



# Development of a Checklist for Emergency Department RSI: A Delphi Study

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# Background

- Pilots routinely use checklists for critical phases of flight.
- Checklists are variably used for critical aspects of medical care, despite proven evidence of benefit<sup>1</sup>
- RSI is a high-risk procedure that has been shown to have an increased rate of complications when it is undertaken in the ED, in comparison to the operating theatre<sup>2</sup>.
- Despite this, the use of a pre-RSI checklist does not appear to be routine in the majority of EDs.

<sup>1</sup>Arriaga AF, Bader AM, Ziewacz JE, et al.

Simulation-Based Trial of Surgical-Crisis Checklists. *N Engl J Med*. 2013 Jan 17;368(3):246–253.

<sup>2</sup>Fogg T, Annesley N, Hitos K, Vassiliadis J. Prospective observational study of the practice of endotracheal intubation in the emergency department of a tertiary hospital in Sydney, Australia.

*Emergency Medicine Australasia*. 2012 Dec 6;24(6):617–624.



# Aims

- To determine the use of pre-RSI checklists in the EDs of NSW
- To develop a consensus opinion as to what items should be included in such a checklist



# Method

- A checklist was developed by consensus within RNSH ED.
- A Survey Monkey questionnaire was then sent to all ED Directors in NSW.
- 50 items were grouped under four headings:
  - Team factors
  - Patient factors
  - IVI/Drugs
  - Equipment
- Each was ranked according to perceived importance for inclusion in a checklist:
  - From 0/5 (Not important) to 5/5 (Essential)



# Results

- The response rate was 41 from 95 requests (43%).
- 25% of respondents worked in a department that routinely uses a pre-RSI checklist.
- 95% felt a pre-RSI checklist would be beneficial to patient care.
- A consensus opinion as to what items should be included in a pre-RSI checklist was reached.....



# Results

- Items deemed, on average, very important (4/5) or essential (5/5) were included.
- Those deemed moderately, slightly or not important were not included.
- Additions to the RNSH checklist are shown in red
- There were no suggested deletions

Team	Patient	IVI/Drugs	Equipment
<ul style="list-style-type: none"><li><input type="checkbox"/> In hours, ED Senior Dr aware of RSI?</li><li><input type="checkbox"/> Out-of-hours, if difficulty anticipated, anaesthetics contacted?</li><li><input type="checkbox"/> All members introduced by name &amp; role and each briefed in turn by TL</li><li><input type="checkbox"/> Difficult intubation plan briefed?</li><li><input type="checkbox"/> Difficult airway trolley at hand?</li><li><input type="checkbox"/> Anticipated problems – does anyone have questions or concerns?</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Pre-oxygenation optimal?<ul style="list-style-type: none"><li>○ Add nasal prongs or NIV</li></ul></li><li><input type="checkbox"/> Patient position optimal?</li><li><input type="checkbox"/> Patient haemodynamics optimal?<ul style="list-style-type: none"><li>○ Fluid bolus?</li><li>○ Pressor?</li></ul></li><li><input type="checkbox"/> Does it look like it might be difficult:<ul style="list-style-type: none"><li>○ Difficult BVM?</li><li>○ Difficult laryngoscopy?</li><li>○ Difficult supraglottic airway?</li><li>○ Difficult cricothyroidotomy?</li></ul></li><li><input type="checkbox"/> Cervical spine instability?</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Fluids connected, runs easily?</li><li><input type="checkbox"/> Spare IVC?</li><li><input type="checkbox"/> Monitor: ECG, BP, SaO2.</li><li><input type="checkbox"/> RSI drugs drawn up, doses chosen?</li><li><input type="checkbox"/> Post-intubation anaesthesia plan - drugs drawn up?</li><li><input type="checkbox"/> Drug C/I or allergies considered</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Suction working?</li><li><input type="checkbox"/> Adequate Oxygen</li><li><input type="checkbox"/> BVM with ET/CO2 connected?</li><li><input type="checkbox"/> OPA and NPA available?</li><li><input type="checkbox"/> 2 x laryngoscopes working? Correct blade size?</li><li><input type="checkbox"/> Magill's Forceps</li><li><input type="checkbox"/> Tubes chosen, cuff tested</li><li><input type="checkbox"/> Bougie or stylet in tube?</li><li><input type="checkbox"/> Tube tie or tapes ready?</li><li><input type="checkbox"/> Stethoscope available</li><li><input type="checkbox"/> Ventilator circuit attached?</li><li><input type="checkbox"/> LMA sized &amp; available?</li><li><input type="checkbox"/> Surgical airway equipment available?</li></ul>

# Conclusion

- Although used only infrequently, there is a strong agreement that a pre-RSI checklist should be used in EDs
- We present a pre-RSI checklist developed through consensus opinion
- This checklist is freely available for modification to suit specific institutions from:

[www.airwayregistry.org.au/RSI-checklist.html](http://www.airwayregistry.org.au/RSI-checklist.html)

