REAL AIRWAY EXPERTS USE CHECKLISTS
WHAT'S THAT MINH? YOU DON'T USE CHECKLISTS?
quality care
out there
Who is an Expert?
Who is an Expert?

“anyone qualified to independently perform advanced airway management, regardless of specialty”

@Nicholas Chrimes
I must NOT use the C word when talking airways...
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CHECKLISTS

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Minh doesn't want you to use checklists
checklist
crutch
cheat sheet
cook book
cognitive aid
algorithm
crisis manual
action card
being expert is enough
50% of experts below average
Cognitive errors detected in anaesthesiology: a literature review and pilot study

M. P. Stiegler¹*, J. P. Neelankavil¹, C. Canales² and A. Dhillon¹

>50% cognitive errors identified in simulated anaesthetic crises
serious about safety?
fatigue
interruption
cognitive load
sympathetic surge

- 175: freeze, void bowel/bladder
- 150: cognitive processing deteriorates
- 120: complex motor skills deteriorate
- 90: fine motor skills deteriorate
- 60: normal resting HR
Checklist: ‘battle crap’
Relax

parasympathetic backlash
skill fade in experts

Prospective observational study of the practice of endotracheal intubation in the emergency department of a tertiary hospital in Sydney, Australia

Toby Fogg, Nick Annesley, Kerry Hitos and John Vassilabatis
Emergency Department, Royal North Shore Hospital, Sydney, New South Wales, Australia, CareFlight, Sydney, New South Wales, Australia, Discipline of Emergency Medicine, Sydney University Medical School, Sydney, New South Wales, Australia, Department of Surgery, Westmead Hospital, The University of Sydney, Sydney, New South Wales, Australia, and Sydney Clinical Skills and Simulation Centre, Royal North Shore Hospital, Sydney, New South Wales, Australia

airwayregistry.org.au
skill transfer & task saturation
being expert is not enough
team of experts ≠ expert team

flash team
Emily
EM Consultant
Day 1 in new ED
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EM Consultant
Day 1 in new ED

Joe
Anaes Reg
Awake & on call for past 24 hrs
Emily
EM Consultant
Day 1 in new ED

Sarah
Airway RN
split from her GF today

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Surgical RMO
Reg in OT

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Wondering who is the team leader

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Minh
Patient
Hopes the team will use an RSI checklist
**Emergency Induction Checklist**

**Prepare Patient**
- Is preoxygenation optimal?
- Is the patient’s position optimal?
- Can the patient’s condition be optimised any further before intubation?
- How will anaesthesia be maintained after induction?

**Prepare Equipment**
- What monitoring is applied?
  - ECG
  - Blood pressure
  - Sats probe
  - Capnography
- What equipment is checked and available?
  - Self-inflating bag
  - Suction
  - 2 ET tubes
  - 2 laryngoscopes
  - Bougie
- Do you have all the drugs required, including vasopressors?

**Prepare Team**
- Who is ...?
  - Team leader
  - First Intubator
  - Second Intubator
  - Cricoid Pressure
  - Intubator’s Assistant
  - Drugs
  - MILS (if indicated)
- How do we contact further help if required?

**Prepare for difficulty**
- If the airway is difficult, could we wake the patient up?
- If the intubation is difficult, how will you maintain oxygenation? (Plans A,B,C,D)
- Where is the relevant equipment, including alternative airway?
- Are any specific complications anticipated?

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This Checklist is not intended to be a comprehensive guide to preparation for induction

saferintubation.com
power to the people
for routine not crisis
### Central Line Insertion Standard Work and Safety Checklist

**Date:**
**Start time:**

#### Location
- **Catheter Type:**
  - [ ] Dialysis
  - [ ] Central Venous
  - [ ] PICC
  - [ ] Pulmonary Artery

- **Number of Lumen:**
  - [ ] Single
  - [ ] Double
  - [ ] Triple

- **Insertion Site:**
  - [ ] Jugular
  - [ ] D.V.
  - [ ] Arm/Hand

- **Subclavian:**
  - [ ] D.R.
  - [ ] D.L.

- **Reason for Insertion:**
  - [ ] New Indication
  - [ ] Elective
  - [ ] Emergent
  - [ ] Replace Malfunctioning Catheter

- **Procedure Provider:**
  - [ ] Anesthesiologist
  - [ ] Radiologist
  - [ ] Imaging
  - [ ] During Procedure

- **Procedure Assistant:**
  - [ ] Float RN
  - [ ] Respiratory Care

#### Standard Work Before, During, and After Procedure

- **Before:**
  - [ ] Confirm no allergy to heparin
  - [ ] Patient is NPO status assessed & procedure plan modified PRI
  - [ ] Consent form completed & in chart (exception Code 4)
  - [ ] Perform Procedural Pause
  - [ ] Announce the procedure to all personnel
  - [ ] Max. 2 nurses assist
  - [ ] Perform patient consent form procedure
  - [ ] Verify all medication & supplies are labeled
  - [ ] Confirm all person in room cleanse hands (ASK, LISTEN)
  - [ ] Central line cart utilized
  - [ ] Prepare Procedure site
  - [ ] Chloraprep 10.3% applicator used
  - [ ] Dry: 30 second scrub, 30 second dry time OR
  - [ ] Wet: 2 minute scrub, 3 minute dry time
  - [ ] Transducer set-up for all jugular and subclavian line insertions

