APLS 5th Edition
Australia & New Zealand Version
Basic Life Support

D
Dangers?

R
Responsive?

S
Send for help

A
Open Airway

B
Normal Breathing?

C
Start CPR
30 compressions : 2 breaths
if unwilling / unable to perform rescue breaths continue chest compressions

D
Attach Defibrillator (AED)
as soon as available and follow its prompts

Continue CPR until responsiveness or normal breathing return

Basic Life Support

D
Dangers?

R
Responsive?

S
Send for help

A
Open Airway

B
Normal Breathing?
Give 2 breaths

C
Check pulse
Take no more than 10 seconds
Start CPR
15 compressions : 2 breaths

D
Attach Defibrillator / monitor
Ensure help is coming

Continue CPR until responsiveness or normal breathing return

The choking child
Ineffective cough

Assess
Send for help

Ineffective cough

Conscious
5 back blows
5 chest thrusts
Assess and repeat

Unconscious
Open airway
2 breaths
CPR 15:2 Check for FB

Effective cough
Encourage coughing
Support and assess continuously
Adjuncts
Oropharyngeal airway

Size
• Centre of mouth to angle of jaw

Insertion
• Depress the tongue rather than rotate the airway
Adjuncts
Nasopharyngeal airway

Size
• Length – lateral edge of the nostril to tragus of ear
• Diameter - little finger or nostril

Insertion
• Lubricate
• Direct posteriorly (rather than upwards)
• Rotate gently
Advanced Life Support for Infants and Children

Start CPR
15 compressions : 2 breaths
Minimise Interruptions

Attach Defibrillator / Monitor

Assess Rhythm

Shockable

Shock (4 J/kg)
CPR for 2 minutes

Return of Spontaneous Circulation?

Non Shockable

Adrenaline 10 mcg/kg
(Immediately then every 2nd loop)

CPR for 2 minutes

During CPR
Airway adjuncts (LMA / ETT)
Oxygen
Waveform capnography
IV / IO access
Plan actions before interrupting compressions (e.g. charge manual defibrillator to 4 J/kg)

Drugs
Shockable
* Adrenaline 10 mcg/kg after 2nd shock (then every 2nd loop)
* Amiodarone 5mg/kg after 3rd shock
Non Shockable
* Adrenaline 10 mcg/kg immediately (then every 2nd loop)

Consider and Correct
Hypoxia
Hypovolaemia
Hyper / hypokalaemia / metabolic disorders
Hypothermia / hyperthermia
Tension pneumothorax
Tamponade
Toxins
Thrombosis (pulmonary / coronary)

Post Resuscitation Care
Re-evaluate ABCDE
12 lead ECG
Treat precipitating causes
Re-evaluate oxygenation and ventilation
Temperature control (cool)
Advanced Life Support Protocol

Start CPR

Attach defibrillator/monitor

Assess rhythm

Shockable
VF / pulseless VT

Non-shockable
PEA/asystole

Shock
(4 J/kg)

Adrenaline 10 mcg/kg
after 2nd shock
(then every 2nd loop)
Amiodarone 5 mg/kg
after 3rd shock

CPR
for 2 minutes

Return of spontaneous circulation?

CPR
for 2 minutes

During CPR
Airway adjuncts (LMA/ETT)
Oxygen
Waveform capnography
IV/IO access
Plan actions before interrupting
compressions (e.g. charge manual
defibrillator to 4 J/kg)

Consider and correct
Hypoxia
Hypovolaemia
Hyper/hypokalaemia/metabolic
disorders
Hypothermia/hyperthermia
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Tamponade
Toxins
Thrombosis (pulmonary/coronary)

Adrenaline 10 mcg/kg
(immediately then
every 2nd loop)

Adrenaline 10 mcg/kg
after 2nd shock
(then every 2nd loop)

Post-resuscitation care
Re-evaluate ABCDE
12 lead ECG
Treat precipitating causes
Re-evaluate oxygenation and
ventilation
Temperature control (cool)

April 2011, Modified from Australian Resuscitation Council and New Zealand Resuscitation Council
for use by trained medical professionals. Original ARC/NZRC algorithm available at www.resus.org.au
Breathing difficulties
Life-threatening asthma – emergency treatment

• High-flow oxygen
• Salbutamol and ipratropium nebulised
  • IV steroids
  • Continuous nebulised salbutamol
  • IV salbutamol infusion
    • IV magnesium
    • IV aminophylline
  • Respiratory support
Emergency Treatment of Anaphylaxis Protocol

