3 ARRIVAL AT THE HOSPITAL

Before the admission to hospital that resulted in surgery, 331/853 (38.8%) patients sought medical advice. This was most commonly from another hospital (97/331; 29.3%), with 80 patients subsequently transferred to the hospital where the surgery was carried out. Advice was also frequently sought from general practitioners (94/331; 28.4%). There were 68/331 (20.5%) patients who had had a previous presentation to this hospital for the same condition (including a previous emergency department attendance, outpatient department appointment or admission). Where there had been a previous presentation, this was part of the normal pathway of care for this condition for 44/68 patients, and there was a delay in treatment for 12/68 patients. The reviewers considered that there was a delay in arrival at the admitting hospital for 53/772 (6.9%) patients. The most common mode of admission for patients who had a delay in arrival was self-referral (36) followed by GP referral (6) and hospital transfer (6).

Self-referral to the emergency department of the hospital in which the procedure was undertaken (556/813; 68.4%) was the most common mode of admission (T3.1).

Table 3.1 Mode of admission	Number of patients	%
Self-referral (via the emergency department)	556	68.4
Transfer from another hospital	100	12.3
GP referral	67	8.2
Via a specialist clinic	27	3.3
111 referral	15	1.8
Via an urgent treatment centre	14	1.6
Other	34	4.2
Subtotal	**813**	
Unable to answer	40	
Total	**853**	

Reviewer assessment form data

Inter-hospital transfer

All surgical services for children should aim to work within regional networks involving local and regional services. Children presenting with common emergency surgical conditions should, ideally, be treated locally and not transferred to specialist centres, unless this is necessary for safe treatment. Good communication between 'hubs and spokes' of care is essential.[8] Furthermore, it has been documented that the increased centralisation of elective surgical services for young children has reduced the proportion of staff who are confident in the emergency management of critically ill or injured children.[9]

There were 19/143 (13.3%) hospitals not part of a network of care for non-elective procedures in children and young people. Most hospitals reported transferring patients out for surgery (133/143; 93.0%). Data from the clinician survey showed that 313/564 (55.5%) clinicians transferred patients depending on hospital expertise. Fewer anaesthetists than surgeons stated that they would transfer children requiring emergency surgery due to age (140/257; 54.5% vs 157/272; 57.7%) (T3.2).

Table 3.2 Children who require emergency procedures are transferred to another hospital because of their age	Surgeon		Anaesthetist		Medicine	
	Number of respondents	%	Number of respondents	%	Number of respondents	%
Yes	157	57.7	140	54.5	16	72.7
No	115	42.3	117	45.5	6	27.3
Subtotal	**272**		**257**		**22**	
Not answered	6		6		0	
Total	**278**		**263**		**22**	

Clinician survey data

As the reported hospital specialisation increased, the number of survey respondents willing to transfer children who required emergency procedures decreased (T3.3).

Table 3.3 Children who require emergency procedures are transferred to another hospital because of their age	A standalone tertiary paediatric centre		A tertiary paediatric centre in a trust/health board that also treats adults		A university teaching hospital in a trust/health board that delivers surgical care to children		A district general hospital that delivers surgical care to children	
	n	%	n	%	n	%	n	%
Yes	1	1.9	8	7.8	92	50.8	221	87.4
No	53	98.1	94	92.2	88	49.2	32	12.6
Subtotal	**54**		**102**		**180**		**253**	
Not answered	0		0		3		8	
Total	**54**		**102**		**183**		**261**	

Clinician survey data. Answers may be multiple by hospital type; n=number of responses

Existing standards state that hospitals without a suitable paediatric or neonatal intensive care bed should obtain the advice of the local paediatric intensive care unit (PICU) transport team as soon as possible during the management of sick or critically injured children or young people. Specialist tertiary paediatric centres with PICU facilities should provide clinical advice and help in locating a suitable PICU bed once a referral has been made. The management of children and young people requiring transfer should have input from all clinicians involved in their care.[9,10]

Respondents to the clinician survey who worked outside of tertiary paediatric centres were asked about the levels of support they received from those centres. Anaesthetists reported feeling more supported than surgeons in the acceptance of referrals (123/135; 91.1% vs 126/153; 82.4%) (T3.4). However, this meant that 8.9% and 17.6% of anaesthetists and surgeons did not feel supported.

