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Special Airway Challenges Obstetrics & Trauma

Part of Airway Management Module

Airway Module: A4-1A

This project was possible due to funding made available by Health Workforce Australia

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NSW GOVERNMENT Health

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HETI HEALTH EDUCATION & TRAINING INSTITUTE

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Sponsor

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Introductions

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General Aims

- Learn in a team setting
- Blend clinical skills with team skills
- Reflect critically on practice

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Ground Rules

- Participation
- Privacy
- Confidentiality
- Disclaimer
- Debriefing
- Mobile phones

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Session Objectives

- Preparation and planning in predicted difficult airway management
- To recognise potential airway compromise
- To co-ordinate team to manage potentially difficult
- To recognise need for senior specialist help early
- To management patients in the context of available resources

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Patients don’t die from failure to intubate……they die from failure to oxygenate.

DON’T GET FIXATED ON THE PLASTIC

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Emergency Department Airways

- Assessment
  - History
  - Examination
    - Look
    - Listen
    - Feel
  - Difficulty
    - BOOTS
    - LEMON
  - Available Skills

Management Options

- Simple airway maneuvers
- Nasal Prongs
- Oxygen Masks – variable and fixed
- Airway Adjuncts
- Bag Valve Masks
- Non-Invasive Ventilation
- Laryngeal Masks
- Intubation – 7 P's
- Surgical Airway

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ED Intubation Checklist

Team

- ☐ ED Consultant aware of RSI?
- ☐ Out-of-hours, if difficulty anticipated, anaesthetics contacted?
- ☐ All members introduced by name & role and each briefed in turn by TL
- ☐ Difficult intubation plan briefed?
- ☐ Difficult airway trolley at hand?
- ☐ Anticipated problems – does anyone have questions or concerns?

Patient

- ☐ Pre-oxygenation optimal?
  - Add nasal prongs or NIV
- ☐ Patient position optimal?
- ☐ Patient haemodynamics optimal?
  - Fluid bolus?
  - Pressor?
- ☐ Does it look like it might be difficult:
  - Difficult BVM?
  - Difficult laryngoscopy?
  - Difficult cricothyroidotomy?

