



# PLAN D

Emergency front of neck access

Action cards

# PLAN D: Emergency front of neck access

For right handed operator

## Equipment



### Help

Declare **CICO**, ensure neuromuscular blockade

### Oxygenate

Facemask / high flow nasal O<sub>2</sub>/ SAD

### Equipment

Size 10 scalpel, bougie, 6mm cuffed tube

## Position



### Patient

Head extended, no rotation

Pillow between scapulae

### Operator

On the **left** side of the patient

## Locate



### Landmarks

Laryngeal handshake: **left** hand

Locate cricothyroid membrane

Stretch skin, fix trachea: **left** thumb & middle fingers

The following techniques rely on feel rather than visualisation as blood is likely to obscure the surgical field

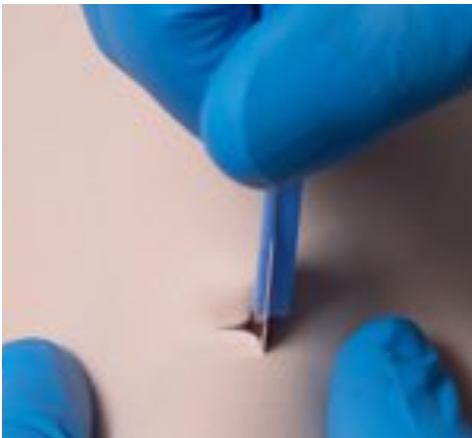
For right handed operator

# Stab Twist Bougie Tube



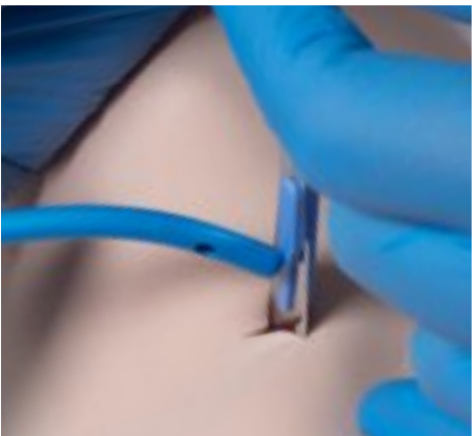
## Stab

Transverse incision: **right** hand



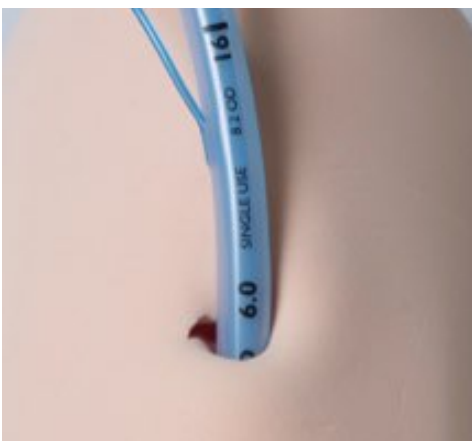
## Twist

Keep scalpel perpendicular to patient  
Twist scalpel, sharp side towards feet  
Traction on scalpel towards you, handle upright  
Swap hands: hold scalpel with **left** hand  
Take bougie in **right** hand



## Bougie

Hold near angled tip: **right** hand  
\*Parallel to floor, perpendicular to trachea  
Push bougie against **far** side of blade  
Insert and rotate through 90° towards feet  
Advance to 10cm



## Tube

Stretch skin + stabilise trachea: **left** hand  
Rotate tube through incision: **right** hand  
Inflate cuff, check ventilation: **CO<sub>2</sub>**  
Check depth of tube and secure

\*Critical step: see video

For right handed operator

# Scalpel Finger Bougie Technique



## Cut

8-10cm vertical skin incision  
From sternal notch towards chin



## Finger dissection of soft tissues

Use both hands to pull strap muscles apart  
Identify cricothyroid membrane  
Stabilise trachea: **left** hand



## Stab twist bougie tube

Transverse incision: **right** hand  
Twist scalpel, blade towards feet  
Stabilise trachea: **left** hand  
Railroad size 6 tube over bougie to 10-15cm  
Inflate cuff



