

FAILED INTUBATION DURING RSI: PLAN A, C & D

MODULE: NOVICE & AIRWAY

TARGET: NOVICE INITIAL ASSESSMENT OF COMPETENCY
ALL ANAESTHETISTS

BACKGROUND:

Management of the “Can’t Intubate, Can’t Ventilate” situation is a core skill for all anaesthetists. Optimal management of this situation should incorporate well-established Difficult Airway Society guidelines* and, where appropriate, local factors (relating to equipment availability and local protocols).

Demonstration of a failed intubation drill is part of the ‘Initial Assessment of Competency’ that novice anaesthetists undergo. This is a standardised scenario – so all participants undergo the same conditions with automated consequences for good practice e.g. adequate preoxygenation. This allows for standardised conditions for assessment of performance.

This scenario simulates a patient requiring an anaesthetic for an emergency operation with a high risk of aspiration, necessitating rapid sequence induction. This allows demonstration of a progression through the DAS guidelines for Plan A, Plan C and finally Plan D.

This scenario has been designed to be completed as part of the assessment process for the novice ‘Initial Assessment of Competency’ certificate.

RELEVANT AREAS OF THE ANAESTHETIC CURRICULUM

IG_BS_07 AM_BS_04	Demonstrates effective pre-oxygenation, including correct use of the mask, head position and clear explanation to the patient.
IG_BS_08	In respect of intravenous induction: <ul style="list-style-type: none"> • Makes necessary explanations to the patient • Demonstrates satisfactory practice in preparing drugs for the induction of anaesthesia • Demonstrates proper technique in injecting drugs at induction of anaesthesia Manages the cardiovascular and respiratory changes associated with induction of general anaesthesia
IG_BS_10 AM_BS_05	In respect of airway management: <ul style="list-style-type: none"> • Demonstrates optimal patient position for airway management. • Manages airway with mask and oral/nasopharyngeal airways • Demonstrates hand ventilation with bag and mask • Able to insert and confirm placement of a Laryngeal Mask Airway • Demonstrates correct head positioning, direct laryngoscopy and successful nasal/oral intubation technique(s) and confirms correct tracheal placement. • Demonstrates appropriate use of bougies. • Demonstrates correct securing and protection of LMAs/tracheal tubes during movement, positioning and transfer.
IG_BS_12	Demonstrates failed intubation drill
AM_BS_10	Demonstrates management of "Can't intubate, Can't Ventilate" scenario. [Cross Reference; Critical incidents].
AM_BS_14	Demonstrates small and large bore needle cricothyrotomy and manual jet ventilation
AM_BS_15	Demonstrates surgical cricothyroidotomy
CI_BK_13	Difficult/failed mask ventilation
CI_BK_14	Failed intubation
CI_BK_15	"Can't intubate, can't ventilate"
CI_BS_01	Demonstrates good non-technical skills such as: [effective communication, team-working, leadership, decision-making
CI_BS_02	Demonstrates the ability to recognise a deteriorating situation early through careful monitoring
CI_BS_03	Demonstrates the ability to respond appropriately to each incident listed above
CI_BS_04	Shows how to initiate management of each incident listed above
CI_BS_05	Demonstrates ability to recognise when a crisis is occurring
CI_BS_06	Demonstrates how to obtain the attention of others and obtain appropriate help when a crisis is occurring

INFORMATION FOR FACULTY

LEARNING OBJECTIVES:

- Applied understanding of the failed intubation protocols – Plan A, C & D
- Recognise problem early, call for help early
- Local variance to published guidelines e.g. Equipment availability and locations

SCENE INFORMATION:

- Location: Anaesthetic Room

(GA for strangulated inguinal hernia with high risk of bowel involvement and conversion to laparotomy. Unexpected difficult intubation with rapid desaturation and eventual need for cricothyroidotomy)

EQUIPMENT & CONSUMABLES

Manikin – On theatre trolley.
Checked anaesthetic machine
Stocked Airway trolley & Simulated Anaesthetic drugs
Plan D equipment, either:
- Scalpel and #6 COETT
- Ravussin needle and Manujet (or local equipment)
IV Fluids and giving set
Self-inflating Bag-valve-mask

PERSONS REQUIRED

Anaesthetic Novice
Anaesthetic Assistant
Third person in the room

Anaesthetic Senior Trainee/Consultant (Optional)

PARTICIPANT BRIEFING: (TO BE READ ALOUD TO PARTICIPANT)

You are the anaesthetist for the emergency list. The next patient has a strangulated right inguinal hernia, which the surgeon believes has a reasonable chance of conversion to laparotomy due to bowel involvement. The patient is William James, a 62 year old who has had no previous operations. He has had 3-4 days of abdominal pain, hernia pain and a few episodes of vomiting in the last 24 hours. He has no other medical problems, no medications and has had previous skin reaction to penicillin. He has fasted for 8 hours, but has vomited in the last 4 hours.

