

CHQ Optimus Courses

Faculty Guide and Downloadable Resources

Last reviewed: 10/2023



Optimus

CORE PRIME PULSE BONUS TRAUMA TEAM

CHQ Optimus Courses: Faculty Guide and Resources

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What is OPTIMUS?

OPTIMUS is a suite of courses designed to create a complete paediatric life support training package.

It has been developed to address Queensland's training needs in paediatric critical care in line with the recommendations of NSQHS Standard - Recognising and responding to acute deterioration.

- **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 retrieval or escalation to an Intensive Care setting. It aims at contextualising seizure management, endotracheal intubation and inotrope administration.
- **PULSE** is a CPR refresher designed around the principles of Rapid Cycle Deliberate Practice
- **BONUS** is a standalone simulation with supportive educational material. It is one solution to skill and knowledge decay after courses are run.
- **TRAUMA** is a course on paediatric trauma currently run primarily at Queensland Children's Hospital by STORK staff.
- **TEAM** is a course on teamwork currently run primarily at Queensland Children's Hospital by STORK staff.

The Optimus Curriculum is a spiral curriculum where the learning objectives for effective paediatric resuscitation are taught throughout our courses while providing opportunities for spaced practice, clinical contextualisation and quality improvement moments.

Who is 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.

If you would like to know more information about STORK please contact us at stork@health.qld.gov.au.

Using the Faculty Guide and Resources

In the following pages you will find an overview of each Optimus course and links to the faculty resources needed to deliver each one. These resources are offered open access but attribution is required when using them outside of their original context.

The PowerPoint slides for Optimus CORE are only for use within CORE and not for use or adaptation in other contexts, due to the specifics of the parental consent involved in the patient story featured.

CHQ STORK Statewide Simulation Service: FOREWORD by A/Prof Jason Acworth

The Children's Health Queensland STORK (Simulation Training Optimising Resuscitation for Kids) Statewide Simulation Service oversees and drives paediatric critical care and resuscitation education through simulation and other contemporary educational techniques. STORK aims to establish a Centre of Excellence in Paediatric Emergency and Resuscitation Education and in doing so, improve the care of children with serious illness/injury or unexpected deterioration throughout the state.

In its first year of operation in 2014, STORK concentrated on providing the Recognition and Management of the Deteriorating Paediatric Patient (RMDPP) first responder course across the state. This was based on a Training Needs Analysis conducted with Hospital and Health Service Executive and staff.

In the years since, STORK has continued to enhance and expand its curriculum through establishment of its OPTIMUS (Optimising Paediatric Training in Medicine Using Simulation) program, including CORE, PRIME, PULSE, BONUS, TRAUMA and TEAM.

STORK continues to develop high quality contemporary on-line learning resources and skills videos to support their face-to-face curriculum.

- Our face-to-face courses have reached over 10,000 learners in 59 hospitals across each of our 16 Hospital and Health Services. Our online learning programs are utilised by > 5000 learners each year and our skills videos have been viewed >35,000 times.
- Within QCH, our service is closely integrated with the Emergency, Intensive Care and Anaesthetic services as well as the hospital's Rapid Response Service and Patient Safety & Quality Service. STORK continues to support a range of regular simulation education activities in these critical care areas.

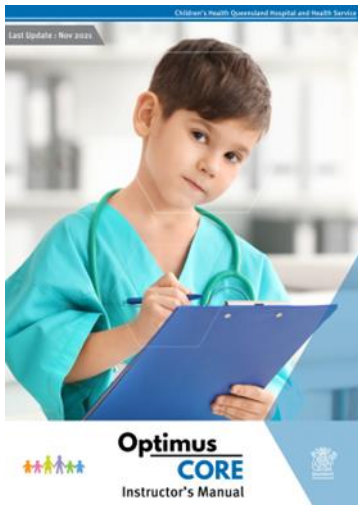
We commit to the provision of continually improving high quality services to children and young people in our service and across the state. The STORK Curriculum Overview 2021 has been prepared in response to questions from educators, administrators, and clinicians across the state regarding our courses.



