

Paediatric Surgery Model for Designated Area Paediatric Surgical Sites

NSW Surgical Services Taskforce Paediatric Surgery Sub Group (October 2008)

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Introduction

Access to non-tertiary paediatric surgical services at non-specialist Paediatric facilities is essential in providing timely treatment for paediatric patients. Over the last 4 years there has been a decline in the provision of emergency paediatric surgical services outside the three Paediatric tertiary centres. This is particularly evident in the 12 to 16 year age group.

The aim of this service model is to encourage and support hospitals to undertake appropriate non-tertiary emergency surgical cases such as appendicectomy, minor fractures, repair of lacerations and minor urology procedures, particularly in the ≥ 12 year age group (or 70kgs), without the need to transfer to a specialist paediatric facility. The model promotes tiered networks within Area Health Services (AHS) with an appropriate escalation to a tertiary paediatric hospital as required.

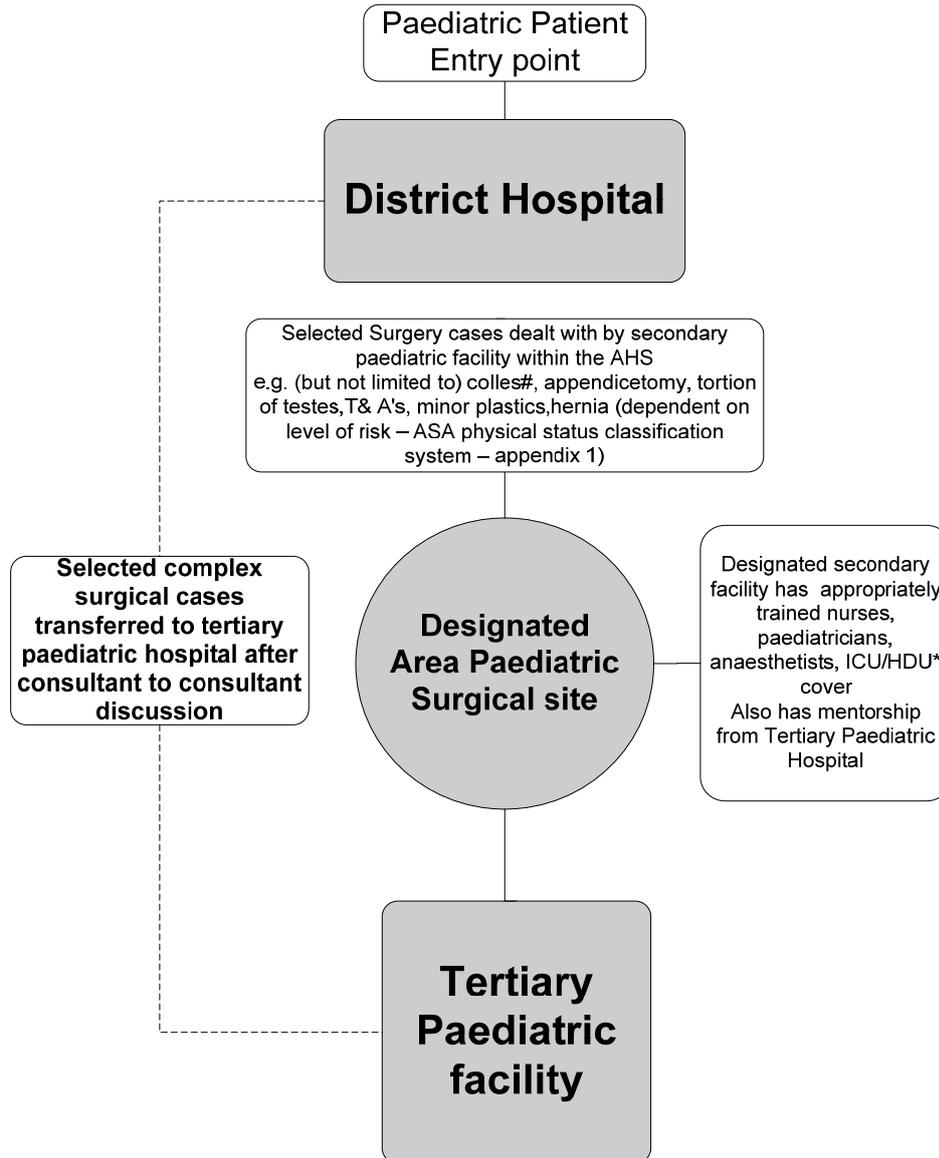
Current evidence suggests that rural facilities are significantly more self sufficient in the provision of general paediatric surgery. For this reason, whilst the model is for consideration across NSW, it is of particular emphasis that metropolitan hospitals act to remedy the current access issues by implementing this model. Implementation of this model will not preclude facilities and or service providers accessing support from tertiary paediatric centres as required. The Child Health Network structures support the facilitation of this supportive function of the children's hospitals.

