Bag Valve Mask & Larson’s Manoeuvre for Laryngospasm.

Advanced Practitioner Training Module — DMC-AW-02

1. Framing: Why BVM Mastery Is Non-Negotiable

Bag-valve-mask (BVM) ventilation is the **most critical manual rescue skill** in the procedural sedationist's armamentarium. It is not a beginner technique to be delegated — it is the skill that bridges apnoea to recovery, and its failure is the proximate cause in the majority of preventable sedation-related critical incidents.

▶️	**Cross-reference: NZSSD IV Sedation Course Manual (9th Ed.), Section 3 — Monitoring and Emergency Response.** That module establishes the foundational emergency framework. This module deepens BVM technique for practitioners operating within TCI and advanced sedation contexts, where the physiology of the apnoeic event is more nuanced than in single-agent midazolam sedation.

In the TCI propofol/remifentanil context (Eleveld PK/PD model), respiratory depression is **synergistic and dose-additive**: propofol attenuates hypercapnic drive while remifentanil suppresses hypoxic drive. The resulting apnoea can be *rapid, complete, and prolonged*. The sedationist who treats BVM as a casual backup skill is one who has not yet encountered a remifentanil-potentiated apnoea at a Ce of 2.0 ng/mL.

▶️	**Cross-reference: DMC TCI Training Module — Pharmacodynamic Synergy and the Eleveld Model.** Review the Ce50 values for respiratory depression under combined propofol/remifentanil before proceeding. Understanding the mechanism of the apnoea you are managing is inseparable from managing it effectively.

1.1 Learning Objectives

On completion of this module the practitioner will be able to:

- Describe the pharmacodynamic basis of respiratory depression in propofol/remifentanil TCI sedation
- Identify the five BVM failure modes and their corrective responses
- Demonstrate correct C-E grip, thenar eminence technique, and two-person BVM role assignment
- OPA, NPA, and SGA as escalating airway adjuncts
- Interpret waveform capnography during BVM ventilation
- Apply the TCI Sedation Apnoea Rescue Sequence under cognitive load

2. Anatomy of BVM Failure

Most BVM failures are predictable. Understanding the failure modes — in anatomical, physiological, and technical terms — is the first competency of the expert user.

2.1 The Upper Airway Under Sedation

Propofol and remifentanil both reduce **pharyngeal dilator muscle tone** (genioglossus, tensor veli palatini). At sedation depths consistent with procedural use (MOAA/S 2–3), the tongue falls posteriorly against the posterior pharyngeal wall, and the soft palate descends. This is *not* simply 'the tongue blocking the airway' — it is a **multi-level collapse** from the nasal valves to the supraglottic structures, worsened by:

!	Critical anatomy point: the seal between the tongue base and epiglottis creates a functional valve under sedation. BVM ventilation pushes gas against this valve. Jaw thrust opens the valve by lifting the hyoid-tongue complex anteriorly — mask seal without jaw thrust wastes your effort.

2.2 The Five BVM Failure Modes

Failure Mode	Mechanism & Expert Response
Mask leak	Gas preferentially exits at mask-face interface rather than through glottis. Detected by absent or low ETCO2, chest not rising, no reservoir bag decompression. Response: re-seat mask, thenar eminence or two-person grip, consider size up/down.
Airway obstruction (soft tissue)	Tongue/palate occlusion. Detected by high resistance on squeeze, no chest rise. Response: jaw thrust as first priority, OPA/NPA insertion. Do not increase inflation pressure — increases gastric insufflation risk.
Laryngospasm	Reflex glottic closure. Distinct from soft tissue obstruction by its onset pattern (often triggered by secretion/blood/stimulation), near-complete resistance, and absence of OPA correction. See Section 5.3.
Gastric insufflation / regurgitation	Inflation pressure exceeds LOS pressure (~20 cmH2O). Stomach fills with gas, increases regurgitation risk. Response: reduce tidal volume, ensure patent airway (obstruction raises required pressure), consider head-up tilt.
Operator fatigue / technique drift	Sustained one-person BVM is physically demanding. Grip weakens, mask position degrades. Response: two-person protocol from the outset in extended apnoeas; rotate the bag-squeezer at 2-minute intervals.

