NWC EMSS Skill Performance Record

i-gel$^{O}_{2}$™ Supraglottic Airway

Name:	1st attempt:	☐ Pass	☐ Repeat
Date:	2nd attempt:	☐ Pass	☐ Repeat

Instructions: An unconscious adult is apneic and two attempts at intubation have been unsuccessful, contraindicated, or a less attractive choice. Prepare the equipment and provide an alternate airway using an i-gel supraglottic airway.

Performance standard 0 Step omitted (or leave blank) 1 Not yet competent: Unsuccessful; required critical or excess prompting; marginal or inconsistent technique 2 Successful; competent with correct timing, sequence & technique , no prompting necessary	**Attempt 1 rating**	**Attempt 2 rating**
* BSI: Gloves, goggles, facemask		
State intended purpose and advantages of using an i-gel airway: ☐ **Purpose**: To create a rapid non-inflatable anatomical seal of the pharyngeal, laryngeal and perilaryngeal structures in providing a supraglottic advanced airway. ☑ **Advantages**: Ease and speed of insertion, non-inflating cuff; superior seal; less cuff over pressurization and air leak; better 1st attempt success vs. King LTS-D; stability after insertion (no position change d/t cuff inflation); multiple sizes for all patients; Tactical Combat Casualty Care course choice for extraglottic airway; minimal risk of tissue compression and displacement. **Features**: Latex free, sterile, single patient use device. The buccal cavity stabilizer has a widened, elliptical, symmetrical and laterally flattened cross sectional shape, providing good vertical stability and axial strength upon insertion. Has a standard airway channel and separate gastric channel		
State indications for extraglottic airway ☐ Need for an advanced airway in an unconscious patient without a gag reflex where 2 attempts at ETI have been unsuccessful or not advised ☐ S&S of a difficult intubation make ETI less attractive ☐ Need for CPR where ETI placement cannot be done without interrupting compressions ☐ In a difficult or unexpectedly difficult intubation, to pass a bougie blindly through the device into the trachea and to rail-road an ETT over it.		
*__State at least 4 contraindications__ ☐ +Gag reflex ☐ Caustic ingestion ☐ Trismus ☐ Limited mouth opening ☐ Pharyngo-perilaryngeal abscess, trauma, or mass		
Precautions ☐ Do not use excessive force to insert the device or suction catheters/nasogastric tube. ☐ Inadequate sedation with retained gag reflex may lead to coughing, bucking, excessive salivation, retching, laryngospasm or breath holding. ☐ Do not reuse or attempt to reprocess the i-gel. ☐ Patients with any condition which may increase the risk of a full stomach e.g. hiatal hernia, extreme obesity, pregnancy or a history of upper GI surgery etc. Have suction ready.		
Prepare patient: Explain each step as it is performed even though pt appears unconscious ☐ Sniffing position unless head/neck movement is inadvisable or contraindicated. ☐ Remove dentures or removable plates from the mouth before attempting insertion.		
Preoxygenate (attempt) with 95% FiO_2 for **3 min** w/ capnography sensor on BVM ☐ If pt spontaneously breathing, attempt preoxygenation w/ NRM ☐ If assist needed: Insert NPA/OPA and squeeze bag over 1 sec providing just enough air to see chest rise (~400-600mL) – avoid high airway pressure (25cm H_2O) & gastric distention. ☐ Ventilate at 10 BPM (1 every 6 sec); Hx asthma/COPD: 6-8 BPM		
Prepare equipment – Have everything ready before beginning procedure ☐ Prepare suction equipment (connect DuCanto); turn on to ✓ unit; suction prn ☐ Ensure that laryngeal structures are as dry as possible – suction secretions prior to insertion.		
i-gel device: ☐ Choose correct **size** device based on pt size (ideal weight) (see chart page 37) ☐ **Inspect packaging**; ensure no damage prior to opening; within expiration date ☐ Inspect device, check airway patency; confirm no FB or lubricant obstructing distal opening or gastric channel. ☐ Inspect inside the bowl, ensuring surfaces are smooth and intact & patent gastric channel. ☐ Discard if airway tube or body of the device looks abnormal or deformed. ☐ Check the 15mm connector is secure		

