

Simulation Package : Anaphylaxis

An open access resource for clinical educators



Optimus
BONUS



Optimus

BONUS

Bank Of iNdependently Useful Simulations

Part of the Children's Health Queensland 'Optimus' curriculum.

OPTIMUS BONUS : Paediatric Anaphylaxis

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A copy of this simulation package is available online at : <https://www.childrens.health.qld.gov.au/research/education/queensland-paediatric-emergency-care-education/optimus-bonus/>

For more information contact:

Simulation Training Optimising Resuscitation for Kids (STORK) Unit, Queensland Children's Hospital, 501 Stanley St, South Brisbane QLD 4101, stork@health.qld.gov.au

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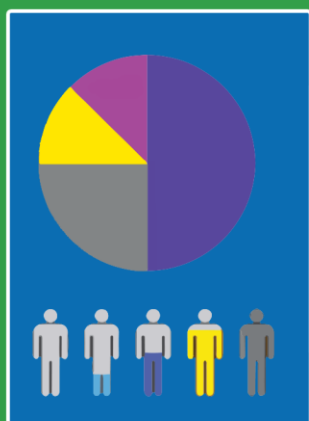
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Contents of this educational package:



Simulation

Structured approach to anaphylaxis
Administering adrenaline in anaphylaxis
Airway management



Infographic

For sharing in the weeks before
or after your simulation via email
or in poster format.



Further Reading

Podcasts and Blog Posts
Online Videos
Journal Articles

Fill out our participant survey
to receive a training certificate

(Select Optimus BONUS as course)



Simulation

Introduction by Dr Jane Peake, MBBS FRACP DTM&H



Jane Peake did her general paediatric training at the Royal Children's Hospital in Brisbane before going overseas to train in immunology and allergy centres of excellence in the United Kingdom, France and Canada over several years. She returned to Brisbane 20 years ago and in 2008 established the first public paediatric immunology and allergy service in Queensland (Queensland Paediatric Immunology and Allergy Service). Jane's clinical and research special interests include primary immune deficiency, food allergy, anaphylaxis and severe eczema. She has numerous publications in these areas and is on a variety of state and national advisory boards and government committees. She is currently a director of the Australasian Society of Clinical Immunology and Allergy (ASCI) which is the peak professional body of immunology and allergy in Australasia. Jane is an associate professor at the University of Queensland.

"Anaphylaxis is a potentially life-threatening severe allergic reaction. It is caused most commonly by foods in children, but other causes include insect stings, drugs and idiopathic. Data shows that there are increasing presentations of children to emergency departments with anaphylaxis. Worldwide prevalence of allergies is rising, and Australia has some of the highest rates of food allergies in the world. Current recommendations of early introduction of solids, including allergenic solids, is aimed at prevention of the development of food allergy. However, for some infants their initial exposure to a food may result in an anaphylactic reaction, meaning that we now have young babies and infants presenting with anaphylaxis to emergency departments.

Most important in the management of anaphylaxis is recognition. Cases may be missed if this diagnosis is not considered in patients presenting with sudden onset of acute severe respiratory or cardiovascular symptoms or in those who don't have any skin or gastrointestinal involvement.

Prompt treatment with adrenaline is then required once anaphylaxis is diagnosed. Multiple doses of intramuscular adrenaline may rarely be required in children. Intravenous infusions of adrenaline would extremely rarely be needed and must be used with care. In patients, especially infants, requiring multiple doses of adrenaline or an infusion, adrenaline overdose needs to be watched for.

Antihistamines as adjunct therapy can be given to alleviate symptoms such as itch but should not be given in the place of adrenaline for anaphylaxis and oral steroids are not useful in this setting. Following an episode of anaphylaxis, it is important that the patient is supplied with an adrenaline autoinjector, an anaphylaxis action plan and the family are educated regarding these and avoidance of the potential allergen. New patients should be referred to an allergist for assessment and confirmation of the cause."