3. Expert BVM Technique

3.1 Equipment Assembly and Pre-Check

The BVM should be assembled and checked BEFORE sedation induction — not retrieved from a bag when the patient becomes apnoeic. The pre-check is a 30-second discipline:

3.2 Mask Sizing

The mask should bridge from the bridge of the nose to the chin cleft — not over the chin. A mask that sits on the chin creates a mechanical pivot that lifts the nasal bridge and breaks the seal with jaw thrust. When in doubt, size down.

Size	Clinical Guide
Size 3	Small adult — narrow face, female with small features
Size 4	Standard adult — the most commonly used size
Size 5	Large adult — bearded male, broad facial structure
Bearded patients	Apply lubricating gel to beard before mask placement, or use a larger mask and accept the need for two-person grip from the outset

3.3 Hand Technique: The Three Methods

The dominant-hand fingers form a **C** over the mask dome and a **E** under the mandible. The thumb and index finger press the mask down; the middle, ring, and little fingers hook under the mandible on the bony ridge — *not the soft tissue*. Soft tissue compression pushes the tongue base backwards, worsening obstruction.

3.3.1 C-E Grip (Single Operator)

!	Expert nuance: the C-E is a JAW THRUST grip first, mask seal second. If you are squeezing the bag and getting resistance, confirm your middle/ring/little fingers are lifting the angle of the mandible anteriorly, not compressing the submandibular triangle.

3.3.2 Thenar Eminence Technique

Both thenar eminences (the muscular pad at the base of each thumb) press laterally on the mask body. Both little fingers hook the mandibular angles. Studies consistently show **superior mask seal** compared to C-E for single operators, particularly in the setting of difficult anatomy.

two-handed thenar grip maximizes both mask seal *and* maximal anterior mandibular displacement.

3.3.3 Two-Person BVM — Role Assignment

Two-person BVM is not simply two people at the head of the bed. It requires explicit role clarity:

Role	Responsibilities

Airway holder (dominant skill)	Maintains mask seal and jaw thrust using two-hand thenar technique; directs the airway; calls ventilation cues; monitors chest rise and reservoir.
Bag operator	Squeezes the bag smoothly (1–1.5 seconds), watches chest rise as the primary endpoint; confirms ETCO2 waveform with each breath; communicates bag resistance changes to the airway holder.

3.4 Ventilation Parameters

The temptation under anxiety is to ventilate too fast and too hard. Both are harmful.

Parameter	Target / Rationale
Tidal volume	6–8 mL/kg ideal body weight. Visible chest rise only — do not use full bag compression. Excessive Vt raises airway pressure, worsens gastric insufflation, and causes pulmonary overdistension.
Rate — apnoeic patient	10–12 breaths per minute. Faster rates prevent adequate exhalation and cause air trapping (auto-PEEP).
Rate — supportive (partial effort)	Match patient rate, assist at trough of effort. Fighting the patient's respiratory cycle increases WOB and may provoke laryngospasm.
I:E ratio	1:2 minimum; 1:3 preferred. Allow full passive exhalation.
Inflation pressure think	Keep below 20 cmH2O to avoid exceeding lower oesophageal sphincter pressure. In an obstructed airway this is not achievable without resolving the obstruction first.
PEEP valve	5 cmH2O in low-compliance states (obesity, bronchospasm). Omit if gastric distension is the primary risk. Never omit suction.

▶️	**Cross-reference: NZSSD Oral Sedation Programme Framework — Monitoring Standards.** Ventilation parameters above are consistent with the NZSSD monitoring standards for sedation depth and respiratory function. The ETCO2 thresholds for intervention align with those established in the Oral Sedation Framework; apply the same decision triggers here.

4. Airway Adjunct Integration

4.1 Oropharyngeal Airway (OPA / Guedel)

The OPA is the **first-line mechanical adjunct** for soft tissue obstruction. Its purpose is to hold the tongue base off the posterior pharyngeal wall by creating a rigid channel through the oropharynx.

Sizing

Measure from the maxillary incisors to the angle of the jaw. Common adult sizes: 80mm (size 3), 90mm (size 4), 100mm (size 5).

!	An OPA that is too small does not reach the tongue base — it provides a false sense of security while the obstruction persists. An OPA that is too large sits in the hypopharynx, worsens obstruction, and may provoke laryngospasm. Size carefully.

