MMC Difficult Airway Response Team

Department of Critical Care Services

Review Slides

Updated June 2025

DART team activation – call 662-2345 or REMIS

- Anticipated difficult airway in a patient with respiratory distress or compromise
- Failed attempt by an experienced intubater with difficult BMV or inadequate oxygenation
- Disrupted airway and failing oxygenation or ventilation, or need for additional resources
- Displaced tracheostomy with airway compromise and/or inability to intubate
- Crisis situation with inadequate airway equipment outside ICU/OR/ED environment

DART Team Members

- Anesthesia team - (leader - airway)
- CCM or EM attending (leader – resuscitation)
  - Redundant faculty may be dismissed after reporting
- Trauma surgery senior resident (in-house)
- Trauma surgery attending (rapidly available)
  - 15 minute response
- RRT Supervisor and hemodynamics RRT
- SCU Coordinator and bedside RN

The DART response

- Everyone has a role
- Mutual respect and formal, closed-loop communication are ideal
- **Follow the algorithms**
- Do not delay placement of a surgical airway when indicated
- Some redundancy of skills of team members is necessary for safety – **all team members are expected to attend these events**

Role of CCM or EM Attending

- Inpatient – CCM. Emergency Department – EM
  - All team members are expected to respond to all locations
- Primary management of the patient – ie, BP, medications, etc
- Initial airway manager – then defer to anesthesia
- Trach replacement if appropriate
- Manage CPR event if necessary
- **Advises anesthesia on calling for surgical airway (ie, failing hemodynamics/SpO2)**
- Post-DART management

DART Team – role and responsibilities of CCM/EM

- Do you have to go to the ED/ward if called?
  - Yes, but can be dismissed by EM/CCM if not needed
- Why?
  - Sometimes there is only 1 EM attending, and 2 emergencies…
  - Sometimes there is only 1 CCM attending, and 2 emergencies
- **Redundancy in the team members assures that there is always a trained provider present even when conflicts exist**

Role of Anesthesia Team

- Follows algorithms
- Primary AIRWAY manager
- Ventilates
- Attempts endotracheal intubation
- Calls for surgical airway
- Post-DART management in surgical areas

Role of Trauma Resident and Attending

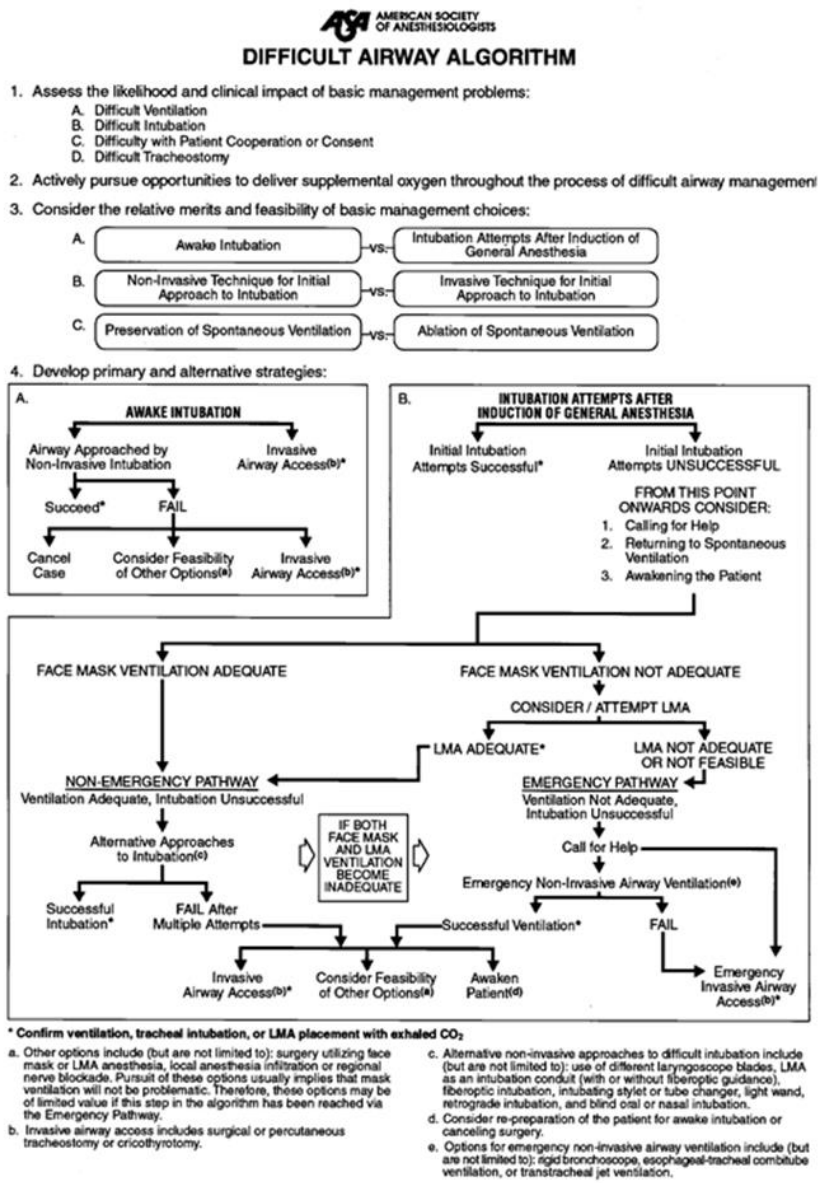
- Follows algorithms
- Prepares immediately for surgical airway
- Performs surgical airway when the intubation is declared failed by anesthesia
- Trauma attending will arrive ASAP and always within 15 minutes (ACS requirement)
- Notify ENT or Pedi surgery immediately for pediatric DART