- **During:**
  - [ ] Wear sterile gloves, hat, mask with eyeshield, and sterile gown
  - [ ] Position patient per provider instruction
  - [ ] Did patient and all other persons in the room wear a mask?
  - [ ] Maintain sterile field
  - [ ] Ultrasound guidance used for all jugular & femoral insertions
  - [ ] Various placement confirmation via:
    - [ ] Pressure handrail or monitor OR
    - [ ] Chest X-ray ordered
  - [ ] Type of solution used to flush/infuse:

- **After:**
  - [ ] Call catheter caps placed on lumen
  - [ ] Rider saturated in place
  - [ ] Position confirmation

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**Percentage:** 47%

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**Percentage:** 40%
CUT THE &$@#$% THROAT!
WHAT ARE YOU WAITING FOR!
tightly coupled
high risk
tightly coupled high risk
tightly coupled

high risk

ED RSI
CICO
MH
LAST
etc
Intubation

- An intubation checklist should be developed and used for all intubations of critically ill patients. A checklist might usefully identify preparation of patient, equipment, drugs and team. A checklist should include identification of back-up plans.
Checklist for emergency induction of anaesthesia in critical care

F. Babolhavaeji, I. Rees, D. Maloney, J. Walker and M. Knights

Ysbyty Gwynedd, Bangor, UK
Email: richard.knights@wales.nhs.uk

Discussion
We have shown that errors are reduced when the emergency induction checklist is used, but that this does not take longer to perform. This appears to be true irrespective of the grade of anaesthetist. Our staff are now trained to use the checklist for every tracheal intubation performed in the emergency department and critical care areas.
Simulation-Based Trial of Surgical-Crisis Checklists


17 Theatre Teams, 106 simulated crises

23% vs 6%
“If I were having an operation & experienced this intraoperative emergency, I would want the checklist to be used”
50% reduction in desaturation events

Paeds ED RSI
Kerrey et al (In Press)
no panacea for badness
beware tick & flick

avoid checklist fatigue

keep simple & brief

ensure well-designed
## A CHECKLIST FOR CHECKLISTS

### DEVELOPMENT
- Do you have clear, concise objectives for your checklist?
- **IS EACH ITEM:**
  - A critical safety step and in great danger of being missed?
  - Not adequately checked by other mechanisms?
  - Actionable, with a specific response required for each item?
  - Designed to be read aloud as a verbal check?
  - One that can be affected by the use of a checklist?
- **HAVE YOU CONSIDERED:**
  - Adding items that will improve communication among team members?
  - Involving all members of the team in the checklist creation process?

### DRAFTING
- **DOES THE CHECKLIST:**
  - Utilize natural breaks in workflow (pause points)?
  - Use simple sentence structure and basic language?
  - Have a title that reflects its objectives?
  - Have a simple, uncluttered, and logical format?
  - Fit on one page?
  - Minimize the use of color?
- **IS THE FONT:**
  - Sans serif?
  - Upper and lowercase text?
  - Large enough to be read easily?
  - Dark on a light background?
  - Are there fewer than 10 items per pause point?
  - Is the date of creation (or revision) clearly marked?

### VALIDATION
- **HAVE YOU:**
  - Trialed the checklist with front-line users (either in a real or simulated situation)?
  - Modified the checklist in response to repeated trials?
- **DOES THE CHECKLIST:**
  - Fit the flow of work?
  - Detect errors at a time when they can still be corrected?
  - Work easily enough that it can be completed in a reasonably brief period of time?
  - Have a timetable for future review and revision of the checklist?
check done
not a how to
STOP ASKING FOR CRICOID PRESSURE, YOU DICK.
#Vortex is a checklist

Facilitates implementation of training

Allows real time crisis management

For each NSA Technique Consider:
1. Manipulations:
   - Head & Neck
   - Larynx
   - Device
2. Adjuncts
3. Size/Type
4. Suction
5. Pharyngeal Muscle Tone

NO MORE THAN THREE TRIES AT EACH NSA TECHNIQUE
AT LEAST ONE TRY SHOULD BE HAD BY MOST EXPERIENCED AVAILABLE LARYNGOSCOPIST
REAL

airway experts

use checklists
assistant: are you ready?
patient: are you ready?
self: am I ready?
true
experts
triple threat model
metacognition
stress inoculation
shared mental model
absence of evidence is not evidence of absence

suggest Dr Le Cong participates in an RCT of parachute vs no parachute?
aviation lessons not relevant
aviation lessons
borne from necessity of
tragic human loss
smoke me a kipper
I’ll be back for breakfast
too cool to use a checklist
more like guidelines...than actual rules
Clunk, Click every trip
under duress
we do not rise to our expectations
we fall to the level of our training
under duress
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