His airway assessment reveals a Mallampati score of 2, good mouth opening and jaw slide, but slightly limited neck movement.

His blood tests are normal.

‘VOICE OF MANIKIN’ BRIEFING:

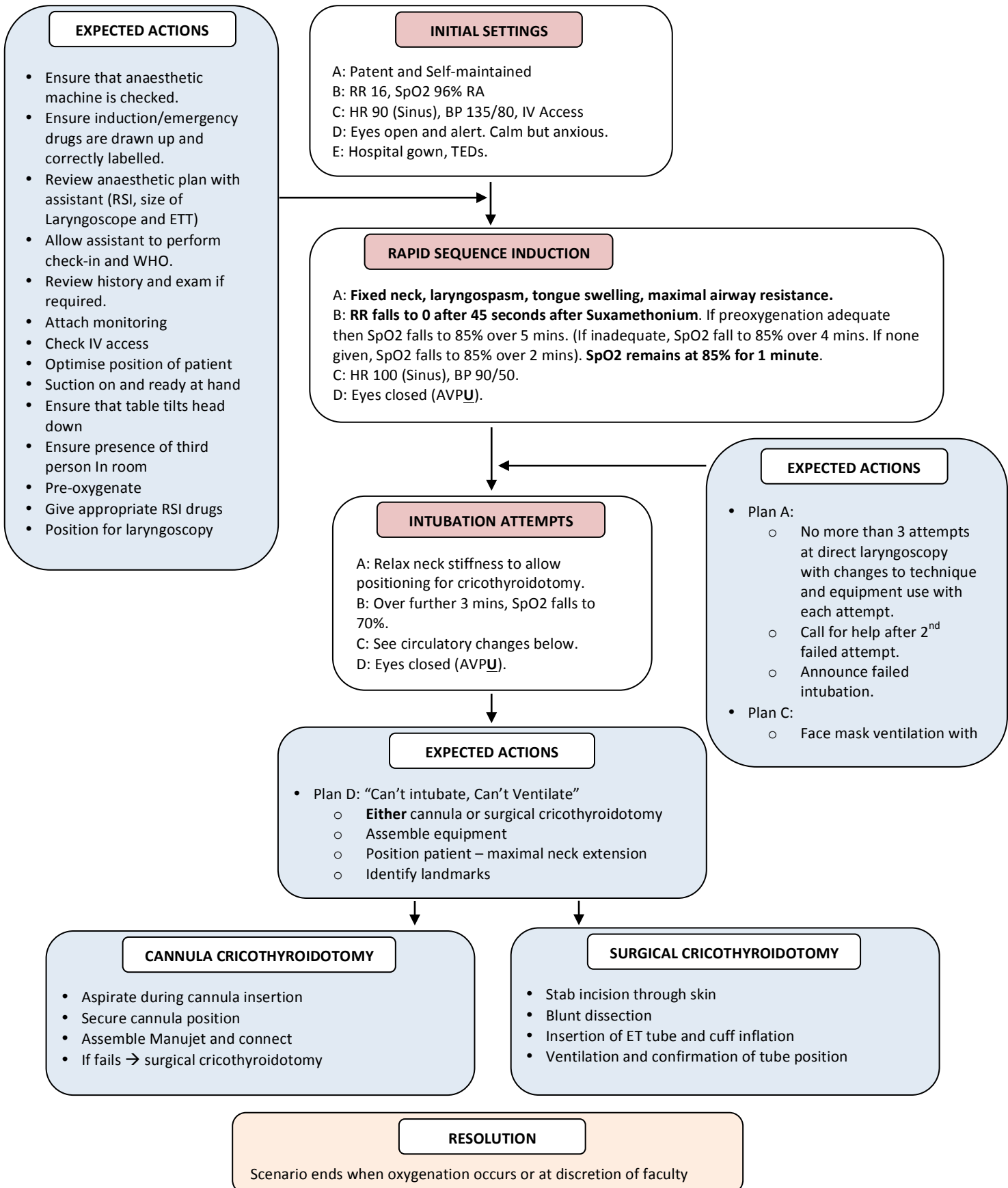
You are William James, a 62 year old man. You have never had an operation before. You have no medical problems, but have had a long-standing inguinal hernia on the right side. Over the last few days this has started to hurt more and more, and you have been vomiting over the last 24 hours. You don't usually take medications, but have been taking Paracetamol over the last few days. You developed a rash with Penicillin when you were a child and have avoided it since.