Non-Physician roles

- SCU coordinator: meds, triage, primary nursing care of the compromised patient
- Patient RN: Provides history and assists with nursing care
- Hemo RRT: Manages DART cart
- RRT Supervisor: Assists with airway management

DIFFICULT AIRWAY

ALGORITHMS



AMERICAN SOCIETY OF ANESTHESIOLOGISTS

DIFFICULT AIRWAY ALGORITHM

1. Assess the likelihood and clinical impact of basic management problems:
   - A. Difficult Ventilation
   - B. Difficult Intubation
   - C. Difficulty with Patient Cooperation or Consent
   - D. Difficult Tracheostomy
2. Actively pursue opportunities to deliver supplemental oxygen throughout the process of difficult airway management
3. Consider the relative merits and feasibility of basic management choices:
   - A. Awake Intubation vs. Intubation Attempts After Induction of General Anesthesia
   - B. Non-Invasive Technique for Initial Approach to Intubation vs. Invasive Technique for Initial Approach to Intubation
   - C. Preservation of Spontaneous Ventilation vs. Ablation of Spontaneous Ventilation
4. Develop primary and alternative strategies:

* Confirm ventilation, tracheal intubation, or LMA placement with exhaled CO_2

a. Other options include (but are not limited to): surgery utilizing face mask or LMA anesthesia, local anesthesia infiltration or regional nerve blockade. Pursuit of these options usually implies that mask ventilation will not be problematic. Therefore, these options may be of limited value if this step in the algorithm has been reached via the Emergency Pathway.

b. Invasive airway access includes surgical or percutaneous tracheostomy or cricothyrotomy.