1. Symptoms and signs of anaphylaxis
   - Call for help
   - Remove trigger/casative agent
   - Assess ABC

2. Cardiac arrest
   - Respiratory arrest
   - Complete airway obstruction

3. Signs of upper airway obstruction (stridor/respiratory distress) or
   Lower airway obstruction (wheeze/respiratory distress) or
   Shock

4. Adrenaline IM 10 mcg/kg
   - Repeat in 3-5 mins if no improvement
   - 0.9% saline 20 mL/kg for shock

5. Resolution

6. No resolution
   - Persistent upper airway obstruction
     - Nebulised adrenaline
     - Consider adrenaline infusion
   - Persistent lower airway obstruction
     - Nebulised adrenaline or salbutamol
     - Consider adrenaline infusion
     - Consider IV aminophylline
   - Persistent shock
     - Further 0.9% saline
     - Adrenaline infusion

7. Basic and advanced life support
   - Adrenaline IM 10 mcg/kg or IV if in cardiac arrest

8. Observe
   - Monitoring and ABC reassessment
   - Consider oral antihistamine and oral prednisolone

9. No

10. Yes
Status Epilepticus Protocol

Airway
High-flow oxygen
Don’t ever forget glucose

Vascular access IV/IO?

Yes

Consider pre-hospital medications

Midazolam or Diazepam or Lorazepam

5 min

Midazolam or Diazepam or Lorazepam

5 min

Phenytoin or Phenobarb

20 min

No

Consider patient’s current anti-convulsants

Midazolam IM, buccal or intranasal

10 min

Midazolam IM, buccal or intranasal

10 min

Paraldehyde PR

10 min

Rapid Sequence Induction with Thiopentone or Propofol
The seriously injured child
Resuscitation: cervical spine

- Hard
- If uncooperative or too small for a collar manual immobilisation
- Head blocks and straps for transport
The seriously injured child
Resuscitation: Circulation

- **Crystalloid 20ml/kg**
- **Crystalloid 20ml/kg**
- **Surgical opinion**
- **Blood 10 ml/kg**

Assess response
Assess response
Newborn Life Support

At all stages ask: do you need help?

Term gestation? Breathing or crying? Good tone?

HR below 100? Gasping or apnoea?
- Yes: Positive pressure ventilation. SpO₂ monitoring.
- No: Laboured breathing or persistent cyanosis?
  - Yes: Ensure open airway. SpO₂ monitoring. Consider CPAP.
  - No: Post-resuscitation care.

HR below 60?
- Yes: Add chest compressions. 3 compressions to each breath. 100% oxygen. Consider intubation or LMA.
- No: Venous access, adrenaline. Consider volume expansion.

Targeted pre-ductal SpO₂ after birth:
- 1 min: 60-70%
- 2 min: 65-85%
- 3 min: 70-90%
- 4 min: 75-90%
- 5 min: 80-90%
- 10 min: 85-90%

Adrenaline IV: 10-30 mcg/kg (0.1-0.3 mL/kg of 1:10,000 solution)
Skills

• Airway
• Rhythm recognition and Defibrillation
• Spinal Skills
Scenarios

- Candidates given the weight, formulae
- Instructor-led debrief
- Style of debrief
BLS Test

• Infant and child
• “You are in a clinic without resuscitation equipment immediately available”.
• Determines need to start CPR
• Start CPR – 15 compressions, 2 breaths and continues for one minute
• Correct site, rate and depth of compressions
Airway test

“Show me how you would position and open this infant’s airway”
Show me an alternate technique
Show me how you would clear secretions

“Show me how you would select a mask, and proceed with BVM ventilation”

“Show me how you would size and insert an oropharyngeal airway & perform BVM again”
Airway test cont’d

“When you are ready, proceed to orotracheal intubation safely”

Orotracheal intubation of an infant (within 30 seconds),
or
recommencement of bag-valve-mask ventilation and a successful second attempt at orotracheal intubation within 2 minutes,
or
attempts at intubation as above followed by recognition that intubation failed followed by safe airway practice.
Defib test

Continue CPR

Apply adhesive monitoring electrodes to correct positions

Select energy required (4J/kg) and charge defibrillator

Briefly pause CPR and assess rhythm (VF)

Shout “stand clear” and ensure rescuers are clear

Deliver shock

Recommence chest compressions immediately for 2 minutes and charge defibrillator
Defib test cont’d

Briefly pause CPR to check for ROSC and assess rhythm (VF)
Shout “stand clear” and ensure rescuers are clear
Deliver shock
Recommence chest compressions immediately
Give adrenaline (10 micrograms/kg) immediately after the second shock
Continue CPR for 2 minutes.
Thank you

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