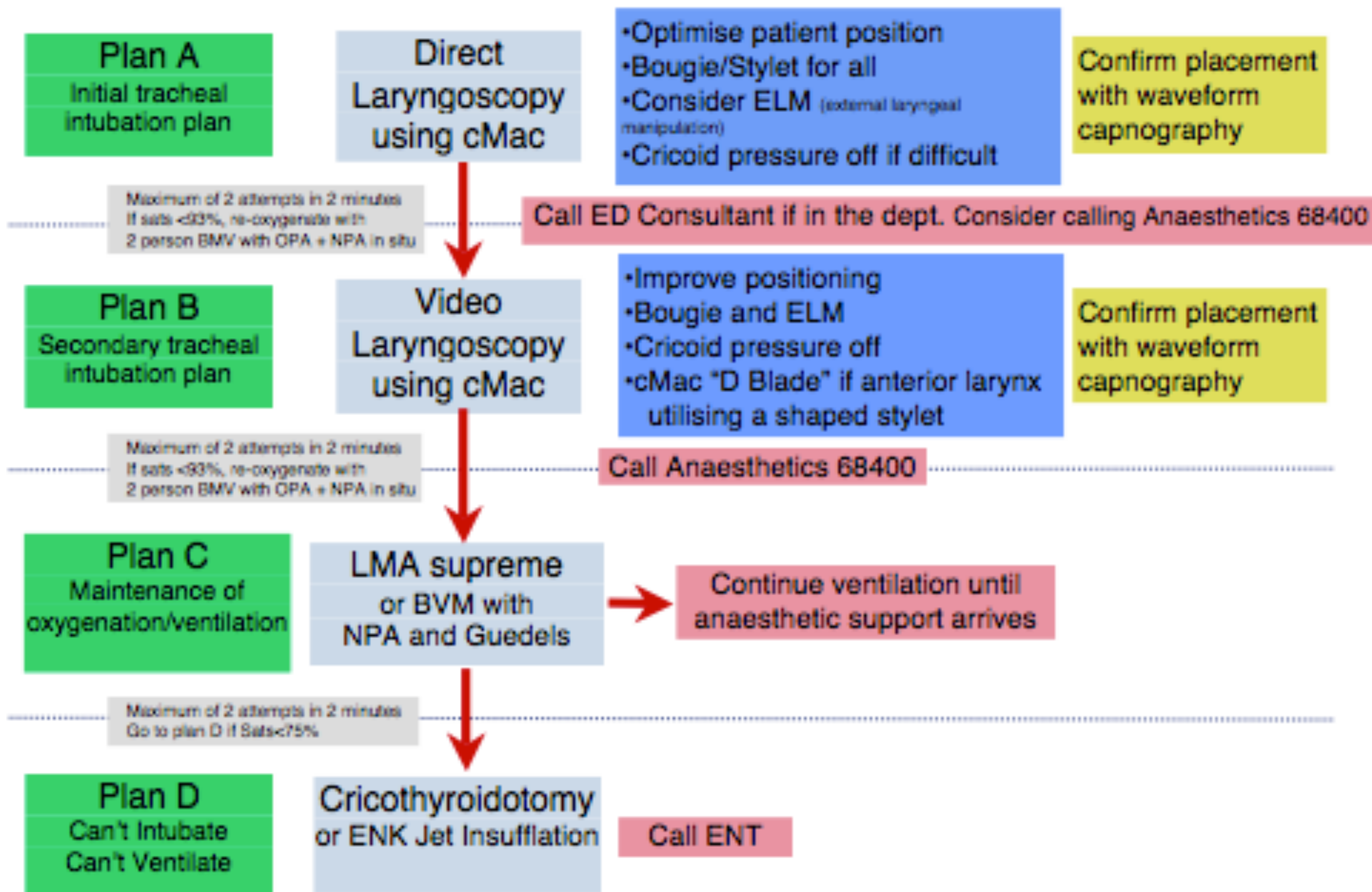
IVI/Drugs

- ☐ Fluids connected, runs easily?
- ☐ Spare IVC?
- ☐ Monitor: ECG, BP, SaO2.
- ☐ RSI drugs drawn up, doses chosen?
- ☐ Post-intubation anaesthesia plan - drugs drawn up?

Equipment

- ☐ Suction working?
- ☐ BVM with ETCO2 connected
- ☐ OPA and NPA available?
- ☐ 2 x laryngoscopes working? Correct blade size?
- ☐ Tubes chosen, cuff tested
- ☐ Bougie or stylet in tube?
- ☐ Tube tie or tapes ready?
- ☐ Ventilator circuit available?
- ☐ LMA sized & available?

Version 1.2
Developed by T Fogg, J Kennedy and J Vassiliadis, RNSH ED 20/04/2012



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Airway in Trauma

Airway Module:A4-1

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Airway in Trauma

- To maintain patency and protection
- To provide oxygenation and ventilation
- Stabilise airway and mid face injuries
- To avoid secondary injury
  - Hypoxia
  - Hypercapnia
  - Care with drugs causing hypotension
- Don't forget to assess the airway thoroughly

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HELP!

- Trauma airways are ***ALL*** difficult!
- Who is available to help at your site?
    - Trauma Team
    - ED colleague
    - Anaesthetics/GP Anaesthetists
    - ICU
    - ENT
    - Retrieval

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Oxygenation over intubation

- Basic airway opening manoeuvres/ adjuncts
- Protect the Cervical Spine
- Prepare and Plan thoroughly for an intubation
  - Pre-oxygenate
  - Equipment, Drugs, Staff
  - Plan A, B and C
- Suction – There is often blood
- Patients die from hypoxia!
  - Do not lose situational awareness

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Cervical Spine Control

- Should be maintained in all blunt trauma until clearance from injury
- Avoid secondary injury
- Use a semi-rigid cervical collar +/- sandbags when appropriate
- Manual In-line Axial stabilisation

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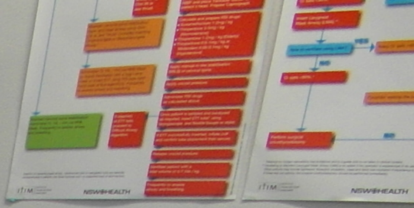