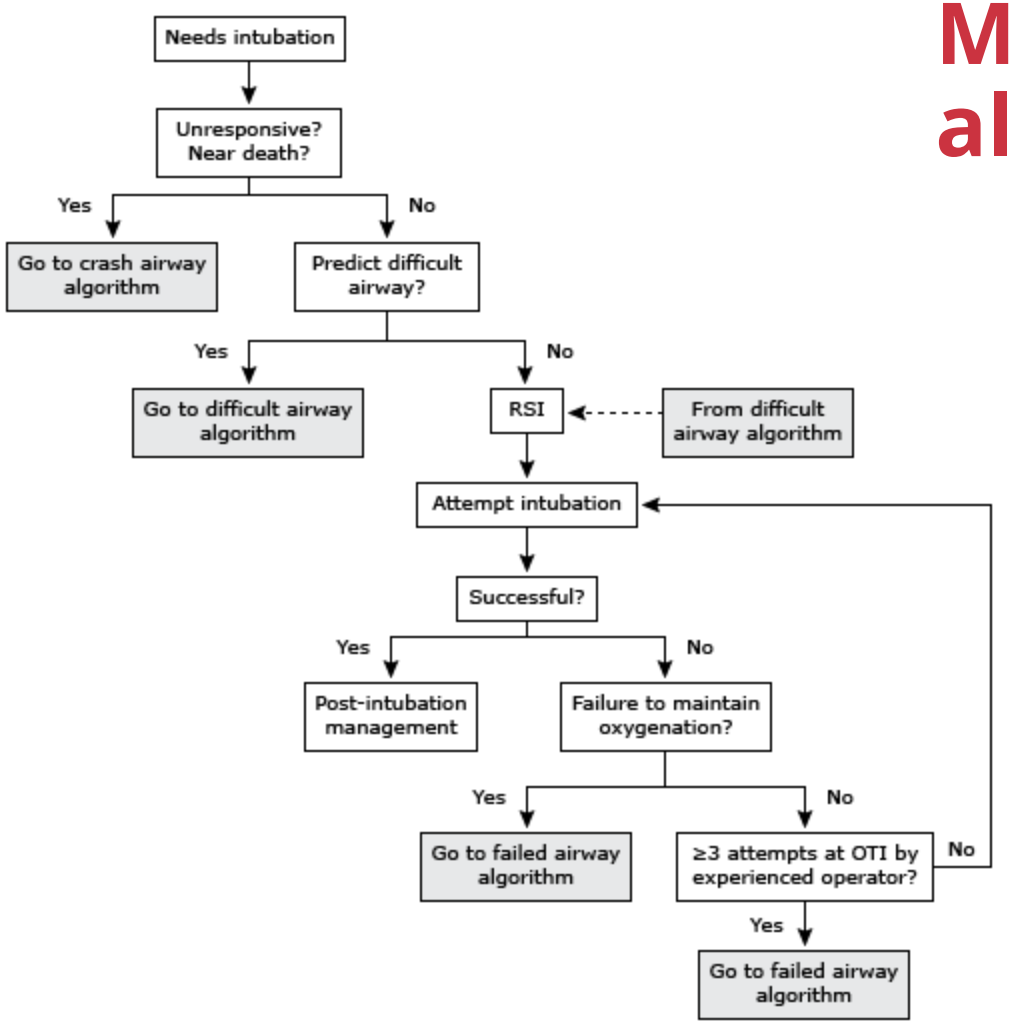
c. Alternative non-invasive approaches to difficult intubation include (but are not limited to): use of different laryngoscope blades, LMA as an intubation conduit (with or without fiberoptic guidance), fiberoptic intubation, intubating stylet or tube changer, light wand, retrograde intubation, and blind oral or nasal intubation.

d. Consider re-preparation of the patient for awake intubation or canceling surgery.

e. Options for emergency non-invasive airway ventilation include (but are not limited to): rigid bronchoscope, esophageal-tracheal combitube ventilation, or transtracheal jet ventilation.

Fig. 1.