Similar proportions of support from the tertiary centre was found regarding the provision of advice (surgeons: 137/161; 85.1% vs. anaesthetists: 141/155; 91.0%) (T3.5). The most common reasons for not feeling supported were a lack of clear referral pathway and lack of beds in the receiving centre.

Table 3.4 Clinicians working outside tertiary paediatric centres felt supported by their local paediatric centre in the acceptance of referrals	Surgeon		Anaesthetist		Physician	
	Number of respondents	%	Number of respondents	%	Number of respondents	%
Yes	126	82.4	123	91.1	12	75.0
No	27	17.6	12	8.9	4	25.0
Subtotal	**153**		**135**		**16**	
Unknown	20		45		0	
Not applicable - consultant	8		7		1	
Not answered	97		76		5	
Total	**278**		**263**		**22**	

Clinician survey data

Table 3.5 Clinicians working outside tertiary paediatric centres felt supported by their local paediatric centre to provide advice	Surgeon		Anaesthetist		Physician	
	Number of respondents	%	Number of respondents	%	Number of respondents	%
Yes	137	85.1	141	91.0	13	76.5
No	24	14.9	14	9.0	4	23.5
Subtotal	**161**		**155**		**17**	
Unknown	20		32		0	
Not applicable	95		75		5	
Not answered	2		1		0	
Total	**278**		**263**		**22**	

Clinician survey data

The 'Guidelines for the Provision of Paediatric Anaesthesia Services' state that all anaesthetists at with a certificate of completion of training (CCT) should be competent to provide safe perioperative care for common non-complex elective and emergency procedures in children aged one year and older.[9] There were 713/853 (83.6%) patients who underwent their procedure in the hospital to which they first presented. There were 100/853 (11.7%) patients who were transferred from another hospital. The most common reason for the transfer, given in 61 cases, was a lack of surgeon competent to undertake the procedure (T3.6).

Table 3.6 The reason for the transfer	Number of patients
No surgeon competent to undertake procedure	61
No anaesthetist competent to anaesthetise patient	28
No emergency surgical services at the referring site	18
No appropriate critical care bed or facilities	14
Specialist surgery undertaken in another trust/health board	11
Other	5
Subtotal	**88**
Unknown	12
Total	**100**

Reviewer assessment form data. Answers may be multiple; n=88

Non-specialist paediatric centres should have arrangements for managing and treating simple surgical emergencies in children, such as acute appendicitis. In addition, they should be able to

resuscitate and stabilise critically ill infants and children of all ages prior to transfer to a specialist centre for surgery and/or critical care.[9] On completion of training, anaesthetists are expected to demonstrate competence in providing safe perioperative care for common non-complex elective and emergency procedures in children aged one year and older.

Within the group transferred to another hospital, 49/100 (49.0%) patients underwent simple surgical procedures and 70/100 (70.0%) were over the age of two years.

Surgeons and anaesthetists who do not treat children in their elective workload may feel that they become deskilled following completion of their training. Many anaesthetic departments maintain a core group of consultants who anaesthetise children regularly and will support on-call teams either formally or informally.[9] This is by no means mandated, we were unable to establish whether those transferred originated in such departments.

Where there was evidence of a transfer in the case notes, the reviewers identified a delay in the transfer of 10/100 (10.0%) patients, and that this impacted the outcome for one patient. Reviewers considered the transfer to be inappropriate for 4/100 (4.0%) patients. Where there was a delay in transfer, this occurred almost exclusively over the weekend (Friday 1/10; Saturday 3/7; Sunday 4/10). Where a questionnaire from the referring hospital had been returned, there was a delay in the transfer for 3/36 patients; mostly due to the availability of imaging.

Anaesthetists reported that five patients who were transferred were unstable on arrival at the receiving hospital, with two deteriorating during the transfer.