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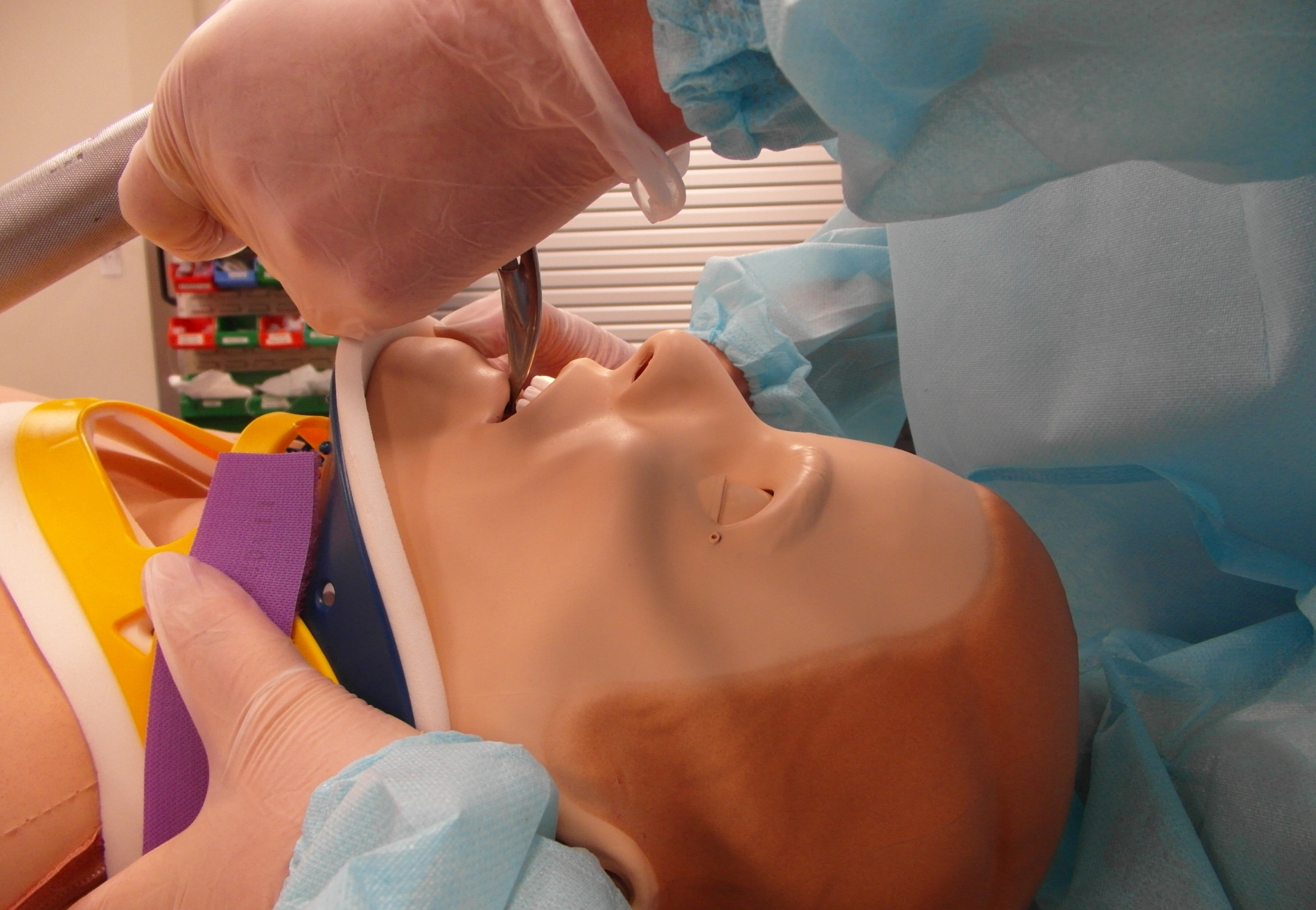

