NAP4 Inclusion Criteria
Guidance for local reporters

This project is ONLY designed to collect data on **major complications of airway management**. These include

- Death and brain damage.
- Emergency surgical airway or needle cricothroidotomy
- Unanticipated ICU admission: only where the complications of airway management are the cause of admission or lead to an adverse outcome.

In order for the project to be achievable we need to focus only on those cases with a poor outcome that is clearly identified as caused by difficult airway management.
Therefore we do not wish to be informed of the following

- Cases admitted to HDU
- Cases who would have been admitted to ICU even without airway management difficulty, unless the airway management difficulty resulted in significant adverse outcome.
- Difficult airway management, no matter how difficult, without adverse patient outcome (except we do wish to collect all cases of emergency surgical airway or needle cricothyroidotomy)

As with all clinical projects there are bound to be cases which are grey.

The following examples may help**.**

Patient A is admitted to the emergency department with a severe head injury (GCS 6), requiring ICU admission. Intubation is difficult but no hypoxia, hypotension or sustained hypertension results. Patient A does not fulfill inclusion criteria as on balance of probability difficult intubation was not the cause of ICU admission and did not lead to adverse outcome.

Patient B is admitted to emergency department with a severe head injury. Intubation proves impossible and multiple attempts are needed. Ventilation becomes impossible. Intubation is finally achieved, but only after a *prolonged period of profound hypoxia*. Patient B fulfills inclusion criteria as, on balance of probability, difficult intubation will have contributed to an adverse outcome (even though extent of contribution will be difficult or impossible to determine).

Patient C is admitted following a routine case during which they aspirated. They are extubated at the end of the procedure, but as a precaution are sent to ICU (HDU is full) for close observation. The following day they are well and are discharged. Patient C does not fulfill inclusion criteria as complication of airway management did not lead to significant adverse outcome. They would fulfill criteria if aspiration led to pneumonitis requiring continued ICU care.

Patient D proves unexpectedly difficult to intubate: several attempts are needed. At the end of the case the anaesthetist is concerned about airway swelling and the patient is admitted to ICU for overnight ventilation and steroids. The patient is uneventfully extubated the next day. Patient D does not fulfill inclusion criteria as complication of airway management did not lead to significant adverse outcome. If the patient had been extubated in recovery and suffered airway obstruction, hypoxia and a myocardial infarction prior to ICU admission, they would fulfill inclusion criteria.

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Patient E undergoes a percutaneous tracheostomy on ICU. Three weeks later the tracheostomy erodes the inominate artery and the patient dies as a result of airway bleeding/exsanguination. Patient E does not fulfill inclusion criteria as the complication was remote (in time). Similarly a late tracheal stenosis would not fulfill inclusion criteria. However they would fulfill inclusion criteria if injury to the posterior tracheal wall at the time of percutaneous tracheostomy lead to mediastinitis and death.

- **Events may occur during anaesthesia or in the emergency department or intensive care unit.**
- **We wish all cases to be reported.**
- **If you have a case you are not sure whether to report or not please discuss with the NAP4 moderator: Dr Ian Calder (email: nap4moderator@rcoa.ac.uk). Dr Calder will act independently of all others involved in the audit and will not be involved in analysis of cases.**
- **Note: Not all airway problems have an available solution. Some patients do come to harm or die even when an airway has been managed with a high degree of skill.**

Dr Tim Cook
Dr Nick Woodall
Co-leads for NAP4 August 2008

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