 'cricothyrotomies':ti,ab OR 'cricothyrotomy':ti,ab OR 'fona':ti,ab OR 'front of neck':ti,ab OR 'front-of-neck':ti,ab OR 'intercricothyrotomies':ti,ab OR 'intercricothyrotomy':ti,ab OR 'laryngotomies':ti,ab OR 'laryngotomy':ti,ab OR 'thyrocricotomies':ti,ab OR 'thyrocricotomy':ti,ab OR 'tracheostomies':ti,ab OR 'tracheostomy':ti,ab OR 'tracheotomies':ti,ab OR 'tracheotomy':ti,ab
7. ('premedication'/exp OR 'hypnotic sedative agent'/exp OR 'sedative agent'/exp OR 'conscious sedation'/de) AND 'deep sedation'/de OR 'premedication':ti,ab OR 'premedicate':ti,ab OR 'premedicated':ti,ab OR 'premedicating':ti,ab OR 'sedate':ti,ab OR 'sedation':ti,ab OR 'sedating':ti,ab OR 'sedated':ti,ab
8. #5 OR #6
9. #7 AND #8
10. 'general anesthesia'/exp OR 'anesthetic agent'/exp OR 'anesthetic':ti,ab OR 'anesthetics':ti,ab OR 'anaesthetic':ti,ab OR 'anaesthetics':ti,ab OR 'anesthetized':ti,ab OR 'anaesthetized':ti,ab
11. 'high frequency ventilation'/exp OR 'jet ventilation'/exp OR 'positive end expiratory pressure'/exp OR 'jet ventilation':ti,ab OR 'positive pressure respiration':ti,ab OR 'positive pressure ventilation':ti,ab OR 'high frequency ventilation':ti,ab OR 'mask ventilation':ti,ab OR 'spontaneous ventilation':ti,ab OR 'ventrain':ti,ab
12. 'rapid sequence':ti,ab OR 'cricoid pressure':ti,ab OR 'sellick maneuver':ti,ab
13. 'suxamethonium'/exp OR 'sugammadex'/exp OR 'succinyldicholine':ti,ab OR 'suxamethonium':ti,ab OR 'quelicin':ti,ab OR 'myorelaxin':ti,ab OR 'listenon':ti,ab OR 'anectine':ti,ab OR 'celocurine':ti,ab OR 'ditiilin':ti,ab OR 'lysthenon':ti,ab OR 'succicuran':ti,ab OR 'esmeron':ti,ab OR 'esmerone':ti,ab OR 'zemuron':ti,ab OR 'rocuronium':ti,ab OR 'rocuxant':ti,ab OR 'roqurum':ti,ab OR 'rocuronio':ti,ab OR 'sugammadex':ti,ab OR 'bridion':ti,ab
14. #11 OR #12 OR #13
15. #5 AND #10 AND #14