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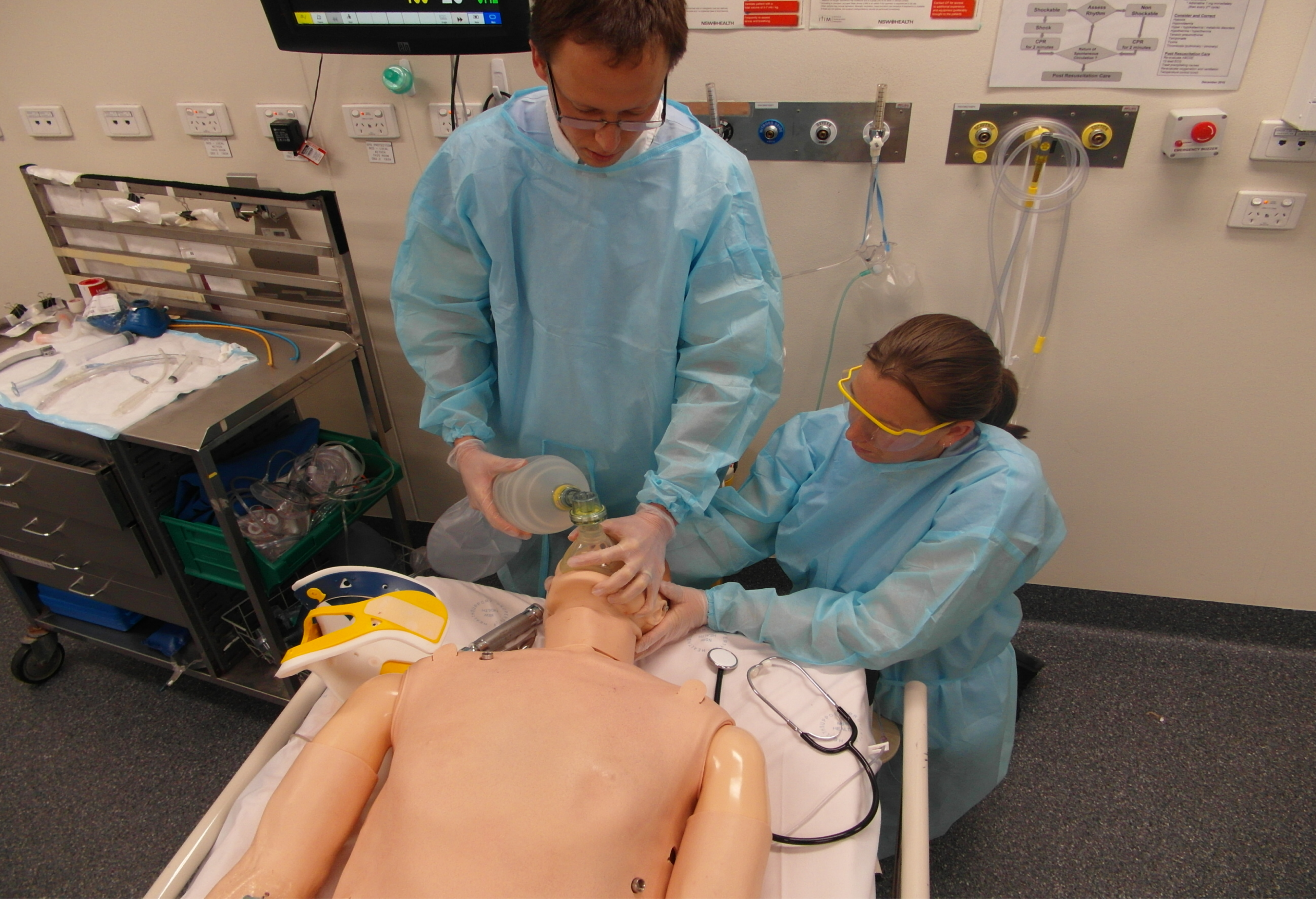

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Post Intubation Care

- Sedation and Analgesia (remember the traumatic injuries)
- Avoid the lethal triad
- Repeat the AcBCDE approach
- Manage the injuries
  - Head injury management
- Complete secondary survey
- Provide definitive care

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THE AIRWAY IN PREGNANCY

A4.1 Special Airway Challenges

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Airway in Pregnancy

- Expect increased difficulty on assessment
- Early involvement of specialists
- Pre-medication anticipation
- Positioning is essential
  - DON'T FORGET THE HIP WEDGE
- Prolonged Pre-oxygenation

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Airway in Pregnancy

- Increased airway odema
- Grade of intubation higher
- Higher incidence of failed intubation
- At increased risk of aspiration after 12 weeks
- Faster Desaturation
- Cardiovascular changes
- Two patients to manage

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Airway in pregnancy

- Consider underlying cause and need for intervention
- Medications and Oxygen supplied to the baby across the placenta
- Ongoing concern for maternal and fetal wellbeing post intubation

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Scenario

BAT call

50 year old man assaulted and burns from shop fire

GCS 15

BP 140/70

HR 90

RR 22

Sats 98%

ETA 1 minute

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Scenario

Queen Latifah, 22 year old woman

30 weeks pregnant, P0G1

Presented with severe hypertension, flashes of vision, headaches, right upper quadrant pain and nausea, ?eclampsia

Seizure en route with NSW Ambulance

HR 110, BP 175/110, Sats 95%, Afebrile

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Trauma Further Reading

- The Royal College of Surgeons of Edinburgh. Faculty of Pre-Hospital Care: Manual of Core Material. 1st ed. Edinburgh, UK; 2004.
- Ollerton JE. Adult Trauma Clinical Practice Guidelines, Emergency Airway Management; NSW Institute of Trauma and Injury Management; 2007.
- Carley, S et al. Rapid Sequence induction in the emergency department: a strategy for failure. Emergency Medicine Journal. 2002:19;109-113
- http://www.itim.nsw.gov.au
- Trauma.org

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Summary

- Spend the extra minute to optimise
- Suction where you can see (10 seconds)
- Make sure ***all*** the team members know that the patient is about to be intubated
- Make sure that ***all*** the team know what the back-up plans are
- The bougie is your BEST friend
- Blood in the airway makes a difficult airway even worse.
- Drugs are good……..and very very bad

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