

Slide 1

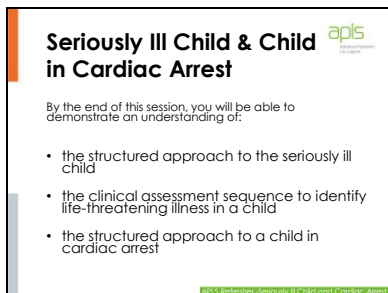


Instructor Notes

This session is 45 mins.

- Read notes on facilitating plenaries.

Slide 2



Consider commencing the session in a usual plenary style and moving into groups of 3-4 after slide 4 (Rapid Assessment).

Sit candidates in groups (3-4 people each group). They will need pen, clip board and 2 double sided copies per group of the A4 Serious Illness Activity Sheet

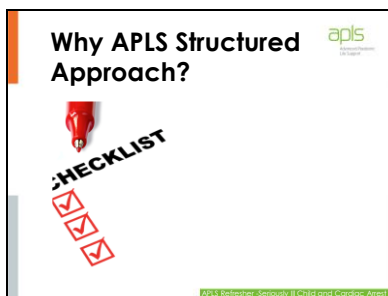
Interactive session is also to:

Candidates nominate a scribe and a spokesperson

ACTIVITY PACKS x 4 - one per group of six candidates

Aim of this session is to recap the recognition and resuscitation of the seriously unwell child, briefly recap identifying when circulatory arrest has occurred, revision of BLS and ALS , and the use of two cases to practice the material discussed

Slide 3



Write down three reasons to have a structured approach to a serious ill child.

One minute for activity – 3 minutes for shared answers

Multiple answers (incl. Human Factors issues - Chapter 3 in 6e)

so you don't miss anything
method to calm oneself down in panic position
prioritise assessment and treatment in a logical order
learn an automated response.
Minimise fixation
Shared situational awareness
Communication

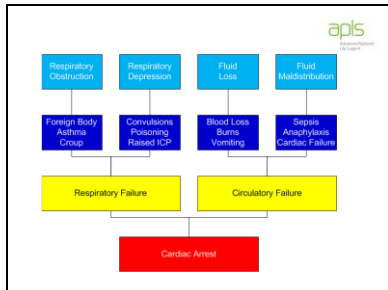
- SEGUE to algorithm activity – **click to show aeroplane** - repetition assists in established automated responses

Slide 4



- Human factors - Chapter 3

Slide 5



Pathways to cardiac arrest

Pale Blue Row – presenting issue

Dark Blue Row – possible reversible causes

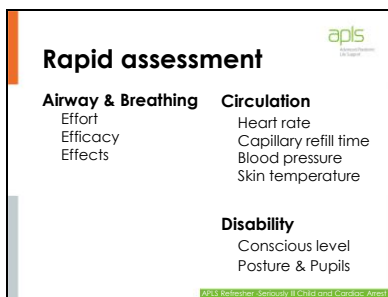
Yellow – where the situations are heading

Talk about how assessment and intervention with the conditions on the top of the slide can prevent or slow progression to the serious consequences on the bottom of the slide.

This involves rapid assessment of the seriously ill child (summarised on next slide).

Be brief – this and the next slide is recall from pre-reading and the online learning.

Slide 6

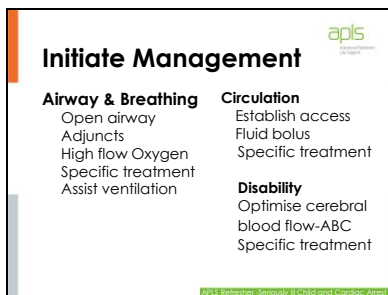


In Disability also mention along with posture COLOUR & TONE

This slide has animation.

Rapid assessment features are emphasised in the online learning – this slide is a prompt for recall of pre-course learning. Give candidates the ‘space’ to provide the answers.