16. 'neuromuscular blocking agent'/exp OR 'muscle relaxation'/de OR 'muscle relaxant agent'/exp OR ((muscle:ab,ti OR muscular:ab,ti OR neuromuscular:ab,ti) AND near2:ab,ti AND (relax\*:ab,ti OR block\*:ab,ti))
17. #5 AND #16
18. 'patient positioning'/exp OR 'posture':ti,ab OR 'postures':ti,ab OR 'position':ti,ab OR 'positions':ti,ab OR 'positioning':ti,ab OR 'positioned':ti,ab OR 'maneuver':ti,ab OR 'maneuvering':ti,ab OR 'maneuvers':ti,ab OR 'maneuvered':ti,ab
19. 'nasal cannula'/de OR 'oxygen nasal cannula'/exp OR 'positive end expiratory pressure'/exp OR 'cpap':ti,ab OR 'positive airway pressure':ti,ab OR 'positive pressure':ti,ab OR 'positive end expiratory':ti,ab OR 'airway pressure release ventilation':ti,ab OR 'aprv':ti,ab OR 'nasal cannula':ti,ab OR 'nasal cannulae':ti,ab OR 'nasal catheter':ti,ab OR 'nasal catheters':ti,ab OR 'nasal oxygen':ti,ab OR 'supernova':ti,ab OR 'ventilation':ti,ab OR 'ventilator':ti,ab OR 'ventilated':ti,ab OR 'ventilators':ti,ab OR preoxygenate\*:ti,ab
20. 'high frequency ventilation'/exp OR 'jet ventilation'/exp OR 'positive end expiratory pressure'/exp OR 'jet ventilation':ti,ab OR 'positive pressure respiration':ti,ab OR 'positive pressure ventilation':ti,ab OR 'high frequency ventilation':ti,ab OR 'mask ventilation':ti,ab OR 'spontaneous ventilation':ti,ab OR 'ventrain':ti,ab
21. 'laryngoscope'/exp OR 'bronchoscope'/exp OR 'bronchoscopy'/exp OR 'laryngoscopy'/exp OR 'laryngoscope':ti,ab OR 'laryngoscopic':ti,ab OR 'laryngoscopes':ti,ab OR 'laryngoscopy':ti,ab OR 'bronchoscope':ti,ab OR 'bronchoscopes':ti,ab OR 'bronchoscopy':ti,ab OR 'nasopharyngoscope':ti,ab OR 'nasopharyngoscopes':ti,ab OR 'videolaryngoscope':ti,ab OR 'videolaryngoscopes':ti,ab OR 'videolaryngoscopic':ti,ab OR 'airraq':ti,ab OR 'benjamin':ti,ab OR 'bullard':ti,ab OR 'c-mac':ti,ab OR 'etview':ti,ab OR 'glidescope':ti,ab OR 'kingvision':ti,ab OR 'king vision':ti,ab OR 'macintosh':ti,ab OR 'mccoy':ti,ab OR 'mcgrath':ti,ab OR 'miller':ti,ab OR 'pentax':ti,ab OR 'shikani':ti,ab OR 'trachlight':ti,ab OR 'truview':ti,ab OR 'blade':ti,ab OR 'blades':ti,ab