A/Prof Jason Acworth
Director, STORK Statewide Simulation Service
Medical Lead, QCH Rapid Response System
Paediatric Representative, Australian Resuscitation Council
Member, ILCOR Paediatric Life Support Task Force
National Chair, APLS Australia

Optimus CORE

Faculty Resources



Instructor's manual:

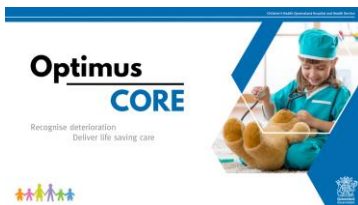
- PDF version ([click to download](#))
- Online version ([click to visit](#))

It contains:

- Demonstration videos of all stations
- Printable resources for use on the course

Course completion certificates

- ([Click to download](#))
- Regional educators please contact STORK for the password to edit



PowerPoint Slides:

- ([click to download](#))

Please do not use the video or case within this slide set in any other context.

Clinical Observation and Responding to Emergencies

CORE is a foundational course for paediatric health care staff with an emphasis on:

- Recognition of the deteriorating paediatric patient
- Orientation to local Medical Emergency Response Teams
- Paediatric basic and advanced life support skills

The course includes a formal BLS assessment. This allows CORE to provide your local paediatric BLS and paediatric ALS certification while also incorporating the Children's Early Warning Tool and introductory paediatric clinical knowledge.

CORE is the foundation of our spiral curriculum and is best suited to those new to paediatric practice or staff who want a refresher on basic life support skills they use infrequently within their setting. For staff with a solid grounding in paediatric life support skills who only want a rapid PBLIS & PALS refresher, we recommend [Optimus PULSE](#).

Learning Objectives:

CORE can assist your health facility fulfil the requirements of the [National Safety and Quality Health Service Standards](#), particularly Recognition and Responding to Acute Deterioration and Clinical Handover.

- Early recognition, management and escalation of care for the deteriorating child
- Basic & advanced life support
- Paediatric airway management
- Paediatric circulation management
- Teamwork and Human Factors

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PRIME

Faculty Resources



Instructor's manual:

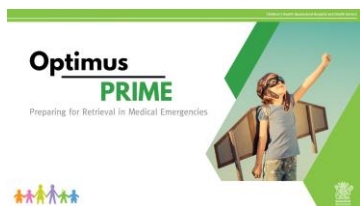
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PowerPoint Slides:

- ([click to download](#))

Preparing for Retrievals in Medical Emergencies

PRIME is a course aimed at responders who will be called upon to resuscitate any unwell child pending the arrival of a Paediatric Intensive Care Unit or retrieval team.

Educational Goals:

PRIME builds upon the foundations of [CORE](#) to cover:

- Advanced airway management
- Mechanical ventilation
- Inotrope preparation
- Status epilepticus management
- The role of communication and human factors in paediatric resuscitation

Quality and Safety Goals:

This updated version of PRIME aims to support a hospital's ability to identify latent safety strengths, threats and opportunities for performance improvement through the framework of 'Self, Team, Environment and System'.

The course is designed to utilise the conversations and simulations throughout the day to uncover actionable systems concerns and identify pathways for escalation and empower teams to embed a culture of continuous performance improvement within their service.

After PRIME courses that have been delivered by STORK staff, hospitals will be provided with a report identifying strengths and latent safety threats identified within the service.

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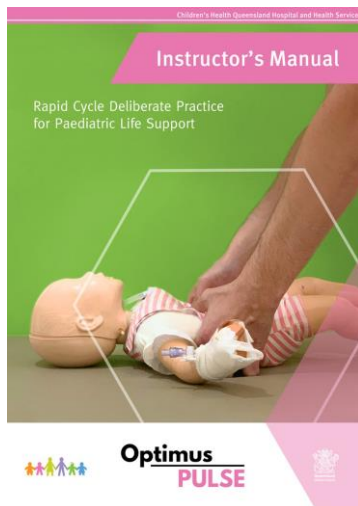
PULSE

A CPR refresher course for CORE graduates

What is Optimus PULSE?