Anesthesiology, V 98, No 5, May 2003

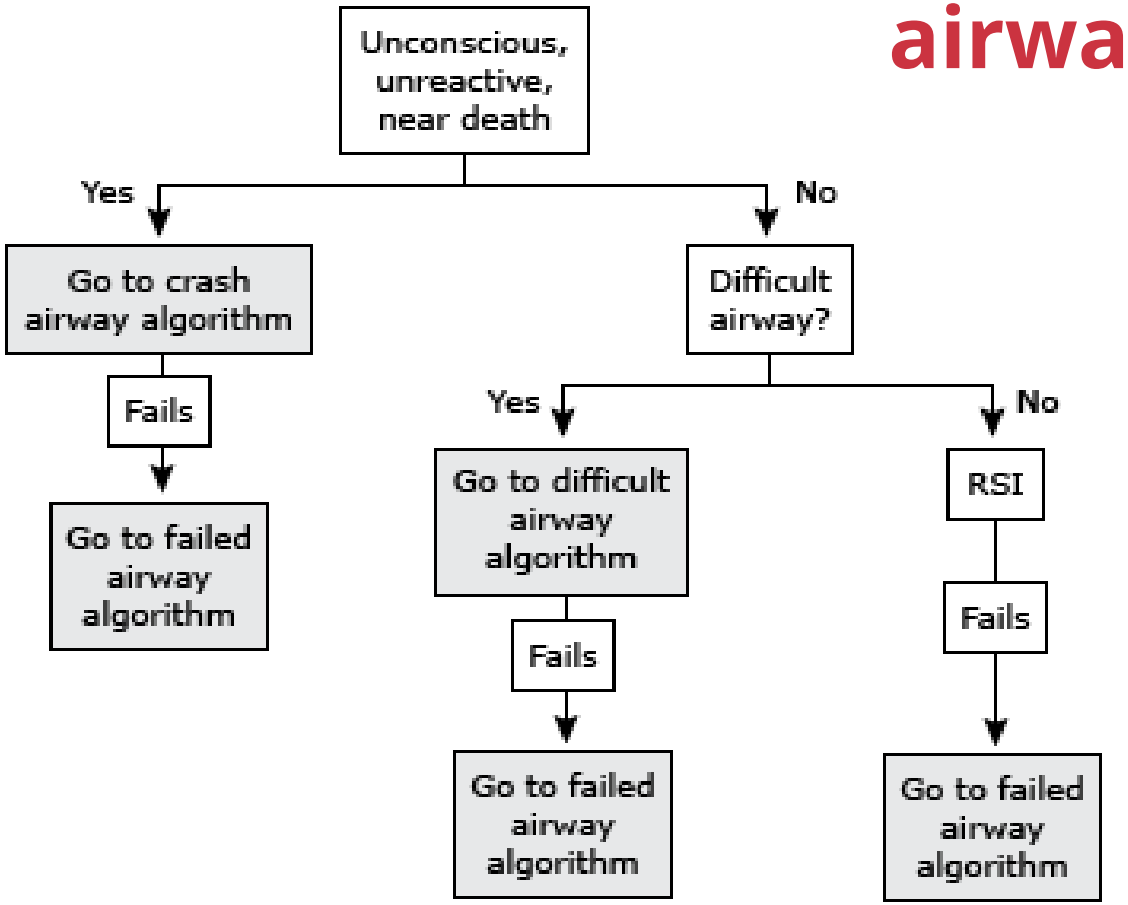


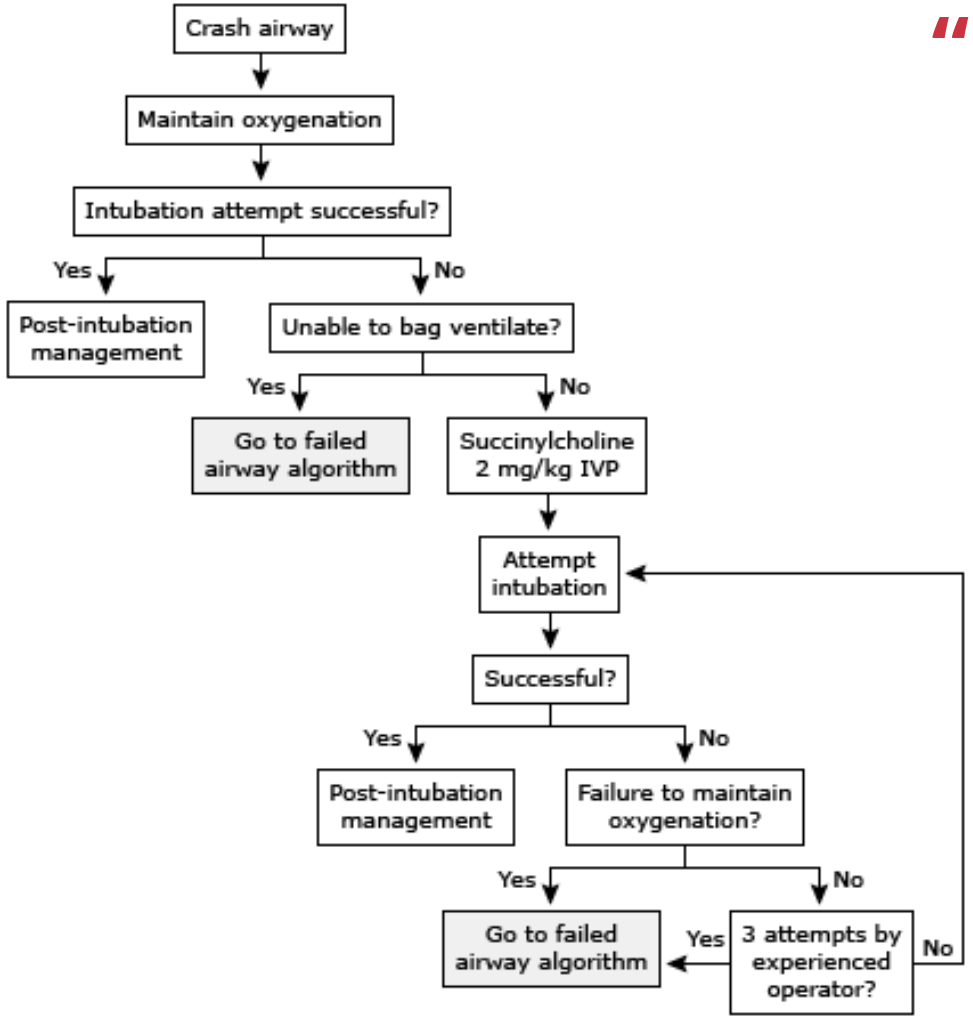
Main airway algorithm