Slide 7

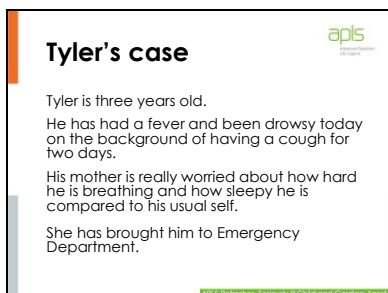


Initial management is similar regardless of cause of the illness

Once more information is available specific treatment can target the cause of the illness

Having a “scaffold” for resuscitation helps the practitioner to provide resuscitation whilst giving more time to gain more information to enable a diagnosis and specific treatment to be found

Slide 8



Present this case and the following slide and invite candidates to discuss in their groups the initial resuscitation and then think about the differential diagnosis of respiratory and circulatory failure and the specific interventions that should be given.

Invite candidates to provide answers to next two slides, including any other key features that they can think of

Slide 9

Tyler's case: Primary assessment and resuscitation

	On examination	Resuscitation
A	Patent	
B	Resp rate 40/min SpO ₂ not recordable Significant recession Poor AE (R) lower chest	
C	Pale Heart rate 170/min Weak peripheral pulses BP 65 mmHg systolic CRT 4 sec	
D	AVPU	

Allow 2 minutes

See Slide 24 for hidden features

Slide 10

Tyler's case: What emergency treatment?

Key Feature	Diagnosis	Treatment
Creps at (R) lung base		
History of asthma		
Fever and rash		
Signs of heart failure		
Abnormal ECG		
High blood glucose		

Show key features and ask for diagnosis and emergency treatment.

Ask whether there are any other key features / diagnoses not listed here.

Allow 4 minutes

See Slide 25 for hidden features, diagnosis and treatment. Note Prostaglandin is in 'grey' font, as a teaching point for infants pg 76-77 (not suitable for Tyler – who is 3 yrs old)

Slide 11

Ruby's case

Ruby is 4 months old.
She has been brought in by her parents who are concerned that she is sleepy and not taking her feeds.
She has had no previous illnesses

Present this case and the following slide and invite candidates to discuss in their groups the initial resuscitation and then think about the differential diagnosis of reduced conscious level and the specific interventions that should be given.

Invite candidates to provide answers to next two slides, including any other key features that they can think of before summing up. Eg:

Fever - meningitis

acute onset – cerebrovascular event

high BP – hypertensive encephalopathy

vague and inconsistent history, other trauma in an infant – child abuse

Slide 12

Ruby's case: Primary assessment and resuscitation

	On examination	Resuscitation
A	Snoring	
B	Resp rate 40/min No recession SpO ₂ not recordable	
C	Heart rate 140/min Pale Cold peripheries BP 80 mmHg systolic	
D	AVPU Pupils: sluggish, equal and reactive	
E	Hypothermic - temperature 34.5°C	

Allow 2 minutes

See Slide 26 for hidden features

Slide
13

Key Feature	Diagnosis	Treatment
Seizures develop		
Brulung, full fontanelle		
Poor growth or regression		
Acute onset and fever		
Possibility of poisoning		

Show key features and ask for diagnosis and emergency treatment.
Ask whether there are any other key features / diagnoses not listed here.
E.g.
headaches, acute onset – cerebrovascular event
headaches, high BP – hypertensive encephalopathy
vague and inconsistent history, other trauma in an infant – child abuse

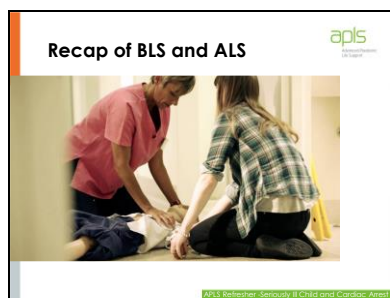
The use of the structured approach in these cases will help ensure early and appropriate treatment. Candidates may practice this in the illness simulations which follow.