- PULSE is a focussed session to **maintain** Paediatric Life Support recency and competency.
- By the end of the session the participants will engage as a high functioning team in the provision of cardio-pulmonary resuscitation, following the paediatric cardiac arrest algorithm.
- PULSE utilises an innovative educational technique called Rapid Cycle Deliberate Practice to ensure participants receive paediatric life support training utilising evidence based educational strategies for maximum long-term benefit.
- Rather than engaging in single pass or fail assessment, participants participate in multiple cycles of CPR performance of increasing complexity. In moments of suboptimal performance, participants are interrupted and coached until a high level of independent performance has been achieved.

Faculty Resources



Instructor's manual:

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- Online version ([click to visit](#))

It contains:

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- Printable resources for use on the course

Course completion certificates

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Learning Objectives:

- Perform high-quality team-based CPR.
- Effectively perform key steps of paediatric immediate life support in a timely, sequential manner.
- Communicate effectively as a team leader and team member during resuscitation of a paediatric patient with a shockable or non-shockable rhythm.
- Demonstrate key team communication skills such as sharing mental models, closed loop communication, and clear role definition to provide rapid, coordinated action.

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BONUS

Faculty Resources



All simulation packages are available online.

[Click the link to visit the BONUS website](#)

Bank Of iNdependently Useful Scenarios

Courses are great to learn new ideas, but our knowledge and skills start decaying rapidly afterwards.

- BONUS packages are individual simulation packs designed to be run by local educators.
- They provide staff with opportunities to refresh concepts and skills from CORE, PRIME and PULSE.
- Newer simulation packs also introduce additional content or orientate staff to new resources and pathways from Children's Health Queensland.
- Staff who complete the feedback survey receive a completion certificate for Professional Development purposes.

Packs include:

- Status Epilepticus
- Head Injuries
- SVT
- CPR Refresher
- Post Arrest Cares
- Febrile Neutropenia
- Asthma
- Bronchiolitis
- Diabetic Ketoacidosis
- Anaphylaxis

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TRAUMA

Faculty Resources



Trauma is currently primarily delivered in house at Queensland Children's Hospital.

Please contact your region's STORK simulation coordinator for a copy of the trauma manual and PowerPoint slides.

What is Optimus TRAUMA?

TRAUMA is a course aimed at healthcare teams who will be called upon to contribute to a trauma related paediatric resuscitation with a particular focus on the initial assessment & management in emergency prior to definitive care.

TRAUMA is currently only offered on a very limited basis outside of Queensland Children's Hospital. Places at QCH are available for external staff. Please book via iLearn.

Educational Goals:

TRAUMA builds upon the foundations of [Optimus CORE](#), [PRIME](#) and TEAM to cover:

- Zero point, primary and secondary surveys.
- Airway and Breathing assessment including rehearsal of surgical airways and pleural decompression.
- Circulatory assessment and management of shock including activation and facilitation of a Massive Haemorrhage Protocol.
- Structured approach to neuroprotection in children, including use of the Qld Paediatric Neuroprotection Checklist.

Faculty:

- Optimus TRAUMA has a large amount of equipment, moulage and multiprofessional faculty requirements and we recommend delivering the course in a hospital with suitable trauma equipment and resources.
- Some of the modules contained within the manual may be helpful to use for individual training sessions.
- Doctors and Nurses confident in teaching about trauma principles in paediatrics are required.

Participants:

- All health staff who might attend a paediatric emergency involving traumatic injury.

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TEAM

What is Optimus TEAM?

TEAM is a course aimed at healthcare teams who look after children.

TEAM is currently only offered by STORK staff and is only offered on a very limited basis outside of Queensland Children's Hospital. Places at QCH are available for external staff. Please book via iLearn.

Educational Goals:

TEAM covers:

- Crisis Resource Management Principles
- Understanding Team Affect, Behaviour and Cognition
- Utilising a Team Brief Checklist
- Strategies to generate psychological safety in ad hoc teams
- Effective adaptation of voice, posture and content of our speech during a resuscitation
- Closed loop communication
- Role allocation and role transactions