Section I: Scenario Demographics

Scenario Title:	Paediatric Anaphylaxis
Date of Development:	18/7/19
Review date:	Sep 2024
Target Learning Group:	Multidisciplinary teams that look after Paediatric Patients

Section II: Scenario Developers

Scenario Developers:	Dr Sonia Twigg, Dr Benjamin Symon, Dr Ben Lawton, Ms Louise Dodson, Mrs Tricia Pilotto, Dr Carolina Ardilo Sarmiento
Reviewed by :	Dr Jane Peake, Dr Fiona Brown

Section III: Curriculum

Learning Goals & Objectives

Educational Goal:	<ul style="list-style-type: none"> Structured approach to anaphylaxis management Preparing for difficult intubation in a shocked paediatric patient
Skills Rehearsal:	<ul style="list-style-type: none"> Adrenaline prescription and administration in anaphylaxis Equipment preparation for a difficult airway
Systems Assessment:	<ul style="list-style-type: none"> Departmental access to clinical guidelines, prescribing resources and action plans for paediatric anaphylaxis Smart-pump software check for adrenaline infusion

Case Summary: Brief Summary of Case Progression and Major Events

- 6yo girl with anaphylactic shock refractory to initial management, requiring IV adrenaline infusion before clinically stabilizing.
 - She is a visitor to the hospital with a known nut allergy, and becomes anaphylactic after eating a piece of chocolate cake.
 - The simulation starts with a call for help from her parent.

Simulation Adaptations

Adapting to your clinical environment

Please adapt this scenario for use in your clinical area.

The simulation works well as a case for Medical Emergency Team response systems, set in a real non clinical area.

If running it as an ED simulation, the parent script can be adapted to be an ambulance service handover.

If running it as a ward simulation, the family are visitors to the unit.

Section IV: Equipment and Staffing

Cast		
Patient:	<input type="checkbox"/> Mannequin (appropriate size for 6 year old patient)	
Facilitator:	Clinician competent at managing anaphylaxis in children.	
Confederate:	Parent	
Equipment		
Examination:	Airway & Breathing:	Circulation:
<ul style="list-style-type: none"> <input type="checkbox"/> Stethoscope <input type="checkbox"/> Tongue depressor 	<ul style="list-style-type: none"> <input type="checkbox"/> Nasal Prongs <input type="checkbox"/> Non-Rebreather Mask <input type="checkbox"/> Bag Valve Mask <input type="checkbox"/> Nasopharyngeal airways <input type="checkbox"/> Endotracheal cuffed tubes 5, 5.5, 6 <input type="checkbox"/> Bougie / Stylet <input type="checkbox"/> LMAs <input type="checkbox"/> Oxygen tubing + 3 way tap 	<ul style="list-style-type: none"> <input type="checkbox"/> IV cannulation equipment <input type="checkbox"/> Intraosseous set up <input type="checkbox"/> IV bags and lines
Documentation:	Medication:	
<ul style="list-style-type: none"> <input type="checkbox"/> Anaphylaxis protocol <input type="checkbox"/> Observation chart 	<ul style="list-style-type: none"> <input type="checkbox"/> Adrenaline 1 in 1000 <input type="checkbox"/> Adrenaline 1 in 10 000 <input type="checkbox"/> Epipen demonstration syringe <input type="checkbox"/> Nebuliser (for Adrenaline) 	
Moulage		
<ul style="list-style-type: none"> Urticarial rash – over most of body 2x IVC with drainage bags attached. “No IV sticker” initially on both IVCs 		

Start of Simulation : Parent Script

As you are representing a parent in this simulation, please role model a calm but appropriately concerned parent who is well informed about anaphylaxis.



At start of simulation : *"Help! My child is sick!"*

When help arrives :

"We were visiting a friend – Lilly ate a piece of chocolate cake and then started looking really sick and vomiting."

"She has a nut allergy. I think she's having an anaphylactic reaction. I have her action plan and epipen here with me. Should I give the epipen now?"

If asked for further information on Lily's background :

Lily is 6 years old

Diagnosed with nut allergy at 1 year of age.

Skin prick testing with her immunologist has confirmed allergy to almonds and cashews.

She has 2 epipen juniors, 1 of which is at school.

