Multi-incident Analysis of Paediatric Clinical Incidents - Turning Local Reviews into Statewide Learnings

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Background

An adverse clinical event is an unexpected event during health care that causes or may cause harm to the patient. Within Queensland Health (QH), these incidents are categorised using a Severity Assessment Code (SAC) with the most serious (those resulting in death or permanent harm) classified as SAC 1. When a SAC 1 incident occurs, the Hospital and Health Service (HHS) undertakes a clinical incident review to identify contributing factors and to make local recommendations to prevent re-occurrence. These learnings are rarely shared beyond that HHS.
Multi-incident analysis examines groups of clinical incident reviews to identify common themes, contributing factors and learnings; and to translate these into system-wide improvements.[2]

Aim

To identify factors that contribute to death/permanent harm in children and opportunities for prevention across Queensland.

Methodology

The QPQC conducted retrospective multi-incident analyses of SAC 1 clinical incident reports involving children under 18 years in Queensland between 2012 and 2017. An Ethics Waiver was approved by the Children's Health Queensland Health Research Ethics Committee. A multi-incident analysis tool was developed to identify demographic, patient, facility, incident, human and system factors associated with the event. This tool was adapted from unpublished documents from the QH Patient Safety and Quality Improvement Service, New South Wales Clinical Excellence Commission and best practice literature and was refined over time. Reviews are undertaken by a multidisciplinary expert panel with state-wide representation and expertise in child health, paediatrics, paediatric specialties, nursing, patient safety and human/system factors.

Multi-incident Review Process

2012-2017 SAC 1 clinical incidents identified from the Queensland Health electronic incident reporting system (RiskMan) (n=179)

Out of Scope (N=81)

- 37 Birth Events
- 27 Mental Health Incidents
- 1 Non QH Investigation
- 8 SAC level downgrades
- 3 Non-Hospital Incidents
- 3 Statutory Authority Reviews
- 2 Duplicates

Cases for Review (N= 98)

Clinical incident and coronial reports requested from HHS and Coroner respectively

Incident reports reviewed by two panel members (individually and then jointly) using multi incident analysis tool. Incident reviews are then presented to the broader panel for discussion/consensus.

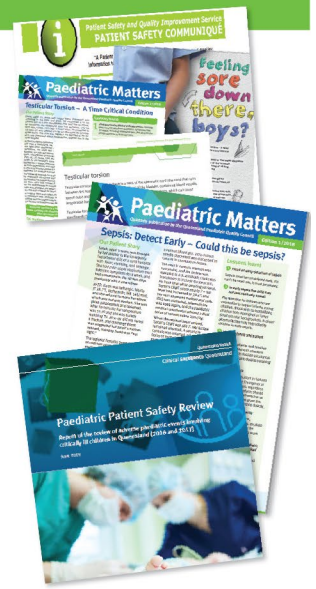
Clusters of similar events were re-presented at themed panel meetings with invited subject matter experts. Requests were made for SAC 1 incidents outside project timeframes or for incidents involving temporary patient harm (SAC 2) if required.

Profile of Serious Paediatric Clinical Incidents 2012-2017 (N= 98):

Gender	**51% Males / 49% Female**
Patient Outcome	**61% Likely Permanent Harm / 39% Death**
Age	**53% Children 0-4 yrs*** *2 times higher than Queensland population estimates (27%) [3]
Indigenous Status	**18% identified as Aboriginal and/or Torres Strait Islander persons*** * 2 times higher than Queensland population estimates (8%) [4]
Accessibility/Remoteness Index of Australia (ARIA) [5]	**38% in Outer Regional, Remote and Very Remote Queensland** * 2 times higher than Queensland population estimates (18%) [6]

Statewide Themes, Learnings and Resources:

Statewide themes	Learnings identified	QPQC Quality Improvement Resources/Activities
Testicular Torsion 12 incidents (2010-2017)	5 lessons learnt	*Paediatric Matters* newsletter Patient Safety Communique Fact Sheet: Clinicians/Families Education poster for families/boys/schools
Sepsis 28 Incidents (2012–2017)	6 lessons learnt	*Paediatric Matters* newsletter Input into Queensland Statewide Paediatric Pathway Project education tools Publication under development
Cast +/-Splints 5 SAC 1 + 24 SAC 2 (June 2014 – April 2019)	5 lessons learnt	*Paediatric Matters* newsletter Promoting resources and pathways for access to specialist advice
Retrieval of Critically Ill Children / 8 incidents (2012–2014)	5 priorities identified	Findings informed recommendations of QH Paediatric Patient Safety Review (PPSR) Report [7]
All themes		Targeted presentations to clinicians Ongoing Stakeholder Collaborations



Conclusion

Multi-incident analysis of clinical incident reports using a structured data tool and modified Delphi process provided a robust methodology for identifying system-wide themes and learnings. Strategies integral to success include action partnerships with subject-matter experts; and having broad clinical expertise and state-wide representation on the expert panel.

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For more information contact the Queensland Paediatric Quality Council at qpqc@health.qld.gov.au

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