The Guidelines for the Hospitalisation of Children (July 1998) outline the requirements for Paediatric surgery requiring overnight stay: 'Appropriate elective & emergency paediatric surgery should be undertaken locally where possible'. This will be facilitated through support provided by the three tertiary paediatric hospitals, and will include a range of clinical support activities including mentorship, education and participation in quality and safety programs as requested.

Where it is considered likely that that a child will require intensive care post operatively, planning should aim for that child to have their surgery in a tertiary paediatric facility, where paediatric intensive care can be provided appropriately without the need to transport an unstable post operative child. For children who are unstable or critically ill, the NSW neonatal and paediatric Emergency Transport Service (NETS) provides a consultation service, clinical teleconference up with relevant specialties, and retrieval service.

This paediatric surgical model is particularly relevant to hospitals in the metropolitan area and applies to paediatric patients between 12 and 16 years, or paediatric patients weighing > 70 kg. Hospitals in NSW are required to provide services in accordance with relevant delineation for paediatric surgery, the model is **not** designed to limit current local surgical activity in children less than 12 years of age.

Overview of the Model



- This model is relevant for paediatric patients in the 12 to 16 years age group. The model does not preclude paediatric patients outside this age group if surgery is appropriate for the hospital's role delineation and Level of Risk – Children (Appendix 1). For clinical support and assistance the appropriate Tertiary Paediatric Hospital should be consulted.
- There is an expectation that paediatric patients who can be treated at a designated Area paediatric surgical site within an AHS should be transferred* there in the first instance.

Aims for Non-Tertiary Paediatric Hospitals

- Encourage local surgical services to undertake common elective & emergency surgical cases, particularly in the 12 to 16 years age group, within role delineation.
- Strengthen the partnership with their networked paediatric tertiary hospital

* Where it is considered likely that a child will require intensive care post operatively, planning should aim for that child to have their surgery in a tertiary paediatric facility, where paediatric intensive care can be provided appropriately.

Service Requirements for Non Tertiary Paediatric Hospitals

- Access to Anaesthetists and Surgeons with paediatric experience
- Access to appropriately trained paediatric staff – nursing & medical
- Access to appropriate radiology & pathology services
- Designated and staffed paediatric beds and recovery area
- Appropriate accommodation for parents and carers
- Availability of appropriate paediatric equipment
 - Resuscitation/defibrillation equipment
 - Instrumentation
 - Infusion equipment
 - Pulse oximetry

Protocol for the transfer of paediatric patients to a NSW tertiary paediatric hospital

Paediatric patients should be transferred to a NSW tertiary paediatric hospital based on the appropriate Child Health Network (Western Child Health Network, Greater Eastern & Southern Child Health Network & Northern Child Health Network) for their facility. *The Principles for Transfer of Paediatric Patients for Non-Tertiary Surgical Services* are attached in Appendix 2.

NSW Child Health Networks – basis of mentorship program

Networking clearly links local paediatric services with a NSW tertiary paediatric hospital. The quality of care available locally is improved through the support available from the tertiary hospital in terms of specialist clinical outreach services, shared treatment protocols and guidelines, staff rotation between services, professional training and development opportunities, support in times of peak demand and smoother transfer and referral of patients between services.

The process of paediatric networking extends beyond developing links between hospitals and must include GPs, private paediatricians and allied health service providers, community health and primary care services, early childhood services and other agencies with a responsibility for children's health and welfare.

The Child Health Networks support facilities that manage children. Accordingly, the Networks have an active role to play in with facilities providing paediatric surgery beyond children's hospitals, particularly in regards to facilitation of:

- Education for a range of staff;
- Clinical mentorship;
- Quality and safety;
- Outreach clinics;
- Facilitation of transfer through agreed protocols both within the networks, and between tertiary facilities.