3 flavors

- Crash
- Difficult
- Failed

Overview: DART airway

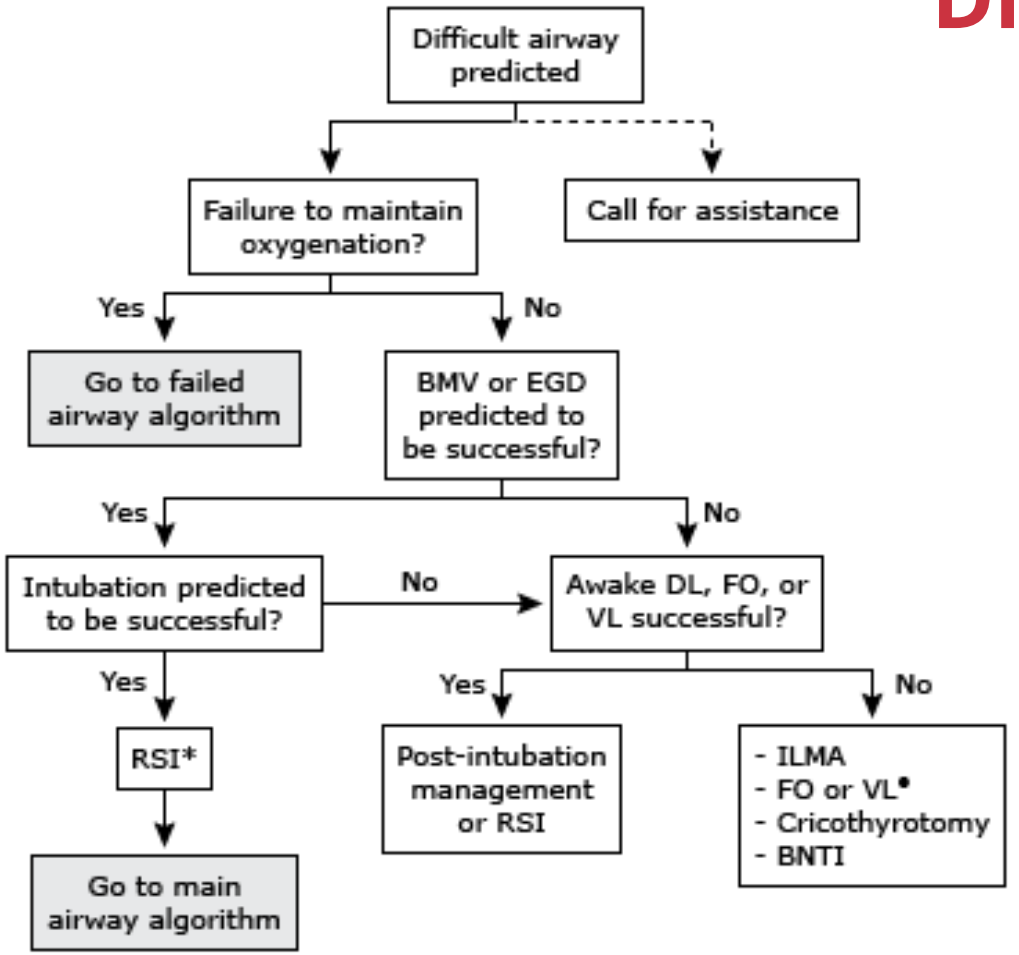




"Crash Airway"