22. 'laryngeal mask'/exp OR 'supraglottic airway device'/exp OR 'supraglottic':ti,ab OR 'glottis':ti,ab OR 'laryngeal mask':ti,ab OR 'laryngeal masks':ti,ab OR 'combitube':ti,ab OR 'laryngeal tube':ti,ab OR 'laryngeal tubes':ti,ab OR 'pharyngeal tube':ti,ab OR 'pharyngeal tubes':ti,ab OR 'face mask':ti,ab OR 'face masks':ti,ab OR 'facemask':ti,ab OR 'mask ventilation':ti,ab OR 'facemasks':ti,ab OR 'portex soft seal':ti,ab OR 'aurastraight':ti,ab OR 'i-gel':ti,ab OR 'air-q':ti,ab OR 'sga':ti,ab OR 'sad':ti,ab OR 'sgd':ti,ab OR 'egd':ti,ab OR 'lma':ti,ab OR 'ilma':ti,ab OR 'bite blocks':ti,ab OR 'esophageal vent':ti,ab OR 'esophageal vents':ti,ab OR 'teleflex':ti,ab OR 'proseal':ti,ab OR 'ambu aura':ti,ab OR 'tru-cuff':ti,ab OR 'fastrach':ti,ab OR 'streamlined liner of the pharynx airway':ti,ab OR 'slipa':ti,ab OR 'perilaryngeal airway':ti,ab OR (('cuffed':ti,ab OR 'uncuffed':ti,ab) AND ('sealer':ti,ab OR 'sealers':ti,ab))
23. 'stylet':ti,ab OR 'stylets':ti,ab OR 'bougie':ti,ab OR 'bougies':ti,ab OR 'light wand':ti,ab OR 'light wands':ti,ab OR 'retrograde':ti,ab OR 'ventrain':ti,ab OR 'ventilation':ti,ab OR 'transnasal humidified rapid insufflation ventilatory exchange':ti,ab OR 'thrive':ti,ab OR 'vortex':ti,ab
24. 'extracorporeal membrane oxygenation device'/exp OR 'ecmo':ti,ab OR 'membrane oxygenation':ti,ab OR 'extracorporeal oxygenation':ti,ab OR 'extracorporeal life support':ti,ab OR 'extracorporeal life supports':ti,ab OR 'oxygenator':ti,ab
25. 'reintubation'/exp OR 'reintubate':ti,ab OR 'reintubation':ti,ab OR 'reintubated':ti,ab OR 'reintubating':ti,ab
26. #6 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25
27. 'pulse oximetry'/exp OR 'capnometry'/exp OR 'colorimetry'/exp OR 'pulse oximetries':ti,ab OR 'pulse oximetry':ti,ab OR 'capnography':ti,ab OR 'capnographies':ti,ab OR 'capnogram':ti,ab OR 'capnometry':ti,ab OR 'co2 monitoring':ti,ab OR 'carbon dioxide monitoring':ti,ab OR 'colorimetry':ti,ab OR 'colorimetric':ti,ab
28. 'ultrasound'/exp OR 'x ray'/exp OR 'thorax radiography'/exp OR 'computer assisted tomography'/exp OR 'ultrasound':ti,ab OR 'ultrasounds':ti,ab OR 'ultrasonic':ti,ab OR 'ultrasonography':ti,ab OR 'chest radiography':ti,ab OR 'chest radiograph':ti,ab OR 'thorax radiography':ti,ab OR 'thorax radiograph':ti,ab OR 'chest radiogram':ti,ab OR 'chest radiology':ti,ab OR 'chest roentgenogram':ti,ab OR 'chest roentgenography':ti,ab OR 'thorax roentgenography':ti,ab OR 'ct scan':ti,ab OR 'chest ct':ti,ab OR 'cat scan':ti,ab OR 'cat scanning':ti,ab OR 'computed tomographic':ti,ab OR 'computer