'ANAESTHETIC ASSISTANT' BRIEFING:

The anaesthetist is going to experience a difficult airway. Be supportive to their requests and instructions. Do not volunteer suggestions unless the participant is particularly junior or is significantly struggling.

If the participant is relatively experienced/senior, then you may consider to act as relatively inexperienced (i.e. Not anticipating the next requests, not knowing where equipment is and passing equipment to anaesthetists inappropriately).

CONDUCT OF SCENARIO



ANAESTHETIC RECORD SHEET



PATIENT DETAILS / ADDRESSOGRAPH
 Hospital No. _____

SURNAME: James Williams
 (Block Letters)

FORENAMES: 62 years old

Address:
 Ward/Hosp: _____

DOB: _____ Sex: M / F

Procedure(s) proposed:
Strangulated Right Inguinal Hernia repair

CEPOD CLASS: ELECTIVE / SCHEDULED / URGENT / EMERGENCY

Anaesthetist's preoperative assessment by

Name: _____ Grade: Cons AS SG Trainee _____

Date: _____ Time: _____ Signature: _____

<p>Anaes / Surg history:</p> <p>No previous GAs</p> <p>Medical history:</p> <p>Fit and well usually.</p> <p>Unwell with hernia and abdominal pain for the last 3-4 days. Vomiting has developed in the last 24 hours (last episode of vomiting 4 hours ago).</p> <p>VTE Risk: <input type="checkbox"/> High <input type="checkbox"/> Low</p>	<p>O/E</p> <p>Unremarkable</p> <p style="text-align: center;">Airway Assessment</p> <p>Mouth Opening: MP Score: 1 2 3 4</p> <p>Jaw: MP 2, mouth opening</p> <p>Neck: >3cm, limited neck ROM.</p> <p style="text-align: center;">TEETH</p> <table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">8</td><td style="border-right: 1px solid black; padding: 0 5px;">7</td><td style="border-right: 1px solid black; padding: 0 5px;">6</td><td style="border-right: 1px solid black; padding: 0 5px;">5</td><td style="border-right: 1px solid black; padding: 0 5px;">4</td><td style="border-right: 1px solid black; padding: 0 5px;">3</td><td style="border-right: 1px solid black; padding: 0 5px;">2</td><td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="border-right: 1px solid black; padding: 0 5px;">1</td><td style="border-right: 1px solid black; padding: 0 5px;">2</td><td style="border-right: 1px solid black; padding: 0 5px;">3</td><td style="border-right: 1px solid black; padding: 0 5px;">4</td><td style="border-right: 1px solid black; padding: 0 5px;">5</td><td style="border-right: 1px solid black; padding: 0 5px;">6</td><td style="border-right: 1px solid black; padding: 0 5px;">7</td><td style="padding: 0 5px;">8</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">8</td><td style="border-right: 1px solid black; padding: 0 5px;">7</td><td style="border-right: 1px solid black; padding: 0 5px;">6</td><td style="border-right: 1px solid black; padding: 0 5px;">5</td><td style="border-right: 1px solid black; padding: 0 5px;">4</td><td style="border-right: 1px solid black; padding: 0 5px;">3</td><td style="border-right: 1px solid black; padding: 0 5px;">2</td><td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="border-right: 1px solid black; padding: 0 5px;">1</td><td style="border-right: 1px solid black; padding: 0 5px;">2</td><td style="border-right: 1px solid black; padding: 0 5px;">3</td><td style="border-right: 1px solid black; padding: 0 5px;">4</td><td style="border-right: 1px solid black; padding: 0 5px;">5</td><td style="border-right: 1px solid black; padding: 0 5px;">6</td><td style="border-right: 1px solid black; padding: 0 5px;">7</td><td style="padding: 0 5px;">8</td> </tr> </table> <p>X = missing L = loose B = bridge C = caps / crowns D = damaged</p>	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	<p>ASA</p> <p>BP: _____</p> <p>HR: _____</p> <p>Temp: _____</p> <p>Weight: _____</p> <p>Height: _____</p> <p>BMI: _____</p> <p>Smoke: _____</p> <p>Alcohol: _____</p> <p>Apfel Score</p>
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8																			
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<p>NBM since</p> <p>Solids: Fasted 8 hours</p> <p>Clear Fluids: _____</p> <p>Pregnancy: _____</p> <p>Lactation: _____</p>	<p>ALLERGIES</p> <p>Penicillin</p>																																	