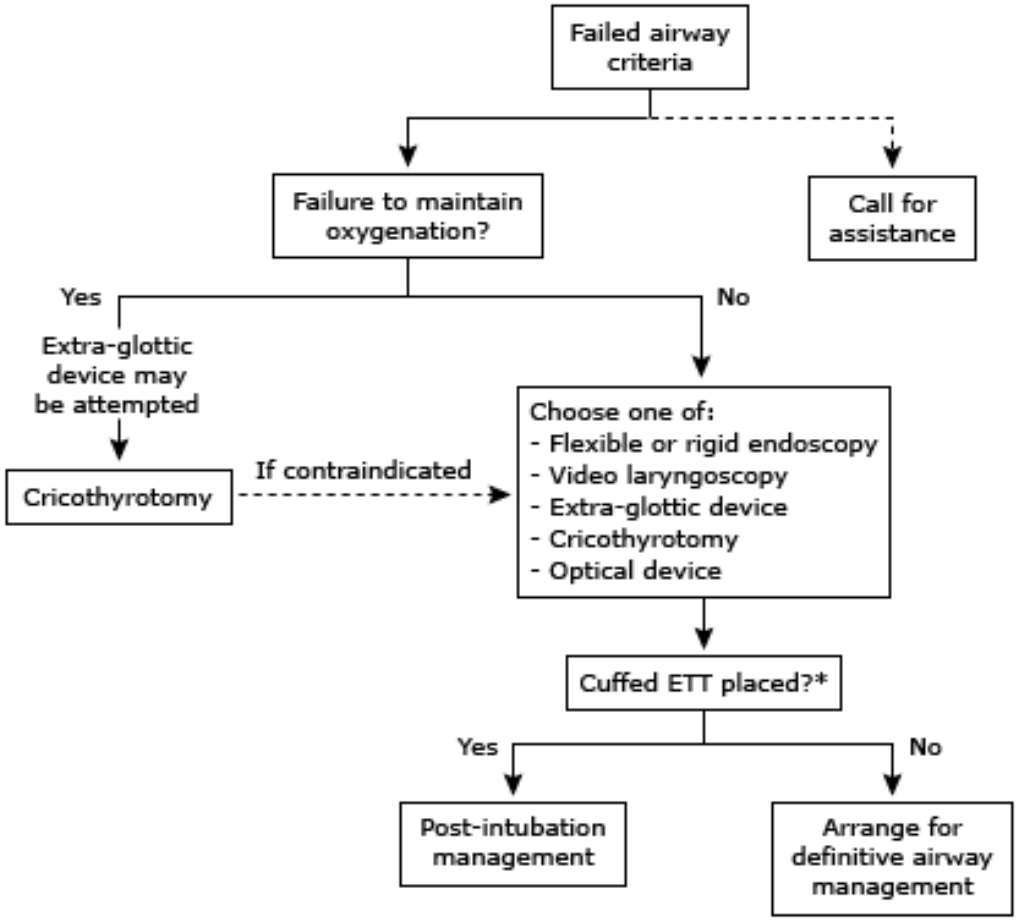
- Single attempt at RSI
- Reattempt RSI x3 if can BMV
- "Failed" if can't BMV/oxygenate

"Difficult Airway"



- In the Difficult Airway algorithm, there is allowance for various airway adjuncts if oxygenation can be maintained

"Failed Airway"



If can't oxygenate,

- Place LMA and crich
- Otherwise, try airway adjuncts or crich
- Trach if all fails

Top of Cart

Storz Headlamp
C-Mac Monitor
C-Mac Cord
AMBU Monitor
AMBU Slim Scope
AMBU Regular Scope
AMBU Large Scope
MMC Adult Trach Tray
4x4s, Betadine Bottle, #15 Scalpel, 0 silk suture in pack

Top Drawer

1st DRAWER Meds, Preps & Instruments
Silicone Spray
Scope Defogger
1 BOX OF MEDS
10ml Slip Tip Syringe
10 ml Luer Lock Syringe
Filter Straws
Blunt Needles
Nebulizer
Mucosal Atomizer
Wire Cutter
Magill Forceps Large
8” KELLY CLAMP
Double Swivel Elbow Adapter
Gauze 2x2 loose
Cotton Swab
Tongue Depressor

Second Drawer: Airway Adjuncts

2nd Drawer Airway Adjuncts
Surgi Lube Packets
Oral Airway #10
Oral Airway #11
Williams Airways #9
Williams Airway #10
Nasopharyngeal Airway size 6.5 (26f)
Nasopharyngeal Airway size 7.0 (28f)
Nasopharyngeal Airway size 7.5 (30f)
Nasopharyngeal Airway size 8.0 (32f)
LMA Unique #5
LMA Unique #4
LMA Unique #3
Air-Q LMA 2.5
Air-Q LMA 3.5
Air-Q LMA 4.5
Air-Q Removal Stylet s