No other medical issues or allergies.

Fully immunised and developmentally normal.

Section VI: Scenario Progression

Scenario States			
State 1 : Parent cry for help and MET response			
Patient State	Patient Status	Learner Actions	Facilitator tips:
Rhythm: NSR HR: 180 BP: 75/50 Cap refill 1s RR: 60 O₂ SAT: 94%RA T: 37.2 BSL: 5.6 AVPU = Alert, distressed	Airway: Patent, lip swelling evident Breathing: <ul style="list-style-type: none"> Noisy breathing Hoarse voice Wheeze Itchy throat Circulation: Pale, cool peripheries Disability/Exposure: <ul style="list-style-type: none"> Alert but distressed Urticarial rash over face, torso and limbs Complains of abdominal pain and nausea 	<ul style="list-style-type: none"> Listens to parent Escalates care Allocate team roles Apply monitoring Facilitate ABCDE assessment Identify anaphylaxis 	<u>Triggers to move on:</u> After 5 minutes, or when actions have been completed <u>Pause and discuss moments [optional]:</u> <ul style="list-style-type: none"> Role allocation – how did you organise your team? How to access resources – QPEC website, CREDD book
State 2 : Administration of two doses of IM adrenaline			
Patient State	Patient Status	Learner Actions	Facilitator tips:
Rhythm: NSR HR: 180 BP: 75/50 Cap refill 1s RR: 60 O₂ SAT: 94% RA 98% on NRB T: 37.2 BSL: 5.6 AVPU = Alert	Unchanged	<ul style="list-style-type: none"> Apply Oxygen Administer first dose of IM adrenaline Administer second dose of IM adrenaline Obtain IV access Administer fluid bolus Escalate care 	<u>Modifiers</u> If team does not recognise need for 2 nd IM dose of adrenaline, make this clearly necessary by increasing HR to 190 and BP to 65/40. <u>Triggers</u> 10 minutes or has given two doses of IM adrenaline <u>Pause and discuss moments:</u> <ul style="list-style-type: none"> How to escalate – local and RSQ, how we do this Drawing up adrenaline

Scenario States

State 3 : Severe Anaphylactic Shock

Patient State	Patient Status	Learner Actions	Facilitator tips:
Rhythm: NSR HR: 185 BP: 70/45 Cap refill 1s RR: 60 O₂ SAT: 94% T: 37.2 BSL: 5.6 AVPU = Voice, becoming drowsy	Airway: <ul style="list-style-type: none"> Tongue and lip swelling Stridor (new) Breathing: <ul style="list-style-type: none"> Moderate recession Wheeze ++ Circulation: Pale, cool peripheries Disability/Exposure: <ul style="list-style-type: none"> Drowsy (shocked) 	<ul style="list-style-type: none"> Continue as per anaphylaxis pathway Support airway with positioning <ul style="list-style-type: none"> Plan for potential intubation Commence adrenaline infusion Consider 2nd IV access and further fluid bolus Consider nebulised adrenaline 	Triggers <ul style="list-style-type: none"> 5 minutes or tasks done Pause and discuss moments: <ul style="list-style-type: none"> Use of CREDD book for preparing medications Optimising environment – consideration of moving bed/resus trolley

Senior advice (if called for)



It sounds like this is refractory anaphylaxis. I advise:

- Repeat 10ml/kg fluid bolus to improve BP
- Commence an adrenaline infusion with a starting dose of 0.1microgram/kg/min
- I will activate a retrieval team and call you back with estimated time of arrival

I am worried that we may need to support this patient's airway.

- Give 5mg (1mg in 1ml) of nebulised adrenaline.
- Prepare to intubate if she doesn't respond.