Insertion Technique (Sedated Adult)

Tolerance indicator: In the sedated (not anaesthetised) patient, gagging or swallowing on the OPA indicates the patient is lighter than anticipated. Remove, reassess depth, consider NPA as a lower-stimulus alternative.

4.2 Nasopharyngeal Airway (NPA)

The NPA is **better tolerated** than the OPA across a wider range of sedation depths. It is the adjunct of choice when the patient is semi-conscious, has limited mouth opening, or has a strong gag reflex at the current sedation depth.

Consideration	Detail
Sizing	Size 6–7mm ID in most adults.
Contraindications	Suspected base of skull fracture, coagulopathy (relative — consider benefit/risk), severe nasal polyps, recent nasal surgery.
Lubrication	Water-soluble gel generously applied. Insertion without lubrication causes haemorrhage that then contaminates the airway.
Insertion	Bevel facing the nasal septum; pass posteriorly, not superiorly. If resistance met, do not force — try the other nostril.
Safety pin / flange	Always use a safety pin or ensure the flange cannot pass through the nares. Unflanged airways can migrate fully intranasally.

4.3 Supraglottic Airway (SGA) as Rescue Bridge

The i-gel or classic LMA represents the **bridge device** between failed BVM ventilation and definitive airway management. In the procedural sedation context, the SGA is most likely to be deployed in:

!	The SGA is not a failure — it is an appropriately escalated response. The failure is delaying its deployment while repeatedly attempting inadequate BVM ventilation in a deteriorating patient. Know your threshold and act on it.

5. Capnography Integration with BVM Ventilation

Waveform ETCO2 monitoring during BVM ventilation provides **real-time, breath-by-breath feedback** that clinical observation cannot match. It should be regarded as an *essential*, not optional, adjunct for the advanced procedural sedationist.

5.1 What Capnography Tells You During BVM

Capnography Pattern	Interpretation
Regular square waveform, ETCO2 35–45 mmHg	Effective ventilation, patent airway, appropriate rate.
Absent waveform (flat line)	Either oesophageal ventilation, complete mask leak, or circuit disconnection. Confirm with chest rise and auscultation.
Low ETCO2 (<30 mmHg)	Hyperventilation (reduce rate), large mask leak with dilution, or low cardiac output state (check perfusion).
High ETCO2 (>50 mmHg) and rising	Hypoventilation — increase rate or tidal volume; confirm airway patency.
Shark fin / sloped plateau	Bronchospasm or partial obstruction; consider salbutamol, OPA repositioning.
Cleft in expiratory plateau	Patient's own respiratory effort emerging — consider reducing ventilation support.
Irregular waveforms, variable height	Mask leak — reseat, adjust grip, consider adjuncts.

5.2 Capnography and the Apnoeic Oxygenation Window

In the optimally pre-oxygenated patient (SpO2 100% on 15 L/min via non-rebreather mask for 3 minutes pre-induction, or ideally high-flow nasal oxygen at 30–60 L/min), the apnoeic window before desaturation ranges from **3–8 minutes** depending on BMI, FRC, and metabolic rate. Capnography confirms *when* apnoea began (flat ETCO2) and tracks CO2 accumulation — which, in the TCI context, may paradoxically **stimulate spontaneous breathing** as CO2 rises above the apnoeic threshold.

▶️	**Cross-reference: DMC TCI Training Module — Pre-oxygenation Protocol and Apnoeic Threshold Management.In sedation-induced apnoea, the sudden loss of muscle tone often leads to complete upper airway obstruction. This obstruction drastically accelerates the depletion of Functional Residual Capacity (FRC). In an obese patient, severe desaturation can occur in under 60 seconds if the airway is not immediately stented open.***If obstruction occurs, rapid FRC depletion will cause precipitous desaturation.*

5.3 Laryngospasm: Recognition and Intervention

Laryngospasm is a sustained, reflex adduction of the true vocal cords and supraglottic structures. In the sedation context it is most comIn sedation-induced apnoea, the sudden loss of muscle tone often leads to complete upper airway obstruction. This obstruction drastically accelerates the depletion of Functional Residual Capacity (FRC). In an obese patient, severe desaturation can occur in under 60 seconds if the airway is not immediately stented open.

