

Anaesthetic Crisis Handbook

V1. Oct 15 -Original document

V2. Feb 17 – Multiple changes. See below

v2.1 Oct 17 – Minor additions mostly to do with adding in more paed emergency information. 1 major correction on infraglottic rescue: 2nd breath via cannula should be 500ml not 250ml

v2.2 Nov 17 – Improvements to formulary terminology & dosing as well as some phrasing used throughout the book. Major changes to CICO supraglottic airway page - full rollout of the Vortex approach.

v2.3 Jan 18 – Added severe bronchospasm on 28d Low EtCO2 as a cause for no EtCO2.

v2.4 Apr 18 - Changes to bronchospasm. Decr max pressures, removed “listed in priority order”, changed LV failure to pulmonary oedema, improved suggestions around ventilatory strategies. Changes to low EtCO2 page: reordered differential diagnosis lists.

Version 2 Change Log

General Changes

- A new name = Handbook
- Changed layout of book into 2 seperate books - “Treating known Emergencies” & “Diagnosing Problems”. The print version is intended to be made as 2 books into 1 in a topsy turvy fashion. Flip end over end to look at the other book:
- Updated title pages with new colours to reflect different books
- Updated instructions pages
- Updated acknowledgements & thanks
- Whole new design to contents page with discrete arrows to tabs, colours on stems to reflect whether contents of emergencies or diagnosing, re-ordered pages into A>B>C>E>O approach (page changes below relate to old page numbers)
- Removed all shadowing from the pages for a cleaner, more modern look
- Updated digital links
- Updated all tag links within book
- added 🧐 icon to symbolise paed dosing

New Pages

- Failure to Wake
- Airway & Patient Fire
- Amniotic Fluid Embolism
- Peri-partum seizure
- Telephone Directory

Individual Page Changes

| OLD PAGES | CHANGES |
|----------------------------|--|
| 1 - adult arrest shock | <ul style="list-style-type: none">- Added anaphylaxis to H's & Ts- Changed wording of delivering baby by 5mins |
| 2 - adult arrest non shock | <ul style="list-style-type: none">- corrected formatting isoprenaline bolus- Added anaphylaxis to H's & T's- added bold to giving adrenaline immediately |
| 3 - paed arrest | <ul style="list-style-type: none">- Added anaphylaxis to H's & T's causes |
| 4 - paed calculations | |

| OLD PAGES | CHANGES |
|----------------------------|--|
| 5 - MI | <ul style="list-style-type: none"> - Added expedite end of surgery - subcategorised yellow box into intra-op & post op tasks - added cardiology referral - moved Hb target to red box - Hb target of 80-90 as per NZ Blood - moved IABP referral to red box - Subtle wording changes to ongoing ischaemia & supporting MAP with GTN infusion |
| 6 - anaphylaxis | <ul style="list-style-type: none"> - Corrected arrow to be ↓MAP - Added prompt to follow ANZAAG cards if prefer - change refractory bronchospasm drugs as ANZAAG - Added paed dosing for salbutamol, adrenaline & vasopressin infusions |
| 7 - haemorrhage | <ul style="list-style-type: none"> - Corrected “Rx” - Changed quick win: Volume replacement & good teamwork - Added TEG if available - swapped O-ve for O negative |
| 8 - haemolytic transfusion | <ul style="list-style-type: none"> - corrected colour coding on methylpred injection - Removed “Rx” - Added target MAP - added paed fluid bolus calculation |
| 9 - embolism | <ul style="list-style-type: none"> - changed order of signs of embolism - resp first - Put ↓EtCO2 first and annotated it as “most sensitive” |
| 10 - CICO supra | <ul style="list-style-type: none"> - changed escalation SpO2 to 90% as per DAS - Added consider ETT conversion with fibre-optic scope - Added Ready & Set to Vortex escalation algorithm |
| 11 - CICO infra | <ul style="list-style-type: none"> - Add pulling pt up bed to extend neck - added 10 blade scalpel - Added saline into syringe on cannula method - Changed order of techniques - scalpel boogie now method 1 - to reflect DAS |
| 12 - laryngospasm | <ul style="list-style-type: none"> - Add “gentle chest compressions” - changed sux to suxamethonium - added link to paed remade emerge calculations for sux dosing |
| 13 - bronchospasm | <ul style="list-style-type: none"> - changed Vt to tidal volume - Added age range to paed IV salbutamol - added max paed magnesium dose |
| 14 - aspiration | |
| 15 - total spinal | <ul style="list-style-type: none"> - improved consistency with specific maternal collapse actions with maternal collapse - removed “stop” from review infusions - changed wording of baby delivery by 5mins - intubate with alfentanil not fentanyl - add call 777 & maternal & neonatal emergency - removed some rpt’s = repeat - Added AFE to differential diagnosis - added concealed & external haemorrhage - added tag links to differential pages - added Mg toxicity to differential list |
| 16 - PPH | <ul style="list-style-type: none"> - Added aggressive warming - Added prompt for review with surgeon diagnosis & plan - Added aortal compression to intra-op treatment options |