## Check

Ventilation: waveform **CO<sub>2</sub>**  
Check tube depth  
Secure the tube

# PLAN D: Emergency front of neck access

For **left** handed operator

## Equipment



### Help

Declare **CICO**, ensure neuromuscular blockade

### Oxygenate

Facemask / high flow nasal O<sub>2</sub>/ SAD

### Equipment

Size 10 scalpel, bougie, 6mm cuffed tube

## Position



### Patient

Head extended, no rotation

Pillow between scapulae

### Operator (left handed operator)

On the **right** side of the patient

## Locate



### Landmarks

Laryngeal handshake: **right** hand (left handed operator)

Locate cricothyroid membrane

Stretch skin, fix trachea: **right** thumb & middle fingers

The following techniques rely on feel rather than visualisation as blood is likely to obscure the surgical field

For **left** handed operator

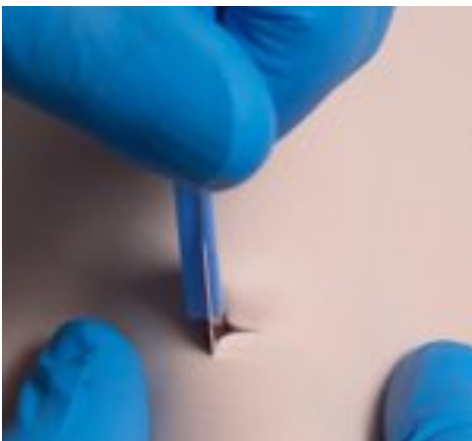
# Stab Twist Bougie Tube



For **left** handed operator

## Stab

Transverse incision: **left** hand



## Twist

Keep scalpel perpendicular to patient  
Twist scalpel, sharp side towards feet  
Traction on scalpel towards you, handle upright  
Swap hands: hold scalpel with **right** hand  
Take bougie in **left** hand



## Bougie

Hold near angled tip: **left** hand  
\*Parallel to floor, perpendicular to trachea  
Push bougie against **far** side of blade  
Insert and rotate through 90° towards feet  
Advance to 10cm



## Tube

Stretch skin + stabilise trachea: **right** hand  
Rotate tube through incision: **left** hand  
Inflate cuff, check ventilation: **CO<sub>2</sub>**  
Check depth of tube and secure

For **left** handed operator

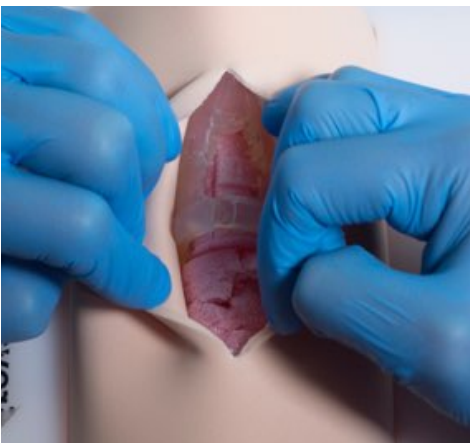
# Scalpel Finger Bougie Technique



For **left** handed operator

## Cut

8-10cm vertical skin incision  
From sternal notch towards chin



## Finger dissection of soft tissues

Use both hands to pull strap muscles apart  
Identify cricothyroid membrane  
Stabilise trachea: **right** hand



## Stab twist bougie tube

Transverse incision: **left** hand  
Twist scalpel, blade towards feet  
Stabilise trachea: **right** hand  
Railroad size 6 tube over bougie to 10-15cm  
Inflate cuff



## Check

Ventilation: waveform **CO<sub>2</sub>**  
Check tube depth  
Secure the tube



## Teaching framework scalpel for cricothyroidotomy

For use as a prompt when teaching.

