Emergency Medical Retrieval Service (EMRS)
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Standard Operating Procedure
Public Distribution

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Aims
To ensure appropriate familiarisation and use of the McGrath MAC EMS Video Laryngoscope.
To outline cleaning procedure after use.

Application
EMRS team members
SAS airwing Paramedics

Background
The McGRATH MAC EMS Video Laryngoscope is a tool used to aid the intubation of the trachea. The device incorporates a light source (LED) and miniature camera to view the larynx during the procedure of laryngoscopy. The image is displayed on an LCD screen contained within a monitor mounted to the handle of the device. A 3.6V battery mounted within the handle powers the screen, camera, and LED. The McGRATH MAC disposable laryngoscope blade range covers the camera and LED assembly (CameraStick) to prevent direct patient contact. The McGRATH MAC blades are supplied sterile and are single use.
Battery

The device turns on and off by a single push of the Power button.
The life of the battery unit is displayed on the bottom right hand corner of the screen. This counts down from 250 as each unit of power is consumed. When the counter reaches 5, the battery icon will flash. Replace the battery unit when this happens.

The device is switched off by firmly depressing the Power button then releasing it.
Remove the battery unit by pulling the tab and dispose of under local regulations for disposal of batteries.
If the device is not to be used for an extended period of time (more than 1 month) remove the battery unit before storage.

Fitting the blade

To fit the blade, open the peel pouch and slide the blade over the camera and light source portion of the device. The blade is fully located when the blade clip is firmly latched to the CameraStick. To remove the blade lift the clip and pull the blade off.

McGRATH MAC DISPOSABLE LARYNGOSCOPE BLADES ARE SINGLE USE AND MUST BE DISPOSED OF AFTER EACH PATIENT USE.
Using the Videolaryngoscope

1. If possible, position the patient in the optimal position for direct laryngoscopy. Look into the mouth; insert the blade into the right side of the mouth, moving the device to a central position while sweeping the tongue to the left.

2. Advance the blade into the vallecula.

3. Visualize the epiglottis on the screen. Lift the anatomy forwards and upwards to expose a direct and indirect view of the glottis.

4. When the device is in the optimal position the glottis should be viewed in the central upper section of the screen.

5. Advance the tube gently and atraumatically through the vocal cords. Tube placement can be performed either by looking directly in the mouth, indirectly on the screen or a combination of both.

6. If a direct pathway for the tube was not created by sweeping the tongue or aligning the airway axes a stylet or a bougie may need to be used.

7. Indirectly visualize the tube placement through the vocal cords.

8. The screen view can be used to confirm the correct insertion depth of the endotracheal tube.
**Tips for successful intubation**

If the device is used outside in bright conditions, some shade e.g. a blanket, may be necessary to see the screen. If the screen cannot be visualised it is still possible to use the device as a standard macintosh laryngoscope.

If the vocal cords are visualised clearly on the screen but there is difficulty passing the tube through the vocal cords, a stylet is likely to be more successful than a bougie. Lubricating the stylet with lubricant gel before it is inserted into the endotracheal tube will allow easier removal of the stylet after the endotracheal tube has been passed through the vocal cords. External laryngeal manipulation by an assistant may also assist passage of the endotracheal tube through the vocal cords.

**Cleaning the device**

After use, the disposable blade should be removed by releasing the blade clip and sliding it off the camera stick. The device should then be thoroughly cleaned using disinfectant wipes. The device is suitable for high level disinfection by chemical immersion (battery removed).