



5 TOP MESSAGES

*0-18y, except newborns 'at birth'

- 1. Use ABCDE as common language**
– Work as a team – Be competent.
- 2. Titrate oxygen therapy to SpO₂ 94-98%**
- only if impossible to measure, start high flow O₂ based on signs of circulatory/respiratory failure.
- 3. In 'shock', give 1 or more fluid bolus(es) of 10ml/kg of (preferably balanced) crystalloids (or blood products). Reassess after each bolus. Start vasoactive drugs early.**
- 4. For basic life support, use the specific PBLS algorithm (ABC - 15:2) if you are trained to do so. Both improving the quality of CPR and limiting the hands-off time are considered crucial. Consider provider safety.**
- 5. For advanced life support, use the specific PALS algorithm. Actively search for and treat reversible causes. Use 2-person BMV as the first line ventilatory support. Only if intubated, provide asynchronous ventilation at an age-dependent rate (10-25/').**



COMMON GROUNDS

KEY EVIDENCE

With the exception of newborns at birth, all children 0-18y are best treated by paediatric guidelines. Adult guidelines can be used for patients that appear adult.

Only perform or lead procedures for which you are sufficiently competent (self-reflection – based on knowledge, skills, attitudes, expertise and ongoing training).



All children at risk of serious illness or injury are best approached in a stepwise pathophysiology based ABCDE manner.

A team-based approach improves performance and outcome. A structured strategy for implementation and ongoing evaluation is needed.

KEY RECOMMENDATIONS



For PLS of all children (0-18y): use ABCDE as common language – work as a team – be competent.



AB

KEY EVIDENCE

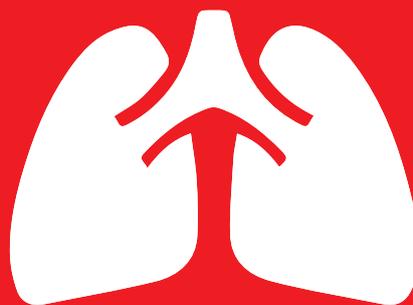
Too liberal supplemental oxygen has undefined risks & resource needs but there is also a risk of inadvertent hypoxaemia if conservative.

No evidence to support pre-emptive oxygen in children without signs or immediate risk for hypoxaemia or shock.



Titrate to normoxaemia if possible. Adjustments might be needed for chronic conditions or severe ARDS. 'Blind' high flow oxygen for children who present with respiratory or circulatory failure.

KEY RECOMMENDATIONS



Titrate Oxygen R/ to SpO₂ 94-98% - only if impossible to measure, start high flow oxygen based on signs of circulatory/respiratory failure.

C

KEY EVIDENCE

Circulatory failure is not one disease – treatment needs to be tailored to the individual (etiology, pathophysiology, age, context, comorbidity, resources...).



For a sustained effect on perfusion, in most patient with shock – even those with underlying hypovolaemia - early vasoactive drugs are mandatory.

Fluid is key in many patients with shock but fluid overload will negatively impact outcome. Timely reassessment is crucial.

KEY RECOMMENDATIONS



In 'shock', give 1 or more fluid bolus(es) of 10ml/kg of (preferably balanced) crystalloids (or blood products). Reassess after each bolus. Start vasoactive drugs early.

PBLS

KEY EVIDENCE



The specific algorithm for pbls continues to emphasize the importance of oxygenation and ventilation as part of CPR. We no longer speak of 'duty to respond', just of 'trained in PBLs'. Those trained should use the pbls algorithm. Specific targetgroups should use 2-person bmv for ventilations.



To limit hands-off time and be more uniform, immediately after the 5 rescue breaths, proceed with chest compressions – unless there are clear signs of circulation. Single rescuers should first call for help then before proceeding.



Good quality compressions have a good rate, depth and recoil. A trained single rescuer preferably also uses a two-thumb encircling technique for infant chest compressions, taking care to avoid incomplete recoil.

KEY RECOMMENDATIONS



For basic life support, use the specific PBLs algorithm (ABC - 15:2) if you are trained to do so. Both improving the quality of CPR and limiting the hands-off time are considered crucial. Consider provider safety.

PALS

KEY EVIDENCE



The specific algorithm for PALS continues to highlight the importance of early defibrillation for shockable rhythms (self-adhesive pads, 4J/kg). If in doubt, consider the rhythms to be shockable. Consider stepwise dose escalation for refractory VF/pVT (≥ 6 shocks). A stacked shock approach is only advised for witnessed onset of shockable arrest with defib immediately available (or in cases where rescuers are still donning PPE).



Currently, no single factor exists that can be used as an isolated target nor as prognostic argument. However, prognosis can be clearly influenced by recognising and (agresively) treating reversible causes.



2-person BMV is the preferred way to manage the airway during advanced CPR. Only in cases where a tracheal tube is in place, provide continuous compressions and ventilate at the lower limit of normal for age (10 (>12y) – 15 (8-12y) – 20 (1-8y) – 25 (<1y)).

KEY RECOMMENDATIONS



For advanced life support, use the specific PALS algorithm. Actively search for and treat reversible causes. Use 2-person BMV as the first line ventilatory support. Only if intubated, consider asynchronous ventilation at an age-dependent rate (10-25/').