Allow 4 minutes

See Slide 27 for hidden features

Pack of laminated sections of BLS and ALS algorithms

Slide
14



5 mins to order cards into BLS and ALS algorithm sequences & keep displayed on table

Start whole group review of questions with activity:

Tap/clap at CPR rate of 100-120 beats/min - give group min 20 secs – watch, some in group will adapt to others or some stay confident. Encourage whole group to listen to each other & yet know their own beat.

* can use ALSi on CPR rhythm or SR to give audible rate – (set up in advance to ensure volume on iPad is on maximum)

Ask why is CPR rate is at 100-120 beats/min?

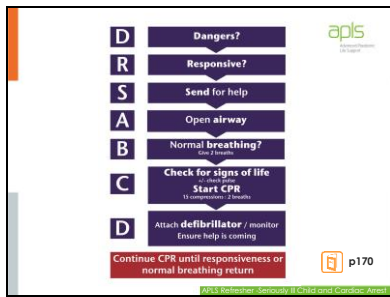
- They will know the answer, however knowing doesn't mean doing.....

clinicians (in simulation) haven't shown to be great at keeping rate or sustaining depth –

Studies show that we need repeated practice and feedback on performance – (what they are going to get on the face to face course)

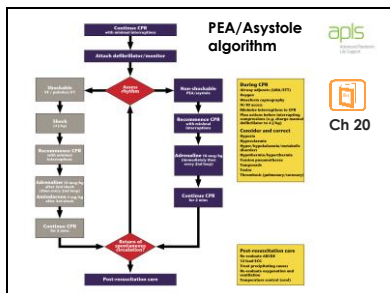
As main evidence for resuscitation is primarily related to effective CPR – need to change manpower to prevent exhaustion & maintain rate and depth

Slide 15



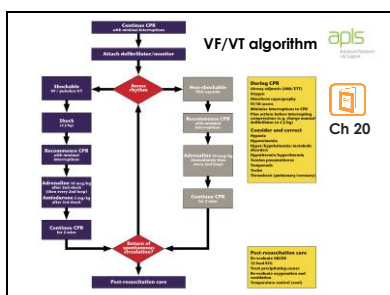
Mention the difference between Adult and Paediatric algorithms- Place of rescue breaths, technique for compressions, ratio of breaths to compressions,

Slide 16



Check with cards on the table

Slide 17



This is the part of the ALS algorithm for VF/VT

5 mins of small group activity

Questions to be answered in their groups – worksheet with questions provided

-How long is a cycle?

-What do you do during the 2 minute cycle?

When is adrenaline given? VT/VF vs asystole?

Which of the Hs and Ts are of particular importance in asystole?

- hypoxia
- hypovolaemia
- anything else suggested by history of child's illness/injury

Which of the Hs and Ts are of particular importance in PEA?

- hypovolaemia
- hypocalcaemia
- tension pneumothorax
- cardiac tamponade
- hypothermia
- pulmonary embolus

How is ROSC assessed? – why feel for a pulse?

Where do you feel for a pulse?

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Hs and Ts?

List the 4 Hs and Ts

How would you exclude these causes during a cardiac arrest?

apls

Slide
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4 Hs/Ts – diagnosis/Mx	
Hypoxemia	O ₂ on, connected, ventilation confirmed
Hypovolemia	Fluid bolus
Hyperkalemia, H⁺, Ca⁺⁺	VBG
Hypo/Hyperthermia	Temp
Toxins	Drug error, poisoning
Thrombosis	Pulmonary, thrombus/air - clinical, ultrasound Coronary - clinical, ECG
Tension pneumothorax	Clinical, ultrasound
Tamponade	Clinical, ultrasound

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Slide
21

Summary Rapid assessment	
Airway & Breathing	Circulation
Effort	Heart rate
Efficacy	Capillary refill time
Effects	Blood pressure
	Skin temperature
	Disability
	Conscious level
	Posture & Pupils

Remember to include tone & colour when you mention posture
Closure – include that further opportunities to discuss assessment and management of illnesses raised in the Serious Illness plenary will be in the workshops and illness scenarios.