Recognition

Feature	Laryngospasm vs Soft Tissue Obstruction
Onset	Sudden, often stimulus-related (laryngospasm) vs gradual, depth-related (soft tissue)
Capnography	Abrupt flat line or severely reduced waveform (laryngospasm) vs reduced with irregular waveform (soft tissue)

Response to jaw thrust + OPA	Minimal (laryngospasm) vs significant improvement (soft tissue)
Sound	High-pitched inspiratory stridor / complete silence (laryngospasm) vs snoring / stertor (soft tissue)
Chest movement	Paradoxical (see-saw) or absent (laryngospasm) vs reduced but present (soft tissue)

Intervention Sequence

!	Laryngospasm is the one scenario where increasing BVM pressure IS appropriate — up to 30 cmH2O to stent the cords — but only after suction and stimulus removal. In all other BVM scenarios, high pressure is the enemy.

6. Predicting and Pre-Planning the Difficult BVM

6.1 The MOANS Mnemonic

MOANS identifies anatomical and physiological predictors of difficult BVM ventilation. Assess EVERY patient pre-sedation.

Letter	Predictor & Clinical Implication
M — Mask seal	Beard, facial trauma, absence of teeth (edentulous patients — re-insert dentures or pack the cheeks with gauze), facial deformity, NG tube through nare.
O — Obesity / Obstruction	BMI >26 increases difficulty; BMI >35 significantly. Obstruction from any cause (angioedema, tumour, infection). Pre-oxygenation more critical; consider 20° head-up position.
A — Age	>55 years associated with reduced pharyngeal muscle tone and increased likelihood of difficult BVM. Not a contraindication — increases vigilance.
N — No teeth (edentulous)	Loss of structural support collapses the cheeks. Solutions: leave dentures in for mask seal, then remove prior to airway intervention; pack sulci with gauze.

S — Stiff / Snoring	Reduced lung compliance (obesity, COPD, pulmonary oedema) increases inflation pressure required. Snoring history predicts OSA and pharyngeal collapse at sedation depth.

Two or more MOANS predictors = **high-risk BVM patient**. Your response: pre-size OPA and NPA, confirm two-person team available, brief your assistant on their role before induction, and lower your threshold for SGA deployment. Consider whether TCI target concentrations should be reduced to limit apnoea duration.

6.2 The Difficult Airway Pre-Brief

The pre-brief is a structured 90-second conversation with your sedation assistant before induction in any MOANS-positive patient:

!	Crew Resource Management principle: a pre-brief converts an emergency into a rehearsed event. The assistant who has been briefed acts in 3 seconds; the unbriefed assistant acts in 30. In desaturation, those 27 seconds matter.

7. The TCI Sedation Apnoea Rescue Sequence

The following sequence is designed for the **propofol/remifentanil TCI context** where apnoea may be complete and sustained. It is not a linear protocol — decisions branch at each step — but the sequence provides a cognitive scaffold under stress.

Step	Action
0 — Recognise	Absent ETCO2 waveform and/or SpO2 plateau/falling AND absent respiratory effort. Note time. Call out to assistant: "Apnoea — initiating rescue sequence."
1 — TCI target reduction	Reduce remifentanil Ce target first (faster offset), then propofol. Do NOT switch pumps off abruptly — this does not speed offset and causes loss of sedation continuity on recovery.
2 — Stimulation	Verbal and physical stimulus: name + sternal rub. A subset of patients will resume breathing with stimulus alone at Ce values below apnoeic threshold.

3 — Airway positioning	Head tilt-chin lift OR (preferred) modified jaw thrust. Optimal sniffing position — not neutral, not hyperextended. 20° head-up if obese.
4 — OPA insertion	Size-appropriate OPA. Confirm patent airway by absence of BVM resistance.
5 — BVM ventilation	C-E or thenar grip, 10–12/min, 6–8 mL/kg, visible chest rise, watch capnography. If resistance: jaw thrust, recheck OPA.
6 — Two-person upgrade	If one-person BVM is inadequate after 4 breaths: "[Name], take the bag. I'm holding the airway." Explicit handover.
7 — NPA addition	If obstruction persists despite OPA: insert NPA contralateral naris. Both adjuncts can be in situ simultaneously.
8 — SGA deployment	If adequate ventilation not achieved after 90 seconds of optimised BVM: insert i-gel / LMA. This is not a failure — it is correct decision-making.
9 — Escalate	If SGA placement fails or ventilation remains inadequate: call 111, intubation team, or transfer to emergency services. Do not persevere beyond your training.