Third Drawer: Adult Tubes & Blades

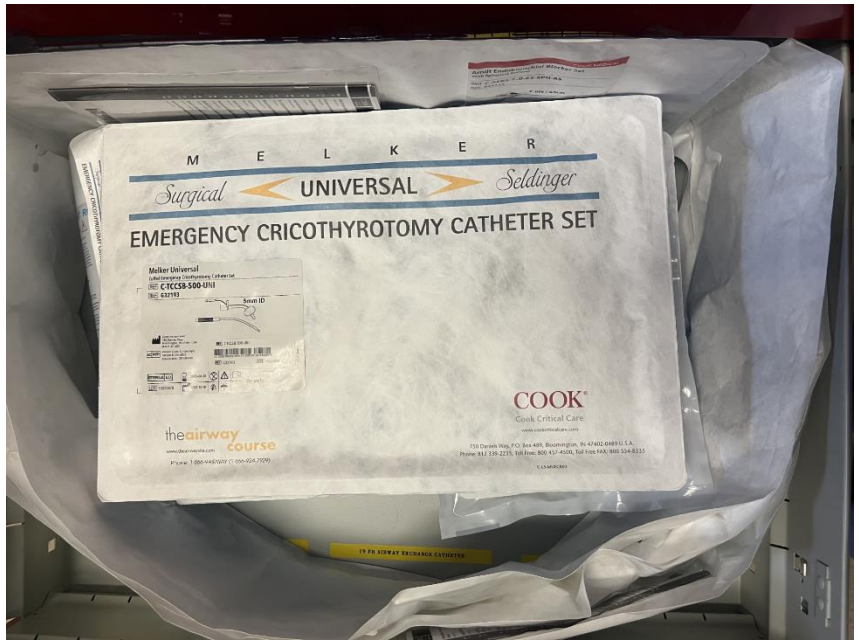
3rd Drawer – Adult Blades, Tubes & Stylets
McGrath Laryngoscope Battery
McGrath Mac Laryngoscope Handle
McGrath #3 Blade
McGrath #4 Blade
McGrath X3 Blade
C-Mac #3 Blade
C-Mac #4 Blade
C-Mac D Blade
Cuffed ETT 5.0
Cuffed ETT 5.5
Cuffed ETT 6.0
Cuffed ETT 6.5
Cuffed ETT 7.0
Cuffed ETT 7.5
Cuffed ETT 8.0
Cuffed ETT 8.5
Adult Intubating Stylet
Adult Glide Rigid Stylet
Adult EZ CAP Stat CO2 detector
Bougie
Portex Trach 6.0 Cuffed
Portex Trach 8.0 Cuffed
Ducanto Oral Suction

Fourth Drawer: Pedi

4th Drawer- Pediatrics
LMA Unique 1.0
LMA Unique 1.5
LMA Unique 2.0
LMA Unique 2.5
Air-Q LMA 1.0
Air-Q LMA 1.5
Air-Q LMA 2.0
2.5mm Uncuffed ETT
3.0mm Uncuffed ETT
3.5mm Cuffed ETT
4.0mm Cuffed ETT
4.5mm Cuffed ETT
5.0mm Cuffed ETT
5.5mm Cuffed ETT
Infant/Pedi EZ CAP Stat CO2 Detector
C-MAC Miller 0 Blade
C-MAC Miller 1 Blade
McGrath #2 Blade
Pediatric Intubating Stylet
Magill Forceps Small
Cook Pediatric Airway Exchange Catheter 8.0fr/45cm
Melker 3.5mm Cricothyrotomy Kit
Transtracheal Needle Jet Ventilator 6f/5cm

Bottom Drawer: Procedural Kits & Catheters

5th Drawer- Surgical, Tube Changers
Melker 5.5mm Cricothyrotomy Kit
Ciaglia Blue Rhino Tracheostomy Kit
Aintree Intubation Catheter 19.0fr/56cm
Airway Exchange Catheter 19.0fr/83cm
Soft Tipped Extra Firm Exchange Catheter 14.0fr/100cm
.038”/150cm Glidewire
SILKOSPRAY – universal silicone spray
Bronchial Blocker 7FR 65CM ARNDT
Radial Jaw Biopsy Forceps (for bronchial blocker)




MaineHealth