tomography':ti,ab OR 'computerized tomography':ti,ab OR 'computerised tomography':ti,ab OR 'computerized axial tomography':ti,ab OR 'computerised axial tomography':ti,ab OR 'fmri':ti,ab OR 'magnetic resonance imaging':ti,ab OR 'magnetization transfer contrast imaging':ti,ab OR 'mr tomography':ti,ab OR 'nmr imaging':ti,ab OR 'nmr tomography':ti,ab OR 'proton spin tomography':ti,ab OR 'spin echo imaging':ti,ab OR 'spin echo imagings':ti,ab OR 'zeugmatography':ti,ab

29. #27 OR #28

30. #5 AND #29

31. #5 AND #26

32. #4 OR #9 OR #15 OR #17 OR #30 OR #31

33. #32 AND 'human'/de AND (2012:py OR 2013:py OR 2014:py OR 2015:py OR 2016:py OR 2017:py OR 2018:py OR 2019:py OR 2020:py) AND ('article'/it OR 'article in press'/it)

## **Scopus**

(TITLE-ABS ("Airway" OR "Airways" OR "Intubate" OR "Intubates" OR "Intubation" OR "Intubations" OR "Intubating" OR "intubated" OR "laryngeal mask" OR "laryngeal masks" OR "Face mask" OR "Facemask" OR "Face masks" OR "Facemasks" OR "Supraglottic" OR "laryngscopy" OR "laryngscopies" OR "bronchoscopy" OR "bronchoscopies") W/2 ("Difficult" OR "Difficulty" OR "Fail" OR "Failing" OR "Failed" OR "failure" OR "Challenge" OR "Challenging" OR "Challenged" OR "complex" OR "Complicate" OR "Complicating" OR "Complicated" OR "Emergency" OR "emergent" OR "critical")) OR TITLE-ABS (((can\*t AND intubate) AND (can\*t AND ventilate)) OR ((can\*t AND intubate) AND (can\*t AND oxygenate)) OR "CICO" OR "CICV")) OR (TITLE-ABS (((('intubate' OR 'intubation' OR 'intubated' OR 'intubating') AND ('abnormal' OR 'difficult' OR 'difficulty' OR 'fail' OR 'failing' OR 'failed' OR 'failure' OR 'challenge' OR 'challenging' OR 'challenged' OR 'complex' OR 'complicate' OR 'complicating' OR 'complicated' OR 'emergency' OR 'emergent' OR 'critical')) OR ("cricoid" OR "Cricothyroidotomies" OR "Cricothyroidotomy" OR "Cricothyrotomies" OR "Cricothyrotomy" OR "FONA" OR "Front of neck" OR "Front-of-neck" OR "Intercricothyrotomies" OR "Intercricothyrotomy" OR "Laryngotomies" OR "Laryngotomy" OR "Thyrocricotomies" OR "Thyrocricotomy" OR "Tracheostomies" OR "Tracheostomy" OR "tracheotomies" OR "tracheotomy")) AND TITLE-ABS (premedication OR premedicate OR premedicated OR premedicating OR sedate OR sedation OR sedating OR sedated)) OR (TITLE-ABS (('intubate' OR 'intubation' OR 'intubated' OR 'intubating') AND ('abnormal' OR 'difficult' OR 'difficulty' OR 'fail' OR 'failing' OR 'failed' OR 'failure' OR 'challenge' OR 'challenging' OR 'challenged' OR 'complex' OR 'complicate' OR 'complicating' OR 'complicated' OR 'emergency' OR 'emergent' OR 'critical')) AND TITLE-ABS ("Anesthetic" OR "anesthetics" OR "anaesthetic" OR "anaesthetics" OR "anesthetized" OR "anaesthetized") AND (TITLE-ABS ("jet ventilation" OR "positive pressure respiration" OR "positive pressure ventilation" OR "high frequency ventilation" OR "mask ventilation" OR "spontaneous ventilation" OR "ventrain" OR "Rapid sequence" OR "Cricoid pressure" OR "Sellick maneuver" OR "Succinylidicholine" OR "Suxamethonium" OR "Quelicin" OR "Myorelaxin" OR "Listenon" OR "Anectine" OR "Celocurine" OR "Ditilin" OR "Lysthenon" OR "Succicuran" OR "Esmeron" OR "Esmerone" OR "Zemuron" OR "Rocuronium" OR "Rocuxant" OR "Roqurum" OR "Rocuronio" OR "Sugammadex" OR "Bridion") OR TITLE-ABS (((muscle OR muscular OR neuromuscular) AND (relax\* OR block\*)))) OR (TITLE-ABS (((('intubate' OR 'intubation' OR 'intubated' OR 'intubating') AND ('abnormal' OR 'difficult' OR 'difficulty' OR 'fail' OR 'failing' OR 'failed' OR 'failure' OR 'challenge' OR 'challenging' OR 'challenged' OR 'complex' OR 'complicate' OR 'complicating' OR 'complicated' OR 'emergency' OR 'emergent' OR 'critical')) AND TITLE-ABS (((muscle OR muscular OR neuromuscular) AND (relax\* OR block\*)))) OR ((TITLE-ABS (((('intubate' OR 'intubation' OR 'intubated' OR 'intubating') AND ('abnormal' OR 'difficult' OR 'difficulty' OR 'fail' OR 'failing' OR 'failed' OR 'failure' OR 'challenge' OR 'challenging' OR 'challenged' OR 'complex' OR 'complicate' OR 'complicating' OR 'complicated' OR 'emergency' OR 'emergent' OR 'critical')) AND (TITLE-ABS ("Posture" OR "Postures" OR "Position" OR "Positions" OR "Positioning" OR "positioned" OR "Maneuver" OR "Maneuvering" OR "Maneuvers" OR "Maneuvered") OR TITLE-ABS ("CPAP" OR "Positive Airway Pressure" OR "Positive pressure" OR "Positive end expiratory" OR "Airway Pressure Release Ventilation" OR "APRV" OR "Nasal cannula" OR "Nasal cannulae" OR "Nasal catheter" OR "Nasal catheters" OR "Nasal oxygen" OR "SuperNOVA" OR "Ventilation" OR "Ventilator" OR "ventilated" OR preoxygenate\*)) OR TITLE-ABS