8. Knowledge Assessment — Multiple Choice Questions

These questions are designed for the advanced procedural sedationist. Each question has a single best answer. Answers and rationale are provided below each question.

Question 1	
A 58-year-old male (BMI 34, beard, OSA on CPAP) undergoes procedural sedation with propofol/remifentanil TCI. Two minutes post-induction he becomes apnoeic. You apply C-E grip BVM ventilation. The capnography shows a flat line and you feel high resistance on the bag. Your FIRST action should be:	
A	Increase inflation pressure to overcome resistance.

B	Insert a size 4 OPA and re-apply BVM with jaw thrust.
C	Immediately deploy the i-gel supraglottic airway.
D	Reduce the remifentanil TCI target concentration.
E	Call for emergency services.
Answer: B *High BVM resistance with flat capnography and no chest rise indicates soft tissue airway obstruction. The first corrective step is OPA insertion and jaw thrust — not increasing pressure (which risks gastric insufflation), not immediate SGA (which is escalation step 8 after BVM optimisation fails). TCI reduction (D) is important but does not address the immediate airway problem. Emergency services (E) are premature.*	

Question 2	
During two-person BVM ventilation for a sedation-induced apnoea, your capnography displays a 'shark fin' waveform with a sloped rather than square expiratory plateau. SpO2 is 97%. The MOST likely explanation is:	
A	Oesophageal ventilation.
B	Complete mask leak.
C	Bronchospasm or partial lower airway obstruction.
D	Hyperventilation causing low ETCO2.

E	Return of spontaneous breathing.
Answer: C *The shark-fin capnography waveform (sloped expiratory plateau rather than a square wave) reflects heterogeneous alveolar emptying, classic for bronchospasm or partial obstruction. Oesophageal ventilation produces absent or very low ETCO2 without a plateau. Mask leak reduces amplitude but does not slope the plateau. Hyperventilation produces low ETCO2 with a preserved square waveform. Return of spontaneous breathing produces a cleft in the plateau.*	

Question 3	
Following a dental procedure under propofol/remifentanil TCI sedation, a patient develops sudden complete silence (no breath sounds, no stridor) with paradoxical chest movement and an abruptly flat ETCO2. Jaw thrust and OPA insertion produce no improvement. SpO2 is 94% and falling. The MOST appropriate next step is:	
A	Apply 20–30 cmH2O continuous positive pressure via BVM and prepare succinylcholine.
B	Increase the propofol TCI target to deepen sedation.
C	Perform immediate laryngoscopy and intubation.
D	Administer IV salbutamol for bronchospasm.
E	Insert a nasopharyngeal airway and continue

	standard BVM ventilation.
Answer: B *The presentation is laryngospasm: sudden onset, paradoxical movement, silence or stridor, flat ETCO2, failure to respond to OPA/jaw thrust. The intervention sequence is: remove stimulus/suction. Deepening the anesthetic with a hypnotic (Propofol) is a recognized rescue step for spasm, provided the practitioner is prepared to manage the resulting apnoea.apply CPAP at 20–30 cmH2O (can stent partial spasm and oxygenate), apply Larson's manoeuvre, and have succinylcholine ready.*	

9. Cognitive Load Management and Crew Resource Context

Airway rescue under sedation is a **high cognitive load event** occurring in a procedural context where the clinician may simultaneously be managing equipment, communicating with an awake-but-sedated patient, and coordinating a small team. The expert practitioner manages this through:

9.1 Shared Mental Model

Cognitive Overload/Assumption. Expecting a sedationist managing a desaturating airway to mentally calculate or read the pump's decrement time while applying two-handed BVM is unrealistic. Furthermore, 4 minutes of apnoea in a dental chair is an eternity and likely guarantees anoxic injury if BVM is failing.*Action:* The shared mental model shouldn't just be about the pump's math; it must be actionable. The callout should be: *"Remi target dropped to X. If we don't have chest rise in 60 seconds, we place an SGA."*

9.2 Closed-Loop Communication

9.3 Fixation Error Prevention

The most common cognitive error in airway rescue is **task fixation**: becoming so focused on BVM technique that you stop reading the patient. Deliberately *step back cognitively* every 60 seconds: SpO2? ETCO2 trend? Patient colour? TCI

targets reduced? Team briefed? This meta-awareness is the difference between managing an incident and being managed by one.