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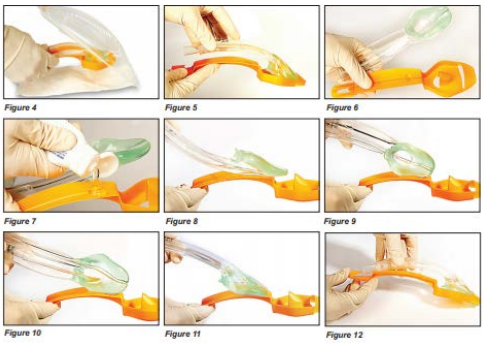
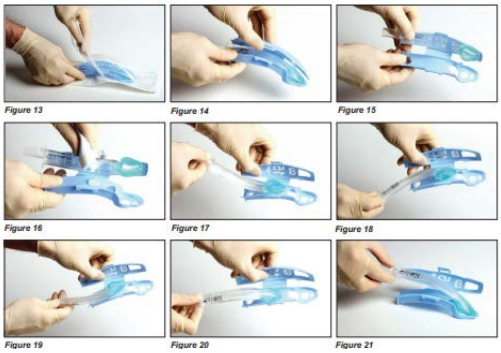
Prep adult sizes In final min of pre-ox, open package; remove device from protective cradle and transfer to same hand holding the cradle. Support device between thumb and index finger (figure 6). **Place a small amount of a water-based lubricant onto middle of cradle's smooth surface** (figure 7). Grasp i-gel at integral bite block area with the opposite (free) hand and lubricate back, sides and front of the cuff by pulling through lubricant. Repeat if lubrication is inadequate. After completed, ensure that no bolus of lubricant remains in the cuff bowl or elsewhere on the device. Avoid touching cuff with your hands (figures 8, 9, 10 and 11); see notes below*. **Place i-gel back into cradle** in preparation for insertion (figure 12). **Warning**: **The i-gel must always be separated from the cradle prior to insertion. The cradle is not an introducer and must never be inserted into the patient's mouth.**  Figure 4 Figure 5 Figure 6 Figure 7 Figure 8 Figure 9 Figure 10 Figure 11 Figure 12		
Prep child sizes In the final minute of pre-ox, open cage package and remove the device (figure 13). Transfer device into cage lid. **Place a small bolus of a water based lubricant onto the smooth inner surface of cage** (fig. 14, 15 and 16). Grasp i-gel at integral bite block area with the opposite (free) hand and lubricate back, sides and front of the cuff by pulling through lubricant. Repeat if lubrication is inadequate. After completed, ensure that no bolus of lubricant remains in cuff bowl or elsewhere on the device. Avoid touching the cuff with your hands (figures 17, 18, 19, and 20); see notes below* Place i-gel back into cage pack in prep for insertion (fig 21).  Figure 13 Figure 14 Figure 15 Figure 16 Figure 17 Figure 18 Figure 19 Figure 20 Figure 21		
***Notes:** ▪ Do not place device directly onto pt's chest or surface near patient's head; always place in protective cradle/cage pack after lubrication, pending insertion. ▪ Do not use unsterile gauze or your finger to help lubricate device. ▪ Do not apply lubricant too long before insertion (need to maintain moisture).		
Prep confirming & securing equipment: Capnography attached to BVM, tape, tube strap, head immobilizer, stethoscope (put around neck)		
Premedicate if applicable ☐ Fentanyl per SOP for pain (not necessary if ketamine used for sedative)		
Sedate: Optimum sedation must be achieved prior to insertion (absence of gag reflex suggested by lack of eyelash reflex or response to a glabellar tap; easy up and down movement of the lower jaw, no reaction to pressure applied to both angles of the mandible). Allow for clinical response to sedative prior to inserting airway. ☐ ***Etomidate** 0.5 mg/kg IVP (max 40 mg) OR ☐ ***Ketamine** (preferred for asthma and children) 2 mg/kg slow IVP (over one min) or 4 mg/kg IM or IN		
INSERTION TECHNIQUE (Proficient users can insert in < 5 sec) ☐ Remove i-get from protective cradle or pack ☐ Grasp lubricated i-gel firmly along the integral bite block. Position device so the cuff outlet is facing towards patient's chin. ☐ Gently press down on chin to open mouth (no fingers or thumbs in mouth). ☐ Introduce leading soft tip into pt's mouth in a direction towards hard palate. ☐ Glide the device downwards and backwards along the hard palate with a continuous but gentle push until definitive resistance is felt. Sometimes a feel of 'give-way' is felt before end point resistance is met. This is the due to the passage of the i-gel bowl through the faucial pillars. Continue to insert device until definitive resistance is felt. 		
Do not repeatedly push i-gel up and down or apply excessive force during insertion. If resistance during insertion, do jaw thrust maneuver or deep rotation For pt in spine motion restriction, prevent head movement by placing thumbs on maxilla & hands around head (in-line maneuver) 		