### 1: Scalpel Bougie station (palpable cricothyroid membrane)

| Communication                                                                                                               | Completed? |
|-----------------------------------------------------------------------------------------------------------------------------|------------|
| Confirm Neuromuscular blockade                                                                                              |            |
| Declare CICO and transition to front of neck access                                                                         |            |
| Rescue oxygenation                                                                                                          | Completed? |
| Ensure attempts to oxygenate via upper airway are maintained: Facemask ventilation/ high flow nasal oxygen/ SAD             |            |
| Equipment                                                                                                                   | Completed? |
| List and explains equipment                                                                                                 |            |
| Scalpel size 10 or 20 (broad blade similar width to tube)                                                                   |            |
| Bougie with angled tip                                                                                                      |            |
| Size 6 tube                                                                                                                 |            |
| 10ml syringe                                                                                                                |            |
| Self inflating bag or circuit                                                                                               |            |
| Position                                                                                                                    | Completed? |
| Extend patients neck                                                                                                        |            |
| Stand on left hand side of patient if right handed (reverse if left handed)                                                 |            |
| Technique*                                                                                                                  | Completed? |
| Perform laryngeal handshake with left hand                                                                                  |            |
| Locate CTM with left index finger                                                                                           |            |
| Stabilise larynx with left hand                                                                                             |            |
| Use index finger to locate CTM                                                                                              |            |
| Stretch skin over CTM using left thumb and middle finger                                                                    |            |
| Make transverse <b>stab</b> incision with cutting edge towards operator                                                     |            |
| Apply gentle traction towards operator, <b>twist</b> blade through 90° (blade points towards feet) creating triangular hole |            |
| Swap hands maintaining traction                                                                                             |            |
| Keep scalpel perpendicular to skin                                                                                          |            |
| Hold <b>bougie</b> near coude tip with dominant hand                                                                        |            |
| Position bougie parallel to floor and at right angles to the trachea                                                        |            |
| Insert bougie using scalpel blade as a guide                                                                                |            |
| Rotate bougie to align with trachea and advance (to 10-15 cm)                                                               |            |
| Note that clicks or hold up may be present                                                                                  |            |
| Stabilise trachea and tension skin with left hand                                                                           |            |
| Rotate <b>tube</b> over bougie as it is advanced                                                                            |            |
| Remove bougie & ventilate checking for CO2                                                                                  |            |
| Check depth of tube and secure                                                                                              |            |
| Progress to scalpel finger if unsuccessful                                                                                  |            |
| Difficulties                                                                                                                | Completed? |
| Excessive lateral traction causing obstruction                                                                              |            |
| Scalpel slips out of trachea when creating triangular hole                                                                  |            |
| Scalpel not held perpendicular                                                                                              |            |
| Inserting bougie vertically not horizontally                                                                                |            |
| Bougie inserted too deep                                                                                                    |            |
| Failure to rotate tube when railroading                                                                                     |            |
| Inserting tube too deep                                                                                                     |            |
| Holding bougie instead of stabilising trachea on insertion                                                                  |            |

**\*Reverse instructions if left hand dominant**

## 2: Scalpel Bougie finger technique (impalpable anatomy or failed scalpel bougie technique)

| Communication                                                                                                                                                                     | Completed? |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Confirm neuromuscular blockade                                                                                                                                                    |            |
| Declare CICO and need for front of neck access                                                                                                                                    |            |
| Rescue oxygenation                                                                                                                                                                | Completed? |
| Ensure attempts to oxygenate via upper airway are maintained: Facemask ventilation/ high flow nasal oxygen/ SAD                                                                   |            |
| Equipment                                                                                                                                                                         | Completed  |
| List and explain equipment<br>Scalpel size 10 or 20 (broad blade similar width to tube)<br>Bougie with angled tip<br>Size 6 tube<br>10ml syringe<br>Self inflating bag or circuit |            |
| Position                                                                                                                                                                          | Completed? |
| Extend patients neck<br>Stand on left hand side of patient if right handed (reverse if left handed)                                                                               |            |
| Technique*                                                                                                                                                                        | Completed? |
| Perform laryngeal handshake with left hand                                                                                                                                        |            |
| Discuss USS if immediately available                                                                                                                                              |            |
| Position as for scalpel bougie                                                                                                                                                    |            |
| Tension skin with left hand                                                                                                                                                       |            |
| Makes 8-10cm vertical incision caudal to cephalad                                                                                                                                 |            |
| Use both hands to blunt dissect/ separate tissues and identify airway                                                                                                             |            |
| Stabilise airway with left hand                                                                                                                                                   |            |
| Proceed as for scalpel bougie                                                                                                                                                     |            |
| Difficulties                                                                                                                                                                      | Completed? |
| Transverse instead of vertical incision                                                                                                                                           |            |
| Inadequate or excessive depth of scalpel incision                                                                                                                                 |            |

**\*Reverse instructions if left hand dominant**