10. Quick Reference Summary Card

The following summary is designed for printing as a laminated reference card for the sedation suite.

BVM QUICK REFERENCE — ADVANCED PROCEDURAL SEDATION

Element	Expert Standard
Pre-check	Bag integrity, valve function, mask size, O2 at 15 L/min, reservoir inflated, suction on.
Mask sizing	Bridge of nose to chin cleft. Size down if in doubt.
Grip — 1 person	C-E grip with jaw thrust, OR thenar eminence technique (preferred for difficult anatomy).
Grip — 2 person	Thenar eminence bilateral (airway holder) + two-hand bag squeeze (operator). Explicit role call.
Ventilation	10–12/min, 6–8 mL/kg IBW, I:E 1:2 to 1:3, pressure <20 cmH2O.
OPA	Nose to jaw angle. Insert curve-up, rotate 180°. Remove if patient gags before laryngospasm concern.
NPA	Little finger diameter. Generous lube. Bevel to septum. Safety pin mandatory.
Capno — targets	ETCO2 35–45, square wave, consistent amplitude. Flat line = reassess immediately.
Laryngospasm	CPAP 20–30 cmH2O → **Larson's** → succinylcholine 0.1 mg/kg. Do not delay.
Escalate to SGA	If adequate BVM ventilation not achieved in 90 seconds of optimised technique.

Larson’s Manoeuvre for Laryngospasm.

Larson's maneuver (also known as the **laryngospasm notch technique**) is an emergency airway manoeuvre used primarily to break a laryngospasm—a sudden,

involuntary spasm of the vocal cords that completely or partially occludes the airway.

It combines a aggressive jaw thrust with deep, painful digital pressure applied to a specific anatomical point to force the vocal cords to relax. 5minuteairway+ 1

Anatomical Landmark: The Laryngospasm Notch
The manoeuvre targets the "laryngospasm notch" (or Larson's point). As shown in the diagram below, this submastoid notch is located bilaterally behind the earlobe. LITFL *The Laryngospasm Notch (Larson's Point). Source: LITFL*

It is bounded by:
• **Anteriorly:** The posterior border of the ascending ramus of the mandible (just behind the condyle). LITFL

• **Posteriorly:** The mastoid process of the temporal bone. LITFL

• **Cephalad (Above):** The base of the skull.
How to Perform the Manoeuvre
The technique is typically performed bilaterally by an operator or sedationist standing at the head of the patient. It can be easily integrated while holding a face mask for positive pressure ventilation.

1.**Locate the Notch** *Immediate.*
Place the tips of your middle or index fingers bilaterally into the space directly behind the patient's earlobes, identifying the depression just anterior to the mastoid process.

2.**Apply Deep Inward Pressure** *Simultaneous*
Press firmly and steadily **inward toward the base of the skull**. This requires significant force; the goal is to elicit a strong periosteal pain response (often by compressing or displacing the underlying styloid process).

3.**Execute a Jaw Thrust** *Simultaneous*
While maintaining that deep inward pressure, use your fingers to lift the mandible sharply upward and forward (anteriorly), at a right angle to the plane of the patient's body.