("jet ventilation" OR "positive pressure respiration" OR "positive pressure ventilation" OR "high frequency ventilation" OR "mask ventilation" OR "spontaneous ventilation" OR "ventrain") OR TITLE-ABS ("Laryngoscope" OR "Laryngoscopic" OR "Laryngoscopes" OR "laryngoscopy" OR "Bronchoscope" OR "Bronchoscopes" OR "bronchoscopy" OR "Nasopharyngoscope" OR "nasopharyngoscopes" OR "videolaryngoscope" OR "videolaryngoscopes" OR "videolaryngoscopic" OR "Airtraq" OR "Benjamin" OR "Bullard" OR "C-mac" OR "ETView" OR "GlideScope" OR "Kingvision" OR "King Vision" OR "Macintosh" OR "McCoy" OR "McGrath" OR "Miller" OR "Pentax" OR "Shikani" OR "Trachlight" OR "TruView" OR "Blade" OR "blades") OR TITLE-ABS ("Supraglottic" OR "glottis" OR "Laryngeal Mask" OR "Laryngeal Masks" OR "Combitube" OR "Laryngeal tube" OR "Laryngeal tubes" OR "Pharyngeal tube" OR "Pharyngeal tubes" OR "Face mask" OR "Face masks" OR "Facemask" OR "mask ventilation" OR "Facemasks" OR "Portex Soft Seal" OR "AuraStraight" OR "i-gel" OR "air-Q" OR "SGA" OR "SAD" OR "SGD" OR "EGD" OR "LMA" OR "ILMA" OR "bite blocks" OR "esophageal vent" OR "esophageal vents" OR "Teleflex" OR "Proseal" OR "Ambu Aura" OR "Ambu Aura" OR "Tru-Cuff" OR "fastrach" OR "streamlined liner of the pharynx airway" OR "SLIPA" OR "Perilaryngeal Airway" OR (("cuffed" OR "uncuffed") AND ("sealer" OR "sealers"))) OR TITLE-ABS ("Stylet" OR "stylets" OR "bougie" OR "bougies" OR "light wand" OR "light wands" OR "retrograde" OR "ventrain" OR "ventilation" OR "transnasal humidified rapid insufflation ventilatory exchange" OR "THRIVE" OR "VORTEX") OR TITLE-ABS ("cricoid" OR "Cricothyroidotomies" OR "Cricothyroidotomy" OR "Cricothyrotomies" OR "Cricothyrotomy" OR "FONA" OR "Front of neck" OR "Front-of-neck" OR "Intercricothyrotomies" OR "Intercricothyrotomy" OR "Laryngotomies" OR "Laryngotomy" OR "Thyrocricotomies" OR "Thyrocricotomy" OR "Tracheostomies" OR "Tracheostomy" OR "tracheotomies" OR "tracheotomy") OR TITLE-ABS ("ECMO" OR "membrane oxygenation" OR "extracorporeal oxygenation" OR "extracorporeal life support" OR "Extracorporeal Life Supports" OR "oxygenator") OR TITLE-ABS ("Reintubate" OR "Reintubation" OR "Reintubated" OR "Reintubating")) OR ((TITLE-ABS (('intubate' OR 'intubation' OR 'intubated' OR 'intubating') AND ('abnormal' OR 'difficult' OR 'difficulty' OR 'fail' OR 'failing' OR 'failed' OR 'failure' OR 'challenge' OR 'challenging' OR 'challenged' OR 'complex' OR 'complicate' OR 'complicating' OR 'complicated' OR 'emergency' OR 'emergent' OR 'critical')))) AND (TITLE-ABS ('ultrasound' OR 'ultrasounds' OR 'ultrasonic' OR 'ultrasonography' OR 'chest AND radiography' OR 'chest AND radiograph' OR 'thorax AND radiography' OR 'thorax AND radiograph' OR 'chest AND radiogram' OR 'chest AND radiology' OR 'chest AND roentgenogram' OR 'chest AND roentgenography' OR 'thorax AND roentgenography' OR 'ct AND scan' OR 'chest AND ct' OR 'cat AND scan' OR 'cat AND scanning' OR 'computed AND tomographic' OR 'computer AND tomography' OR 'computerized AND tomography' OR 'computerised AND tomography' OR 'computerized AND axial AND tomography' OR 'computerised AND axial AND tomography' OR "fMRI" OR "Magnetic Resonance Imaging" OR "Magnetization Transfer Contrast Imaging" OR "MR Tomography" OR "NMR Imaging" OR "NMR Tomography" OR "Proton Spin Tomography" OR "Spin Echo Imaging" OR "Spin Echo Imagings" OR "Zeugmatography")) OR TITLE-ABS ("Pulse oximetries" OR "Pulse oximetry" OR "Capnography" OR "Capnographies" OR "Capnogram" OR "Capnometry" OR "Co2 monitoring" OR "Carbon dioxide monitoring" OR "Colorimetry" OR "Colorimetric")) AND (LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (EXACTKEYWORD , "Human"))