State 4 : Stabilisation on infusion

Patient State	Patient Status	Learner Actions	Facilitator tips:
Rhythm: 190 HR: 180 BP: 80/50 Cap refill 1s RR: 30 O₂ SAT: 95% on NRM T: 37.2 BSL: 5.6 AVPU = Voice	Airway: Stridor resolving Breathing: <ul style="list-style-type: none"> Wheeze persists Air entry improving Circulation: <ul style="list-style-type: none"> Pale and cool peripheries Looks clinically better on infusion 	<ul style="list-style-type: none"> Arrest doses of adrenaline prepared Disposition planning 	Modifiers and triggers to move to next stage and pause and discuss moments <u>Modifiers</u> <ul style="list-style-type: none"> Once adrenaline infusion commenced BP improves to 80/50 and HR decreases to 180, SaO₂ improves to 95%, wheeze and stridor resolves. Becomes more alert, responding to voice and intermittently coughing.

Optional Handover Prompt from Senior Medical Officer



Hi! Thanks for stabilising Lily.
 I'm here from to help support transfer for ongoing monitoring.
 Could I get a handover of where we're at?

End scenario

Section VII: Supporting Documents, Laboratory Results, & Multimedia

Venous Blood Gas Result : Early in Scenario (Minimal Resp Compromise)

	Results	Units	Normal Range
pH	7.45		7.32 – 7.42
pCO2	35	mmHg	41 - 51
pO2	30	mmHg	25 - 40
O2 Saturations	50	%	40 - 70
Bicarb	25	mmol/L	22 - 33
BE	0	mmol/L	-3 - +3
HCT	0.38		0.3 - 0.42
Hb	115	g/L	105 - 135
Na+	137	mmol/L	135 - 145
K+	4	mmol/L	3.2 - 4.5
Ca++ (ionised)	1.25	mmol/L	1.15 – 1.35
Glucose	5	mmol/L	3.0 – 7.8
Lactate	0.9	mmol/L	0.7 – 2.5

ascia

australian society of clinical immunology and allergy
www.allergy.org.au

ACTION PLAN FOR Anaphylaxis



Name: Lilly Date of birth: 14 / 08 / YYYY
Confirmed allergen(s): Almonds and cashews

Family/emergency contact(s):

1. Maria Mobile: 1234 567 890
2. _____ Mobile: _____

Plan prepared by: Dr Immunologist (doctor or nurse practitioner) who
authorises medications to be given, as consented by the parent/guardian, according to this plan.

Signed: _____ Date: DD / MM / YYYY
Antihistamine: Cetirizine (Zyrtec) Dose: 10mg

This plan does not expire but review is recommended by: DD / MM / YYYY

How to give adrenaline (epinephrine) injectors

EpiPen®



Form fist around
EpiPen® and **PULL
OFF BLUE SAFETY
RELEASE**



Hold leg still and
PLACE ORANGE END
against outer
mid-thigh (with or
without clothing)



PUSH DOWN HARD
until a click is heard
or felt and hold in
place for 3 seconds
REMOVE EpiPen®

EpiPen® is prescribed as follows:
EpiPen® Jr (150 mcg) for children 7.5-20kg
EpiPen® (300 mcg) for children over 20kg and adults

Anapen®



**PULL OFF BLACK
NEEDLE SHIELD**



**PULL OFF GREY
SAFETY CAP**
from red button



**PLACE NEEDLE END
FIRMLY** against outer
mid-thigh at 90° angle
(with or without
clothing)



PRESS RED BUTTON
so it clicks and hold
for 3 seconds.
REMOVE Anapen®

Anapen® is prescribed as follows:
Anapen® 150 Junior for children 7.5-20kg
Anapen® 300 for children over 20kg and adults
Anapen® 500 for children and adults over 50kg

MILD TO MODERATE ALLERGIC REACTIONS

SIGNS:

- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting - these are signs of anaphylaxis for insect allergy

Mild to moderate allergic reactions may
not always occur before anaphylaxis

ACTIONS:

- Stay with person, call for help
- Locate adrenaline injector
- Give antihistamine - see above
- Phone family/emergency contact
- Insect allergy - flick out sting if visible
- Tick allergy - seek medical help or freeze tick and let it drop off

SIGNS OF ANAPHYLAXIS (SEVERE ALLERGIC REACTIONS)

Watch for **ANY ONE** of the following signs:

- Difficult or noisy breathing
- Swelling of tongue
- Swelling or tightness in throat
- Wheeze or persistent cough
- Difficulty talking or hoarse voice
- Persistent dizziness or collapse
- Pale and floppy (young children)

ACTIONS FOR ANAPHYLAXIS

1 LAY PERSON FLAT - do NOT allow them to stand or walk

- If unconscious or pregnant, place in recovery position - on left side if pregnant
- If breathing is difficult allow them to sit with legs outstretched
- Hold young children flat, not upright



2 GIVE ADRENALINE INJECTOR

- 3 Phone ambulance - 000 (AU) or 111 (NZ)
- 4 Phone family/emergency contact
- 5 Further adrenaline may be given if no response after 5 minutes
- 6 Transfer person to hospital for at least 4 hours of observation

IF IN DOUBT GIVE ADRENALINE INJECTOR

Commence CPR at any time if person is unresponsive and not breathing normally

ALWAYS GIVE ADRENALINE INJECTOR FIRST, and then asthma reliever puffer if someone with known asthma and allergy to food, insects or medication (who may have been exposed to the allergen) has **SUDDEN BREATHING DIFFICULTY** (including wheeze, persistent cough or hoarse voice) even if there are no skin symptoms.

If adrenaline is accidentally injected, phone your local poisons information centre. Continue to follow this action plan for the person with the allergic reaction.

© ASCIA 2023 This plan is a medical document that can only be completed and signed by the patient's doctor or nurse practitioner and cannot be altered without their permission.

Section VIII: Debriefing Guide

Objectives

Educational Goal:	<ul style="list-style-type: none"> • Structured approach to anaphylaxis management • Preparing for difficult intubation in a shocked paediatric patient
Skills Rehearsal:	<ul style="list-style-type: none"> • Adrenaline prescription and administration in anaphylaxis • Equipment preparation for a difficult airway
Systems Assessment:	<ul style="list-style-type: none"> • Departmental access to clinical guidelines, prescribing resources and action plans for paediatric anaphylaxis • Smart-pump software check for adrenaline infusion

Sample Questions for Debriefing

- Can anyone outline the structured approach to managing paediatric anaphylaxis?
- Does your service use a protocol for management of anaphylaxis?
 - What resources do we need to implement that weren't accessed?
- What challenges came up when preparing and prescribing multiple adrenaline doses?
 - Do you have any drug dosing references that can help with prescribing or drawing up adrenaline?
- What airway difficulties were predicted with this patient?
 - How can we optimise management of that in your hospital?
- What was it like forming a team so quickly?
 - What strategies made the team work better together?
 - What made it harder?
 - What could you do to improve this next time?

Key Moments

- Calling for help early
- Giving IM adrenaline
- Anticipating deterioration and preparing adrenaline infusion
- Supporting airway
- Preparing for a difficult intubation
- Starting adrenaline infusion

Fill out our participant survey
to receive a training certificate

(Select Optimus BONUS as course)



Diagnostic Report of In Situ Simulation

Simulation can provide important data about unrecognised latent safety threats within your service.

This form is provided to prompt recording of any Quality and Safety / Systems issues that need escalation within your department.

It is **not** to be used as a recording of personal performance management or to violate candidates' confidentiality.

Category	Issue identified	Action recommended	Should be escalated to	Follow up date
Team				
Environment				
System				

Simulation Occurred on

Follow up date re : identified issues on

ANAPHYLAXIS in KIDS

Clinical Features :

Respiratory (one or more) :

- Difficulty /Noisy Breathing
- Swelling of Tongue
- Swelling / Tightness in Throat
- Difficulty Talking or Hoarse Voice
- Wheeze or Persistent Cough

**AND
OR**

Cardiovascular (one or more) :

- loss of consciousness
- collapse
- pallor and floppiness
- hypotension

May also involve other systems such as the skin or gastrointestinal tract.