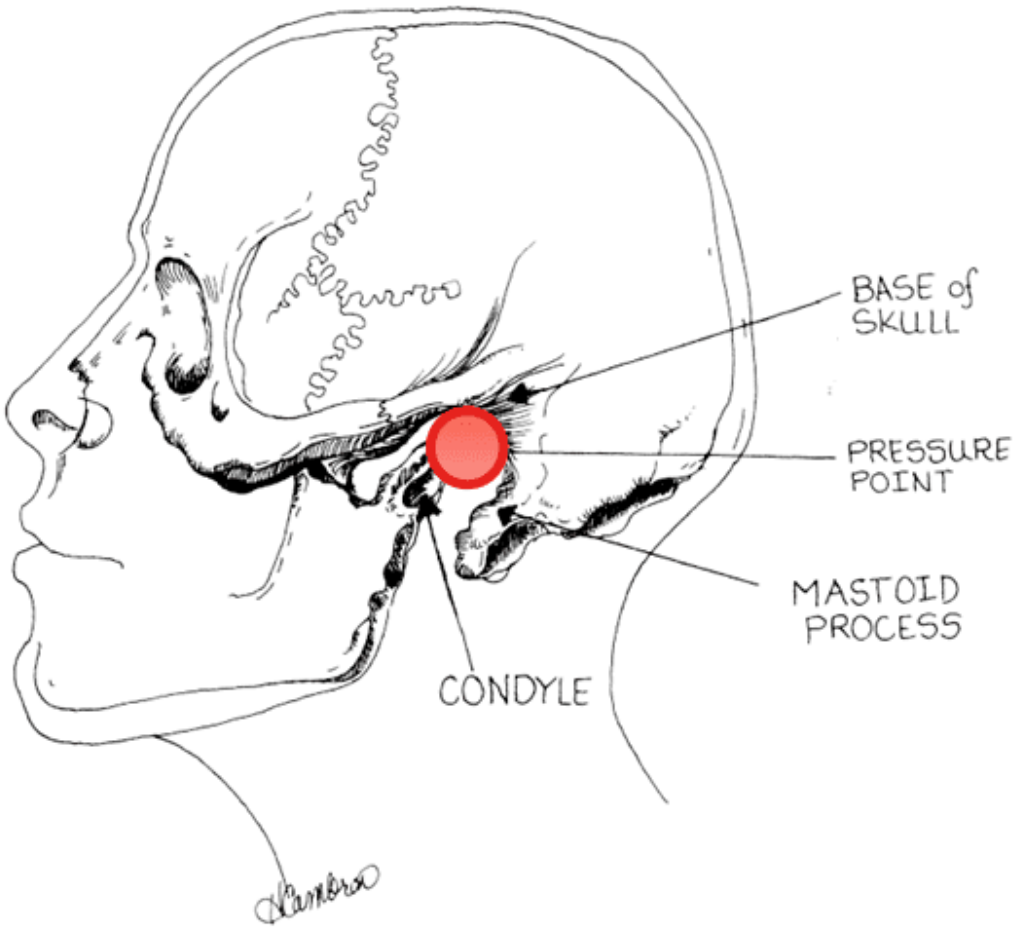
4.**Coordinate with Positive Pressure** *1-2 breaths*
If holding a Bag-Valve-Mask (BVM), apply continuous positive airway pressure (CPAP) with 100% oxygen. Maintain the pressure until the vocal cords "pop" open, typically transitioning from silence to a loud stridor, and finally to unobstructed respiration.

Why It Works
While the exact physiological mechanism remains unproven, its efficacy is widely accepted in anesthesia practice due to a combination of two factors:

1. **Mechanical Realignment:** The forward displacement of the mandible (the jaw thrust component) physically pulls the tongue, epiglottis, and surrounding soft tissues away from the posterior pharyngeal wall, clearing supraglottic obstruction.

2. **Afferent Nerve Stimulation (Periosteal Pain):** The intense, deep painful stimulus applied directly to the periosteum of the styloid process or base of the skull triggers a profound autonomic nervous system reflex. This intense sensory input effectively "resets" the respiratory centre overrides the spastic vagal reflex, and forces the intrinsic laryngeal muscles to relax.

Clinical Note: Larson's manoeuvre is heavily relied upon during emergence from general anesthesia or procedural sedation when a patient develops partial or complete laryngospasm following extubation or airway irritation. If the manoeuvre, paired with CPAP, fails to clear the spasm, neuromuscular blockade (such as succinylcholine) is indicated.



Anteriorly: The posterior border of the ascending ramus of the mandible (just behind the condyle).

Posteriorly: The mastoid process of the temporal bone.

Cephalad (Above): The base of the skull.

1.Mechanical Realignment: The forward displacement of the mandible (the jaw thrust component) physically pulls the tongue, epiglottis, and surrounding soft tissues away from the posterior pharyngeal wall, clearing supraglottic obstruction.

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References and Cross-Referenced DMC Materials