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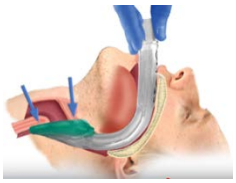
Once definitive resistance met, airway tip should be in the upper esophageal opening and cuff should be against laryngeal framework. Teeth incisors should be resting on integral bite-block*. No more than 2 attempts per patient. WARNING: In order to avoid the possibility of the device moving up out of position HOLD tube in correct position until device is secured in place. 		
*A horizontal line (adult sizes 3, 4 5 only) at the middle of the integral bite-block represents **correct teeth position**. If not aligned, remove i-gel and reinsert with a gentle jaw thrust applied by an assistant. If still not resolved, use one size smaller. Peds sizes (sizes 1 to 2.5) do not have a horizontal line on the integral bite block. This is due to the greater variability in the length of the oro-pharyngeal-laryngeal arch in children. Insertion should continue, as with the adult sizes, until definitive resistance is felt. Teeth may rest anywhere on integral bite block. 		
Ventilate at proper rate and volume **and CONFIRM proper tube position** (listed in order) ☐ *Auscultation bilateral breath sounds over midaxillary lines & anterior chest ☐ *$ETCO_2$ by capnography ☐ Little gastric air channel leak: excessive leak means device is incompletely inserted. *If tube NOT positioned accurately and/or no confirmation of breath sounds and $ETCO_2$, remove tube & ventilate with NPA/OPA & BVM. May reattempt X 1.		
Preceptor ask, *"How would you know if you are delivering appropriate volumes with each ventilation?" (Chest rise, good breath sounds to periphery bilaterally; good capnography number and waveform; SpO2 if not in card arrest)*		
SECURE tube: When good ventilations and appropriate positioning established, tape in place from 'maxilla to maxilla' (keep tube midline in mouth) or secure with head strap.		
If required, an adequately lubricated, appropriate size NG or **suction catheter** may be passed down gastric channel (see chart last page of procedure). Place small bolus of lubricant over proximal end of gastric channel prior to inserting suction catheter. Move catheter in and out slightly while inserting to distribute lubricant. **Do not insert catheter through gastric channel if there is:** ▪ An excessive air leak through the gastric channel ▪ Esophageal varices or evidence of upper GI bleed ▪ Esophageal trauma ▪ Hx of upper GI surgery ▪ Hx of bleeding/clotting abnormalities NG insertion in the presence of inadequate levels of sedation can lead to coughing, bucking, excessive salivation, retching, laryngospasm or breath holding		
REASSESS: Frequently to detect displacement and complications (especially after pt. movement or pt. status/condition changes) ☐ $ETCO_2$ ☐ Lung sounds ☐ SpO_2 (not in cardiac arrest) ☐ HR ☐ BP		
If protective reflexes return: Remove tube in an area where suction equipment and the ability to rapidly intubate is present.		
Troubleshooting: Peak airway pressure of ventilation must not exceed 40cm H_2O in order to prevent barotrauma. If an excessive air leak is detected during PPV, use one or all of the following: ▪ Hand ventilate pt with gentle and slow squeezing of the BVM ▪ Limit tidal volume to no more than 5mL/kg ▪ Limit the peak airway pressure to 15-20cm of H_2O ▪ Assess the depth of sedation to ensure that pt is not bucking the tube If all of the above fail then change to one size larger i-gel.		
Risks and Complications of inserting an i-gel ☐ Laryngospasm ☐ Sore throat ☐ Tongue numbness ☐ Cyanosis ☐ Trauma to the pharyngo-laryngeal framework ☐ Down-folding of epiglottis (more common in children) ☐ Gastric insufflation, regurgitation and inhalation of the gastric contents ☐ Nerve injuries, vocal cord paralysis, lingual or hypoglossal nerve injuries ☐ If placed too high in the pharynx, may result in a poor seal and cause excessive leakage ☐ If tip of i-gel enters glottic opening, will have an excessive air leak through gastric channel and obstruction to airflow. If NG or suction catheter is inserted through i-gel gastric channel, it will enter the trachea and lungs. If suspected, remove and reinsert with gentle jaw thrust.		