Definitions

Term	Definition
Designated Area Paediatric Surgical Site	A facility that already has a paediatric unit providing a moderate volume of elective surgical paediatric services.
Tertiary Paediatric Facility	One of the three Children's Hospitals; the dedicated paediatric hospital providing only paediatric services, including trauma, ICU & HDU
Selected Surgical Cases	Surgical procedures that can be routinely dealt with by appropriately trained medical & nursing staff in a non tertiary paediatric (i.e. designated area paediatric surgical site)
Appropriately trained staff	Staff who are trained to deal with the appropriate age groups and their physical, medical & psychosocial requirements.
Appropriately trained nurse	Meets the criteria of a "competent paediatric nurse" as defined in the <i>Guidelines for the Hospitalisation of Children (1998)</i>
Mentorship from the Children's Hospitals	Timely advice regarding surgical management or the need for the transfer to a tertiary paediatric hospital. Provide supplementary training, as requested and negotiated.

NSW Health References/Further Reading

- Guidelines for the Hospitalisation of Children (1998)
- Guidelines for Networking of Paediatric Services in NSW (2002)
- Guide to the Role Delineation of Health Services Third Edition (2002)

Appendix 1 – (From Guide to Role Delineation of Health Services)

**Levels of Risk – Children
The ASA Physical Status Classification**

ASA 1	Healthy Child
ASA 2	Child with mild systemic disease – no functional limitation
ASA 3	Child with severe systemic disease – definite functional limitation
ASA 4	Child with severe systemic disease – that is a constant threat to life
ASA 5	Moribund child not expected to survive 24 hours with or without an operation

Indicative list of Paediatric Surgical Procedures – General Surgery

Minor Surgical Procedures

- Suture of laceration
- Excision of skin lesion
- Drainage of abscess
- Circumcision (ie any operation which in competent hands takes less than half an hour)

Common and Intermediate Surgical Procedures

- Pyloromyotomy
- Herniotomy after the first year of life
- Orchidopexy after the first year of life
- Appendicetomy

Appendix 2

Principles for Transfer of Paediatric Patients for Non-Tertiary Surgical Services

- In the first instance every effort will be made to ensure that children requiring non-tertiary services, including surgery, are managed as close to home as possible, wherever possible and that the need for inter-hospital transfer is minimised.
- The decision to seek consultation or to transfer a child or infant to a tertiary children's hospital for non-tertiary care will be made on the basis of individual clinical need and, where appropriate local needs and resources.
- The child/infant will be adequately assessed by a senior medical officer and stabilised prior to transfer.
- The requirement for an escort for the inter-hospital transfer is determined by the clinical condition of the child and in consultation between senior Medical Officers of the transferring and destination hospitals. The escort will be an appropriately trained health care professional competent in managing specific paediatric clinical problems that may occur during transport.
- The parent/carer (and the child where appropriate) will be informed of the need for inter-hospital transfer, provided with appropriate information, supported prior to initiation of transfer and consent obtained.
- All necessary documentation is provided by the referring hospital, accompanies the patient and is received by the destination hospital clinicians including copies of the medical record, imaging reports, pathology results etc.
- Responsibility for the patient remains with the transferring physician/hospital until the child reaches the final destination, or care is transferred to NETS in accordance with hand-over protocol.
- Each inter-hospital transfer is planned and undertaken to ensure that child or infant is transported in a safe, smooth and efficient manner, with the least interference to patient care and family and staff relationships.
- All equipment used during transfers, including intravenous pumps, must be stored in a safe and secure manner to prevent any injury occurring to the infant or child during transfer.
- Paediatric patients will only be admitted for non-tertiary paediatric surgery to hospitals with the appropriate role delineation to manage their paediatric medical and/or surgical needs.
- Back-transfers of children and infants to a facility as close to home as possible will occur as soon as it is safe and practicable to arrange same. Back-transfers require appropriate medical authorisation and notification of parent/carer of readiness to be transferred to another level of care closer to home as well as the potential risks associated with transferring or not transferring the child.
- Healthcare professionals and hospitals are accountable for working together in a collaborative manner to ensure effective networking of care for transfers as required.
- Each inter-hospital transfer for paediatric non-tertiary surgery will be documented with Area Health Services having a process in place to monitor and evaluate the appropriateness of such inter-hospital transfers for children and infants.

Adapted from WCHN Draft Paediatric Inter-Hospital Transfer Guidelines, 2008