Slide
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Initiate Management	
Airway & Breathing	Circulation
Open airway	Establish access
Adjuncts	Fluid bolus
High flow Oxygen	Specific treatment
Specific treatment	
Assist ventilation	Disability
	Optimise cerebral blood flow-ABC
	Specific treatment

Initial management is similar regardless of cause of the illness
Once more information is available specific treatment can target the cause of the illness

Having a “scaffold” for resuscitation helps the practitioner to provide resuscitation whilst giving more time to gain more information to enable a diagnosis and specific treatment to be found

Slide
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6th edition



Advanced Paediatric Life Support



Cases in full for instructor use only

Structured Approach to the Seriously Ill Child and Child in Cardiac Arrest

Instructor Notes
This session is 45 mins.

- Read notes on facilitating plenaries.

Slide
24

Tyler's case: Primary assessment and resuscitation		apls Advanced Paediatric Life Support
On examination	Resuscitation	
A Patent	Call for help Maintain airway (may need intubation) High flow oxygen IV access and fluids (10-20 ml/kg bolus)	
B Resp rate 40/min SpO ₂ not recordable Significant recession Poor AE R lower chest		
C Pale Heart rate 170/min Weak peripheral pulses BP 65 mmHg systolic CRT 4 sec	Reassess	
D AVPU		

Allow 2 minutes

Slide
25

Tyler's case: What emergency treatment?			apls Advanced Paediatric Life Support
Key Feature	Diagnosis	Treatment	
Crepes at right lung base	Severe pneumonia	Resp support IV antibiotics	
History of asthma	Severe asthma	Resp support Bronchodilators IV corticosteroids	
Fever and rash	Septicaemia	IV/IO Fluid Antibiotics	
Signs of heart failure	CHD / Cardiomyopathy	Diuretics, inotropes Prostaglandin	
Abnormal ECG rhythm	Arrhythmia	Arrhythmia algorithms	
High blood glucose	Diabetes	Fluid, Insulin	

Show key features and ask for diagnosis and emergency treatment.

Ask whether there are any other key features / diagnoses not listed here.

Allow 4 minutes

See Slide 26 for hidden features, diagnosis and treatment. Note Prostaglandin is in 'grey' font, as a teaching point for infants pg 76-77 (not suitable for Tyler – who is 3 yrs old)

Slide
26

Ruby's case: Primary assessment and resuscitation		apls Advanced Paediatric Life Support
On examination	Resuscitation	
A Snoring	Call for help Open and protect airway High flow oxygen	
B Resp rate 40/min No recession SpO ₂ not recordable		
C Heart rate 140/min Pale Cold peripheries BP 80 mmHg systolic	IV/IO access and judicious fluids Blood tests esp blood glucose	
D AVPU Pupils: sluggish, equal and reactive		
E Hypothermic - temperature 34.5°C	Start to warm Reassess	

Allow 2 minutes

Slide
27

Ruby's case: What emergency treatment?			apls Advanced Paediatric Life Support
Key Feature	Diagnosis	Treatment	
Seizures develop	Post-ictal state	Supportive, investigate cause	
Bruising, full fontanelle	Head injury	Trauma algorithm	
Poor growth or regression	Metabolic condition	BGL, Blood gas, lactate and ammonia Metabolic screen	
Acute onset and fever	Meningitis Encephalitis	Antibiotics Consider acyclovir	
Possibility of poisoning	Drugs	Supportive Antidotes	

Show key features and ask for diagnosis and emergency treatment.

Ask whether there are any other key features / diagnoses not listed here.

E.g.

headaches, acute onset – cerebrovascular event

headaches, high BP – hypertensive encephalopathy

vague and inconsistent history, other trauma in an infant – child abuse

The use of the structured approach in these cases will help ensure early and appropriate treatment. Candidates may practice this in the illness simulations which follow.

Allow 4 minutes