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Critical Criteria - Check if occurred during an attempt ☐ Failure to initiate ventilations within 30 sec after taking BSI precautions or interrupts ventilations for >30 sec at any time ☐ Failure to take or verbalize body substance isolation precautions ☐ Failure to voice and ultimately provide high oxygen concentration [at least 85%] ☐ Failure to ventilate the patient at an appropriate rate ☐ Failure to provide adequate volumes per breath [maximum 2 errors/minute permissible] ☐ Failure to pre-oxygenate patient prior to insertion of the supraglottic airway device ☐ Failure to insert the supraglottic airway device at a proper depth or location within 2 attempts ☐ Failure to confirm that pt is being ventilated properly (correct lumen and proper insertion depth) by auscultation bilaterally over lungs and over epigastrium ☐ Insertion or use of any adjunct in a manner dangerous to the patient ☐ Failure to manage the patient as a competent paramedic or PHRN ☐ Exhibits unacceptable affect with patient or other personnel ☐ Uses or orders a dangerous or inappropriate intervention		

Scoring: All steps must be independently performed in correct sequence with appropriate timing and all starred (*) items must be explained/ performed correctly in order for the person to demonstrate competency. Any errors or omissions of these items will require additional practice and a repeat assessment of skill proficiency.

Rating: (Select 1)

☐ **Proficient**: The paramedic can sequence, perform and complete the performance standards independently, with expertise and to high quality without critical error, assistance or instruction.

☐ **Competent:** Satisfactory performance without critical error; minimal coaching needed.

☐ **Practice evolving/not yet competent:** Did not perform in correct sequence, timing, and/or without prompts, reliance on procedure manual, and/or critical error; recommend additional practice

CJM 1/19

Preceptor (PRINT NAME – signature)

i-gel size	Patient Size	Pt wt (kg)	(LBS)	Broselow color	NG or Suction size
1.5	Infant	5-12 kg	11-25	Pink, red, purple	10 Fr.
2	Small child	10-25 kg	22-55	Yellow, white, blue	10 Fr.
2.5	Large child	25-35 kg	55-77	Orange	10 Fr.
3	Small adult	30-60 kg	65-130	Green (2.5-3)	12 Fr.
4	Medium adult	50-90 kg	110-200		12 Fr.
5	Large adult	90+ kg	200+		14 Fr.

Note regarding sizing by weight: While size selection on a weight basis is applicable to most patients, individual anatomical variations mean the weight guidance provided should always be considered with a clinical assessment of the pt's anatomy. Those with cylindrical necks or wide thyroid/cricoid cartilages may require a larger size than would normally be recommended on a wt basis. Patients with a broad or stocky neck or smaller thyroid/cricoid cartilage, may require a smaller size. Patients with central obesity, where the main weight distribution is around the abdomen and hips, might require an i-gel of a size commensurate with the ideal body weight for their height rather than their actual body weight.

i-gel size	Max size ET Tube
1	3.0mm
1.5	4.0mm
2	5.0mm
2.5	5.0mm
3	6.0mm
4	7.0mm
5	8.0mm