How to prepare IM dose

1st Line : IM Adrenaline into thigh

10 microg/kg (max 0.5 mg)
which is 0.01 mL/kg of undiluted 1 : 1000
Repeat IM Adrenaline if needed



2nd Line : IV Adrenaline Infusion

If smart pump available
1 mL of 1 : 1000 in 50 mL NS 0.9%
Start at 0.1 microg/kg/min

If no smart pump available
1 mL of 1 : 1000 in 50 mL of NS 0.9%
Start at 0.3 mL/kg/hr
which is 0.1 microg/kg/min

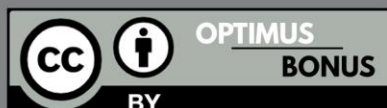


How to prepare IV infusion

For detailed management consult your guidelines :



Children's Health Qld
Clinical Guideline
on Anaphylaxis



Resources for Anaphylaxis Simulation Participants



CHQ Clinical Guideline:
Allergy & Anaphylaxis



Ascia anaphylaxis eTraining
for health professionals.



Anaphylaxis Action Plans
Provider and Parent Information



YouTube Lecture:
Anaphylaxis and Adrenaline, Dr Eve Purdy



QPEC skills sheet:
Drawing up Adrenaline

Curriculum

This package is designed for **individuals** to refresh and retain the following skills learned in previous OPTIMUS courses as well as add new knowledge on

Optimus CORE	Optimus PRIME	Optimus BONUS
<ul style="list-style-type: none"> Assess the deteriorating child Basic airway support Prepare arrest dose adrenaline Escalation of care 	<ul style="list-style-type: none"> Manage shock Team approach to intubation Adrenaline infusions 	<ul style="list-style-type: none"> Manage anaphylaxis Prepare for a difficult intubation IM and Nebulised Adrenaline

This package is designed to offer your **department** a systems level check regarding :

Access to paediatric resources on : <ul style="list-style-type: none"> Anaphylaxis Adrenaline dosing 	<input type="checkbox"/> <input type="checkbox"/>
Equipment Check : <ul style="list-style-type: none"> Adrenaline vials of different concentrations Infusion pump guardrails for paediatric adrenaline infusion Paediatric difficult airway equipment 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Departmental Protocols for : <ul style="list-style-type: none"> Anaphylaxis and Anaphylaxis Action Plans Adrenaline infusions Systems response to anticipated difficult paediatric airway 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

If you would like any assistance obtaining access or advice for any of the above issues, please contact stork@health.qld.gov.au

About the Creators :



Dr Sonia Twigg : Primary Author

@LankyTwig

FACEM, MBBS, BA, BSc

Fellow, STORK (Simulation Training Optimising Resuscitation for Kids)

Queensland Children's Hospital

Dr Sonia from STORK is an emergency physician doing subspecialty training in Paediatric Emergency Medicine and works at the Queensland Children's Hospital as a fellow in the emergency department and for the STORK simulation team.

She is part of the ALIEM faculty incubator program for 2019-2020 and facilitated the 2019 Health Workforce Queensland workshops for GPs on Paediatric Emergency Medicine. Sonia is interested in critical care, medical education and ultrasound. She is passionate about fun, creativity and innovation in education.



Dr Ben Symon : Consultant Supervisor, Infographics and Editor

@symon_ben

RACP PEM, MBBS, BAnim

Simulation Consultant and Paediatric Emergency Physician

Queensland Children's Hospital and The Prince Charles Hospital

Dr Symon is a PEM Physician and Simulation enthusiast with a passion for translating clinical and educational research to front line health care workers. He is co-producer of the podcast '[Simulcast](#)' and facilitates the Simulcast Online Journal Club, an online journal club for simulation educators throughout the world. He is faculty on the APLS Educational Skills Development Course and has recently been invited to join as international faculty for the Master Debriefing Course by [the Debriefing Academy](#). His original degree in Animation has proved surprisingly useful in his career in medical education.



Dr Carolina Ardila : eLearning and Multimedia

@caroelearning

MBBS, MPH(TH), GradDipHlthMgt

Dr Ardila is a medical doctor from Colombia with an award winning skill set in eLearning development. Carolina has been working on eLearning for the last 4 years at the Royal Brisbane and Women's Hospital and Children's Health Queensland. During these years she has developed extensive knowledge in designing, developing and implementing engaging courses and launching award winning paediatric eLearning. She has a special interest in emergency and neonatology and in her spare time loves making videos and improving her animation and drawing skills.