| OLD PAGES | CHANGES |
|---------------------------|--|
| 17 - maternal collapse | <ul style="list-style-type: none"> - Removed "stop" from reviewing infusions - removed Rx short-hand - added eclampsia/seizures to Toxicity - changed MUD to lifting and displacing - added calling for MTP as nearly first task - added PE to collapse differential - Changed wording of CPR 5min baby delivery - removed some Mg dosing and referred to new peri-partum seizure page - to add alteplase reversal dosing |
| 18 - NLS | <ul style="list-style-type: none"> - Add check heater - Change PEEP to CPAP if poor resp effort - Add "saline" to umbilical fluid bolus - Improved formatting and wording off adrenaline bolusing - added preferred venous catheter and anatomy prompt to identify it - Added: 1min for drying & stimulating baby prior to starting NLS - Bolded ratio of breaths to compressions - Added adrenaline dosing table in line with new algorithm |
| 19 - LAST | <ul style="list-style-type: none"> - added tab links for arrest - added CPR specific tasks ie delayed ↓dose adrenaline - Changed to RSI if refractory seizures - Moved giving lipid above mobilising bypass/ECMO team - moved lipid up list in non arrest based on emerging guidelines - Referred paed's midaz dose to green box - changed adult midaz dosing to 2mg increments |
| 20 - MH | <ul style="list-style-type: none"> - added defib to arrhythmias - Added CK & coats to bloods - Changed wording in regard to CVL insertion - Added get more dantrolene from pharmacy - Changed wording on using MH task cards - corrected insulin infusion wording to read over 30mins, not every 30mins |
| 21 - hyper K | <ul style="list-style-type: none"> - added speed of infusion to run insulin dextrose |
| 22 - diagnostic checklist | <ul style="list-style-type: none"> - Removed |
| 23 - airway pressure | <ul style="list-style-type: none"> - Reordered most frequent causes |
| 24 - desat | <ul style="list-style-type: none"> - Added for CO2 check - Check fresh gas flow / FiO₂ - Added cause of vent problem: inadequate reversal - Added reference to ABC causes for normal EtCO₂ trace - Added consider performing bronchoscopic exam - Decreased size of converting LMA to ETT |
| 25 - ↑ bp | |
| 26 - ↓ bp | <ul style="list-style-type: none"> - Add paed's metaraminol bolus dose - Added & clarified SVV pre-requisites - Added tension PTX to ↓preload - Changed most frequent causes to first - added clamp release to ↓afterload causes - Added () to transducer height |
| 27 - ↑ HR | |

| OLD PAGES | CHANGES |
|------------------|---|
| 28 - ↓HR | <ul style="list-style-type: none"> - corrected rpt - added prompt to connect defib ECG leads - improved line spacing |
| 29 - ↑EtCO2 | <ul style="list-style-type: none"> - added specific vent settings to check - Removed FGF acronym - Removed FGF acronym - moved FGF/soda exhaustion to ↓elim category - corrected bolding order |
| 30 - ↓EtCO2 | <ul style="list-style-type: none"> - Changed most frequent causes to first - corrected PTX acronym - corrected formatting of titles - removed wrong bolding |
| 31 - Adult drugs | <ul style="list-style-type: none"> - changed vasopressin infusion range |
| 32 - Paeds Drugs | <ul style="list-style-type: none"> • Improved IM adrenaline 1:1000 syntax • Change Norad & adrenaline paed's dosing |