Supplementary Table 2. Delphi questionnaire for the recommendations of the tracheostomy guideline

| No. | Recommendation | Fully agree | Agree | Neither agree nor disagree | Disagree | Totally disagree |
|---|---|---|---|---|---|---|
| 1A | The airway of patients with upper airway obstruction (infection, tumorous condition, trauma) should be secured via tracheostomy (strong recommendation, low-quality evidence). | 22 (91.7) | 2 (8.3) | 0 | 0 | 0 |
| 1B | Tracheostomy is recommended in patients requiring prolonged intubation (weak recommendation, low-quality evidence). | 24 (100) | 0 | 0 | 0 | 0 |
| 1C | Tracheostomy is recommended for more efficient pulmonary hygiene (weak recommendation, low-quality evidence). | 23 (95.8) | 1 (4.2) | 0 | 0 | 0 |
| 1D | Tracheostomy is recommended to facilitate ventilation support/ventilator weaning (weak recommendation, low-quality evidence). | 22 (91.7) | 2 (8.3) | 0 | 0 | 0 |
| 1E | Tracheostomy is recommended for airway protection in patients with neurologic diseases (weak recommendation, low-quality evidence). | 20 (83.3) | 4 (16.7) | 0 | 0 | 0 |
| 2A | Clinicians should consider tracheostomy in patients with an ongoing need for mechanical ventilation at least 7–14 days after intubation (weak recommendation, low-quality evidence). | 22 (91.7) | 2 (8.3) | 0 | 0 | 0 |
| 2B | Early tracheostomy can be recommended even in critically ill patients (weak recommendation, low-quality evidence). | 9 (37.5) | 10 (41.7) | 3 (12.5) | 2 (8.3) | 0 |
| 3 | Elective tracheostomy can be performed either in the operating room or in the ICU (weak recommendation, weak evidence). | 24 (100) | 0 | 0 | 0 | 0 |
| 4 | A horizontal skin incision is recommended to prevent an unsightly scar in patients undergoing elective tracheostomy (strong recommendation, low-quality evidence). | 8 (33.3) | 10 (41.7) | 4 (16.7) | 2 (8.3) | 0 |
| 5 | Thyroid isthmus bisection can improve visualization of the trachea, eliminate constant pressure, and control postoperative bleeding in patients undergoing elective tracheostomy (weak recommendation, low-quality evidence). | 11 (45.8) | 8 (33.3) | 5 (20.8) | 0 | 0 |
| 6 | A Bjork flap can prevent post-tracheostomy tracheal stenosis in patients undergoing elective tracheostomy (strong recommendation, moderate-quality evidence). | 2 (8.3) | 14 (58.3) | 4 (16.7) | 3 (12.5) | 1 (4.2) |
| 7 | Emergency tracheostomy is indicated in patients with acute airway obstruction who cannot be intubated and in patients in whom endotracheal intubation is expected to fail (strong recommendation, low-quality evidence). | 0 | 17 (70.8) | 4 (16.7) | 3 (12.5) | 0 |
| 8 | Emergency tracheostomy is more difficult than elective tracheostomy and has a higher risk of complications. Procedures such as cricothyroidotomy, tracheostomy using a commercial kit, or awake tracheostomy can be attempted to rapidly obtain a safe airway in an emergency setting (weak recommendation, low-quality evidence). | 22 (91.7) | 2 (8.3) | 0 | 0 | 0 |
| 9A | A vertical skin incision is preferred in pediatric tracheostomy (weak recommendation, low-quality evidence). | 12 (50) | 7 (29.2) | 5 (20.8) | 0 | 0 |
| 9B | A vertical tracheal incision without removal of the tracheal cartilage is recommended in pediatric tracheostomy (strong recommendation, low-quality evidence). | 19 (79.2) | 0 | 5 (20.8) | 0 | 0 |
| 9C | Stay sutures are recommended in preparation for decannulation in pediatric patients (strong recommendation, low-quality evidence). | 19 (79.2) | 0 | 5 (20.8) | 0 | 0 |
| 10A | The tube size, and especially the tube diameter, should be chosen based on the age of the patient (strong recommendation, low-quality evidence). | 19 (79.2) | 0 | 5 (20.8) | 0 | 0 |
| 10B | The length and curvature of the tube should be considered in selecting an appropriate tracheostomy tube (strong recommendation, low-quality evidence). | 18 (75) | 2 (8.3) | 4 (16.7) | 0 | 0 |
| 10C | Cuffed tracheostomy tubes are not generally recommended for children unless there is a need for high-pressure ventilation or the child is at high risk of aspiration (strong recommendation, low-quality evidence). | 22 (91.7) | 2 (8.3) | 0 | 0 | 0 |
| 11A | The indications for mediastinal tracheostomy are malignant lesions involving both the larynx and upper trachea, stomal recurrence after previous laryngectomy for carcinoma, or a tumor involving the upper esophagus (weak recommendation, low-quality evidence). | 2 (8.3) | 17 (70.8) | 5 (20.8) | 0 | 0 |

