



## Patient Safety and Quality Improvement Service PATIENT SAFETY COMMUNIQUÉ

“A Patient Safety Communiqué disseminates safety and quality information to ensure lessons learned are shared across hospital and health services”

### Distributed to:

- Hospital and Health Service Chief Executives
- Chief Health Officer
- Royal Australasian College of Surgeons
- Queensland Child and Youth Clinical Network
- Rural and Remote Clinical Network

### We recommend you also inform:

- Executive Directors of Medical Services
- Executive Directors of Nursing and Midwifery
- Directors of Paediatrics
- Directors of Emergency Departments
- Directors of Surgery
- Directors of Radiology Departments
- Directors of Anaesthesia
- Safety and Quality staff

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### For Internal Use Only

<b>Subject:</b>	Testicular Torsion
<b>Issued by:</b>	Patient Safety and Quality Improvement Service (PSQIS) & Queensland Paediatric Quality Council (QPQC)
<b>Issue Date:</b>	18 April 2017
<b>Approved by:</b>	Kirstine Sketcher-Baker, Executive Director, Patient Safety and Quality Improvement Service
	<b>Signature:</b> SIGNED Dr Julie McEniery, Chair, Queensland Paediatric Quality Council
	<b>Signature:</b> SIGNED

### Purpose

The purpose of this Patient Safety Communiqué is to:

- 1) notify Hospital and Health Services (HHSs) of a review conducted by the QPQC into eight SAC 1 paediatric testicular torsion incidents that occurred between 2010-2015.
- 2) share state-wide lessons learnt from an examination of Root Cause Analyses (RCAs) undertaken by local HHSs in relation to these incidents.
- 3) recommend actions be taken by HHSs to reduce the likelihood of permanent harm.

### Background

Testicular torsion is a surgical emergency. Prompt diagnosis and surgical intervention are essential as testis viability can diminish considerably, six hours after symptoms commence.

The QPQC and PSQIS recently identified a cluster of eight SAC 1 paediatric testicular torsion incidents that occurred across Queensland between 2010 and 2015. The majority of these cases involved boys between 11 and 15 years of age.

The QPQC reviewed RCAs in response to these incidents, with a focus on identifying ways to reduce the likelihood of preventable patient harm. The key lessons learnt from this review include:

**Lesson Learnt 1:** The symptoms of testicular torsion can be vague, including abdominal pain. Not all torsion of the testis presents as testicular pain. Boys may not wish to have the area examined and may not disclose testicular symptoms. The scrotum needs to be examined as part of any abdominal examination and re-examined if patient symptoms deteriorate.

**Lesson Learnt 2:** In male paediatric patients presenting with abdominal pain and or scrotal pain/swelling, the diagnosis of testicular torsion must be



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considered. Given the time-critical nature of this condition, a process to actively exclude torsion must be followed, including scrotal examination and urgent consultation with the local urology or surgical team if suspected.

**Lesson Learnt 3:** Ultrasound imaging of paediatric patients with scrotal pain swelling is generally **NOT** indicated. Despite high resolution scanners and an experienced operator, there is still an unacceptable false negative rate (as was evidenced in the current review) and therefore is not reliable. It can also lead to unnecessary delays in diagnosis and surgery. Ultrasound should only be undertaken on request from a consultant surgeon.

**Lesson Learnt 4:** Pre-pubescent boys (8-12 years) and post pubertal boys (over 12 years of age) presenting with acute scrotum do **NOT** require treatment at a paediatric facility unless there are paediatric specific concerns. The local general surgical or urology team should be the first point of contact, particularly if transfer would result in time-critical delays in surgery and a detrimental outcome for the patient. This is reinforced in the Position Paper, “Surgery in Children” published by the Royal Australasian College of Surgeons. [http://www.surgeons.org/media/24156592/2016-03-23\\_pos\\_fes-pst-055\\_surgery\\_in\\_children.pdf](http://www.surgeons.org/media/24156592/2016-03-23_pos_fes-pst-055_surgery_in_children.pdf)

**Lesson Learnt 5:** Testicular torsion can be misdiagnosed as epididymo-orchitis, leading to time critical delays in diagnosis and surgical intervention. Epididymo-orchitis is rare in children who are older than three years of age until they are sexually active. Excluding testicular torsion should always be given priority for children in this age group.

### Recommendations

#### It is recommended that Hospital and Health Services:

1. Distribute this communiqué widely to all relevant clinical staff.
2. Note the key lessons learnt from the state-wide review.
3. Develop and implement local guidelines on the management of paediatric scrotal pain and swelling/abdominal pain, incorporating the lessons learnt.

### Useful Resources

Children’s Health Queensland Hospital and Health Service (2014). Abdominal Pain: Emergency Management in Children. [http://qheps.health.qld.gov.au/childrenshealth/resources/guidelines/Guide\\_00704.pdf](http://qheps.health.qld.gov.au/childrenshealth/resources/guidelines/Guide_00704.pdf)

Royal Children's Hospital in Melbourne (2013) Clinical Practice Guidelines: Acute Scrotal Pain or Swelling. [http://www.rch.org.au/clinicalguide/guideline\\_index/Acute\\_scrotal\\_pain\\_or\\_swelling/](http://www.rch.org.au/clinicalguide/guideline_index/Acute_scrotal_pain_or_swelling/)

### Acknowledgments

Barbosa, João Arthur Brunhara Alves, Francisco Tibor Denes, and Hiep T. Nguyen. “Testicular Torsion—Can We Improve the Management of Acute Scrotum?” *The Journal of Urology*. 195.6 (2016): 1650-1651.

Mäkelä E, Lahdes-Vasama T, Rajakorpi H, Wikström S. *A 19-year review of paediatric patients with acute scrotum*. *Scandinavian Journal of Surgery*. 2007;96(1):62–6.

Mushtaq I, Fung M, Glasson MJ. *Retrospective review of paediatric patients with acute scrotum*. *ANZ Journal of Surgery*. 2003 Jan;73(1-2):55–8.

Nussbaum Blask AR, Bulas D, Shalaby-Rana E, Rushton G, Shao C, Majd M. *Color Doppler sonography and scintigraphy of the testis: a prospective, comparative analysis in children with acute scrotal pain*. *Pediatric Emergency Care*. 2002 Apr;18(2):67–71.

Royal Australasian College of Surgeons. (2016) “*Position Paper: Surgery in Children.*”

The Patient Safety and Quality Improvement Service and Queensland Paediatric Quality Council wish to acknowledge the endorsement from the Royal Australasian College of Surgeons (RACS), in that the lessons learnt are aligned with the principles of the RACS Position Paper, March 2016.