Relevant Medication:
 Nil regular

Investigations	<input type="checkbox"/> Haematology FBC Hb 12.4 WCC 12 Plts 278 Sickle: _____	<input type="checkbox"/> Biochemistry U & E NAD Blood Sugar: _____	<input type="checkbox"/> Coag. NAD <input type="checkbox"/> Gp. & Save <input type="checkbox"/> X - Match	<input type="checkbox"/> ECG NAD <input type="checkbox"/> X - Ray	Other: _____
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CONSENT: GA Sedation Epidural Spinal Regional Suppository
 PCA EPCA Other

Notes / Discussion / Technique proposed:

Consented for GA with RSI and local anaesthetic infiltration.
 Risks explained: dental damage, sore throat, post-op nausea and vomiting.

Anaesthetic Information leaflet received by patient

For attention of ward staff: (further investigations, fasting, continue/omit current medication, etc.)

DEBRIEFING

POINTS FOR FURTHER DISCUSSION:

Technical:

- Difficult Airway protocols
- Procedural techniques
 - Cannula Cricothyroidotomy
 - Manujet/Sanders/Jet ventilation
 - Surgical Cricothyroidotomy

Non-technical:

- Situation awareness
- Prioritisation
- Task allocation
- Leadership
- Team working
- Communication and handover during crises

DEBRIEFING RESOURCES

1. Difficult Airway Society Guidelines: <http://www.das.uk.com/guidelines/ddl.html>
<http://www.das.uk.com/guidelines/downloads.html> (NB. Free iDAS app available from iTunes)
2. NAP4: Major complications of airway management in the UK <http://www.rcoa.ac.uk/index.asp?PageID=1089>
3. NHS National Institute for Innovation and Improvement: 'Just a Routine Operation – Patient Story'
http://www.institute.nhs.uk/safer_care/general/human_factors.html

INFORMATION FOR PARTICIPANTS

KEY POINTS:

- Applied understanding of failed intubation protocols
- Recognise problem early and call for help early.
- Local variances to published guidelines (e.g. Equipment)

RELEVANCE TO AREAS OF THE ANAESTHETIC CURRICULUM

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WORKPLACE-BASED ASSESSMENTS

Initial Assessment of Competency Certificate	
IAC_D06	Demonstrates the routine for dealing with failed intubation on a manikin
IAC_D03	Demonstrates cardio-pulmonary resuscitation on a manikin (0-3 months).
IAC_C08	Discuss the routine to be followed in the case of a failed intubation

Basic Level WBPA's	
CIB_D01	Demonstrates the management of the following specific conditions in simulation <ul style="list-style-type: none">Failed intubation
CIB_D01	Demonstrates the emergency management of the following critical incidents in simulation <ul style="list-style-type: none">Cardiac and / or Respiratory arrest

FURTHER RESOURCES

1. Difficult Airway Society Guidelines:
<http://www.das.uk.com/guidelines/downloads.html> (NB. Free iDAS app available from iTunes)
2. NAP4: Major complications of airway management in the UK
<http://www.rcoa.ac.uk/index.asp?PageID=1089>
3. NHS National Institute for Innovation and Improvement: 'Just a Routine Operation – Patient Story'
http://www.institute.nhs.uk/safer_care/general/human_factors.html

PARTICIPANT REFLECTION:

What have you learnt from this experience? (Please try to list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?

PARTICIPANT FEEDBACK

Date of training session:.....

Profession and grade:.....

What role(s) did you play in the scenario? (Please tick)

Primary/Initial Participant	<input type="checkbox"/>
Secondary Participant (e.g. 'Call for Help' responder)	<input type="checkbox"/>
Other health care professional (e.g. nurse/ODP)	<input type="checkbox"/>
Other role (please specify):	<input type="checkbox"/>
Observer	<input type="checkbox"/>

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this scenario useful					
I understand more about the scenario subject					
I have more confidence to deal with this scenario					
The material covered was relevant to me					

Please write down one thing you have learned today, and that you will use in your clinical practice.

How could this scenario be improved for future participants?
 (This is especially important if you have ticked anything in the disagree/strongly disagree box)

FACULTY DEBRIEF – TO BE COMPLETED BY FACULTY TEAM

What went particularly well during this scenario?

What did not go well, or as well as planned?

Why didn't it go well?

How could the scenario be improved for future participants?