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Supplementary Table 2. Continued

| No. | Recommendation | Fully agree | Agree | Neither agree nor disagree | Disagree | Totally disagree |
|---|---|---|---|---|---|---|
| 11B | A mediastinal tracheostomy can be performed in selected patients with benign conditions such as tracheal stenosis, tracheoesophageal fistula, and tracheal necrosis (weak recommendation, low-quality evidence). | 1 (4.2) | 18 (75) | 5 (20.8) | 0 | 0 |
| 12A | Relocation of the trachea inferior to the innominate artery can reduce the tension around the tracheal stoma (strong recommendation, low-quality evidence). | 8 (33.3) | 11 (45.8) | 5 (20.8) | 0 | 0 |
| 12B | A muscle flap, such as a pectoralis major or omental flap, can be created to fill the dead space in the upper mediastinum and protect the major vessels as well as the tracheal stoma (strong recommendation, low-quality evidence). | 7 (29.2) | 12 (50) | 5 (20.8) | 0 | 0 |
| 13A | Decannulation should be considered in patients whose upper airway obstruction has been resolved and airway secretions are controlled (strong recommendation, low-quality evidence). | 19 (79.2) | 5 (20.8) | 0 | 0 | 0 |
| 13B | Decannulation should be performed when mechanical ventilation is no longer needed (strong evidence, low-quality evidence). | 24 (100) | 0 | 0 | 0 | 0 |
| 13C | The decision to perform decannulation should be made according to the reason for the tracheostomy (weak recommendation, low-quality evidence). | 23 (95.8) | 1 (4.2) | 0 | 0 | 0 |
| 13D | Laryngoscopy or bronchoscopy is necessary to evaluate vocal cord movement and airway obstruction (strong recommendation, low-quality evidence). | 3 (12.5) | 15 (62.5) | 3 (12.5) | 2 (8.3) | 1 (4.2) |
| 14A | Admission for a 24-hour capping trial (deflated-cuff tracheostomy occlusion) with continuous pulse oximetry monitoring is necessary before decannulation (strong recommendation, low-quality evidence). | 5 (20.8) | 17 (70.8) | 2 (8.3) | 0 | 0 |
| 14B | The tracheostomy tube in adult patients should be downsized to a tube with an inner diameter of ≤6 mm (weak recommendation, low-quality evidence). | 8 (33.3) | 12 (50) | 4 (16.7) | 0 | 0 |
| 14C | Decannulation should be performed when the $SaO_2$ is >90% and the $PaCO_2$ is <60 mmHg (strong recommendation, low-quality evidence). | 24 (100) | 0 | 0 | 0 | 0 |
| 14D | During a "physiological decannulation" trial, cough effectiveness, swallowing, voice quality, and the patient's ability to adequately breathe through the upper airway should be monitored (weak recommendation, low-quality evidence). | 8 (33.3) | 13 (54.2) | 3 (12.5) | 0 | 0 |
| 15 | As a mature stomal tract generally forms at 3 days after the tracheostomy, the first tube change should not be performed during that time. Ideally, the first tube change is performed 7–10 days later, by an experienced physician (weak recommendation, low-quality evidence). | 12 (50) | 9 (37.5) | 3 (12.5) | 0 | 0 |
| 16A | The type and size of the tube should be selected according to the patient's condition after tracheostomy (weak recommendation, low-quality evidence). | 11 (45.8) | 10 (41.7) | 3 (12.5) | 0 | 0 |
| 16B | A post-tracheostomy chest X-ray may be appropriate for high-risk patients with postoperative complications (weak recommendation, low-quality evidence). | 24 (100) | 0 | 0 | 0 | 0 |
| 16C | Adequate humidification and suction are needed for the postoperative care of patients unable to expectorate their secretions (weak recommendation, low-quality evidence). | 23 (95.8) | 1 (4.2) | 0 | 0 | 0 |
| 17 | In patients undergoing prolonged mechanical ventilation, the appropriate timing of PDT should be determined individually and depends on the clinical condition of the patient (weak recommendation, low-quality evidence). | 3 (12.5) | 18 (75) | 3 (12.5) | 0 | 0 |
| 18 | PDT is recommended as the tracheostomy procedure of choice in critically ill patients undergoing prolonged mechanical ventilation (weak recommendation, low-quality evidence). | 1 (4.2) | 16 (66.7) | 7 (29.2) | 0 | 0 |

Values are presented as number (%).
ICU, intensive care unit; PDT, percutaneous dilatational tracheostomy.