Ms Louise Dodson : Adrenaline Preparation Videos

BHlthSc, GradCertClinSim

Louise has been a Simulation Leader since establishing the Simulation Program for the Royal Children's Hospital in Brisbane over 10 years ago. She co-created the original OPTIMUS CORE course in 2013 to improve paediatric resuscitation training throughout Queensland.

The course has been delivered to more than 5000 health care professionals throughout Queensland since that time. Louise has a background in paediatric emergency nursing and tries to keep her left foot in clinically. She has also completed a grad cert in simulation and clinical education.

About the BONUS Project :

The OPTIMUS BONUS project is a bank of useful scenarios that are open access and available for free use. It has been designed by the Simulation Training Optimising Resuscitation for Kids team for Children's Health Queensland.

We aim to use the packages to provide :

- Spaced repetition to reinforce learning objectives from CORE and PRIME
- Connections to high quality, up to date paediatric resources for health professionals
- Quality and Safety checks for local hospitals regarding paediatric clinical guidelines, resources and equipment

The scenarios have been designed in response to :

- Paediatric coronial investigations in Queensland, Australia.
- Clinical skills issues revealed through In Situ Translational simulations in hospitals throughout Queensland.
- Quality and Safety Initiatives

About STORK

In 2014, Children's Health Queensland funded the 'Simulation Training Optimising Resuscitation for Kids' service. STORK is a paediatric education team focused on improving healthcare outcomes for children throughout the state.

STORK has developed a number of courses aimed at different phases of paediatric critical care :

- CORE is a course for first responders to a paediatric emergency, and teaches recognition of the deteriorating patient, Children's Early Warning Tools, and resuscitation competencies.
- PRIME is a course for mid phase responders who look after unwell patients while awaiting for retrieval or escalation to an Intensive Care. It aims at contextualising Seizure Management, Intubation and Inotrope Administration within host hospital's real clinical environments in order for healthcare teams to generate their own practice improvement strategies as well as link peripheral hospitals with high quality resources.
- BONUS was proposed as a solution to skill and knowledge decay after these courses are run.

If you would like to know more information about STORK or acquire copies of our resources, please contact us at stork@health.qld.gov.au .

References

1. ASCIA Action Plans, Treatment Plans and Checklists. April 2024. Available at: <https://www.allergy.org.au/hp/ascia-plans-action-and-treatment>
2. Allergy and Anaphylaxis – Emergency Management in Children. Children's Health Queensland Paediatric Emergency Guidelines. April 2024. Available at: <https://childrens.health.qld.gov.au/guideline-allergy-anaphylaxis-emergency-management-in-children/>
3. Purdy, E. (2019) Anaphylaxis and adrenaline: Eve Purdy at DFTB18, YouTube. Available at: <https://www.youtube.com/watch?v=W56fy0n-PWg> (Accessed: 03 April 2024).
4. Skills Sheet – Adrenaline in Anaphylaxis. Children's Health Queensland. Queensland Paediatric Emergency Care. September 2024. Available [Adrenaline \(epinephrine\) in Anaphylaxis \(health.qld.gov.au\)](https://www.health.qld.gov.au/adrenaline-epinephrine-in-anaphylaxis)
5. ASCIA guidelines. Acute Management of Anaphylaxis. 2020. Available at: <https://www.allergy.org.au/hp/papers/acute-management-of-anaphylaxis-guidelines>
6. Greenhawt M, Gupta R, Meadows A et al. Guiding principles for the recognition, diagnosis and management of infants with anaphylaxis: An expert panel consensus. Journal of Allergy and Clinical Immunology in Practice. 2017, 7 (4): 1148-1156.
7. Nunez J and Santillanes G. Anaphylaxis in pediatric patients; Early recognition and treatment are critical for best outcomes. Pediatric Emergency Medicine Practice. June 2019, 16 (6).
8. This Simulation Template has been adapted from the emsimcases template, available at : <https://emsimcases.com/template/>