

THE PRIMARY SURVEY

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Injured children are assessed using the Advanced Trauma Life Support (ATLS) structured cABCDE approach: of catastrophic bleeding with pressure, A irway with C-spine control, B reathing with oxygen, C irculation with further control of haemorrhage, D isability , E xposure and Environ ment. In contrast to managing trauma in adults (see Trauma), the following should be considered:

- /uni25CF A - overextension of the neck can cause airway obstruc tion; a neutral position is used for infants and a 'sni ffi ng the morning air' position for older children.
- /uni25CF B - hypoxia is usually the cause of cardiac arrest in chil dren; if easily reversed, the cardiac rhythm returns.
- /uni25CF C - hypotension occurs comparatively late after 20% of the circulating volume is lost.
- /uni25CF D - an age-dependent modified Glasgow Coma Scale (GCS) is used.
- /uni25CF E - small children lose heat rapidly , with hypothermia exacerbating any coagulopathy . If their weight in kilograms is unknown, it can be estimated from $2 \times (\text{age in years} + 4)$. In cardiac arrest, the four Hs and four Ts are considered: H ypoxia, H ypovolaemia, H ypothermia/Hyperthermia, H yperkalaemia/hypokalaemia, T ension pneumothorax, car diac T amponade, T oxins, T hrombus.

Describe some common patterns of injury in children • Request appropriate investigations for an injured child • Outline the non-operative management of solid organ • injuries Outline the principles of the trauma laparotomy and the • clamshell thoracotomy Explain the principle of damage control surgery •

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