18.B

DHSSPS / HSC MEDICAL LEADERS FORUM
9th January 2012
D2 LECTURE THEATRE, CASTLE BUILDINGS, STORMONT

PRESENT		DEPARTMENT
Dr Tony Stevens	Belfast HSC Trust	Dr Michael McBride
Dr John Simpson	Southern HSC Trust	Dr Paddy Woods
Dr Charlie Martyn	South Eastern HSC Trust	Dr Liz Mitchell
Dr David McManus	NIAS	Angela McLernon
John Compton	HSCB	Dr Heather Livingston
Dr Carolyn Harper	PHA	[redacted]
Dr Sloan Harper	HSCB	Dr Martin Donnelly
Dr Tom Trinick	GAIN	[redacted]
Dr David Stewart	RQIA	
Dr Graham McGeown	QUB	
Peter Lees	Faculty of Medical Leadership & Management	
Lorraine King	HSC Leadership Centre	
Dr Marisa Mason	NCEPOD	
Dr Kathy Wilkinson	NCEPOD	
Jane Lindsay	DHSSPS – CIC Programme	
Gill Smith	BSO	

Welcome and Apologies

[redacted]

PART 1 - STRATEGIC ISSUES

1 The Faculty of Medical Leadership and Management (Copy Slides Attached)

[redacted]

Peter Lees outlined

[redacted]

2 National Confidential Enquiry into patient Outcome and Death(NCEPOD)

Surgery in Children: Are we There Yet? – (Copy Slides Attached)

Dr Kathy Wilkinson, NCEPOD Clinical co-ordinator and Consultant Paediatric Anaesthetist, gave a presentation on its report Are We There Yet which was the 3rd study on Surgery in Children. It aimed to explore remediable factors in processes of care of children 17 years and younger, including neonates, who died prior to discharge and within 30 days of emergency or elective surgery.

The presentation covered the background, aims, data used, clinical governance and recommendations of the report.

It looked at the organisational structure of services and at the quality of care received by individuals.

She outlined

- Difficulties with Data returned
- Data; poor clinical notes, data recording not appearing in notes, types and quality of data
- Clinical leadership, multidisciplinary management meetings and team working
- Specialisation and centralisation of children's services
- Regional Standards and operational procedures

The report highlighted the need

- for children's surgical services to be organised in a comprehensive and fully integrated fashion
- regional leadership to ensure the full development of networks
- the rationalisation of regional standards for children's surgery and anaesthesia

CMO thanked Dr Wilkinson for her presentation.

Knowing the Risk – (Copy Slides Attached)

[redacted]

3 **Health and Social Care (HSC) Review - (Copy Slides Attached)**

[redacted]

[redacted]

4 Quality Strategy 2020 Implementation Plan

[redacted]

5 Regionally Managed Medical Locum Service Project (RMMLS)

[redacted]

PART 2

6 Introduction

[redacted]

- Evaluation of HSC Research & Development Funding in NI

[redacted]

[redacted]

7 **Minutes of Previous Meeting**

[redacted]

8 **Update on Outstanding Action Points**

[redacted]

9 **Any Other Business**

Intravenous Fluids in Children

CMO thanked everyone who had been involved in the GAIN audit.

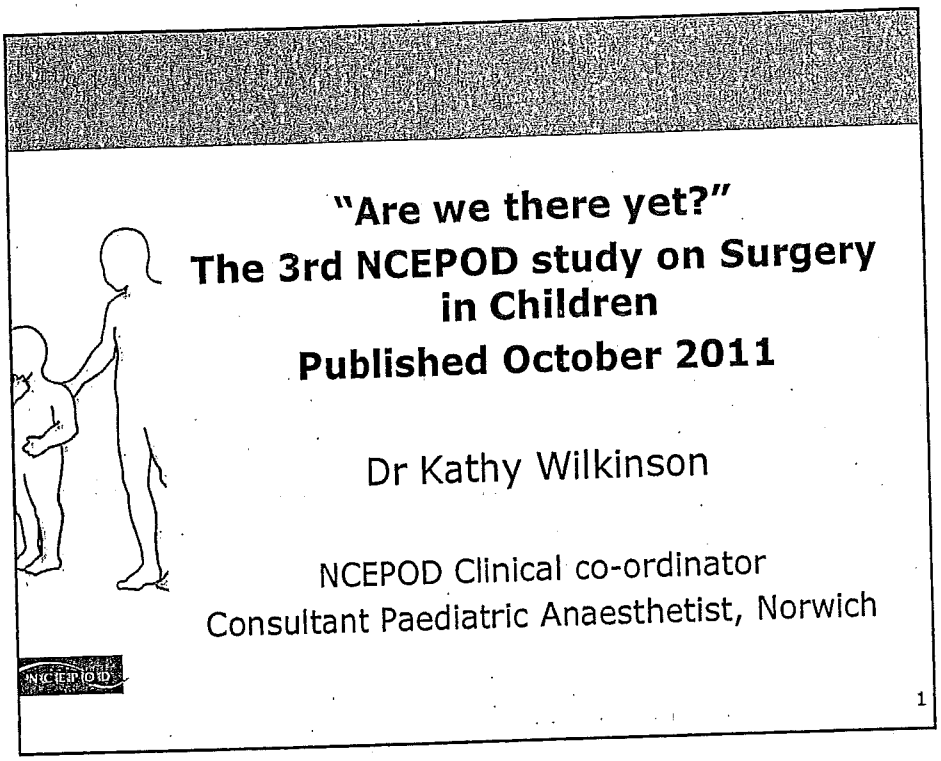
The meeting was advised that the primary issue is to ensure that everyone is aware that the current guidance still stands and is being actively implemented.

CMO informed the meeting that the issue had been discussed at CMO level with the aim to have a UK approach. Sir Bruce Keough, Medical Director of the National Health Service in England, has supported the selection of Intravenous Fluids in Children as a topic for consideration by NICE.

Trauma – Transfer of Patients to the Royal Victoria Hospital

[redacted]

Date of Next Meeting – 5th March 2012


"Are we there yet?"
The 3rd NCEPOD study on Surgery in Children
Published October 2011
Dr Kathy Wilkinson
NCEPOD Clinical co-ordinator
Consultant Paediatric Anaesthetist, Norwich
NCEPOD
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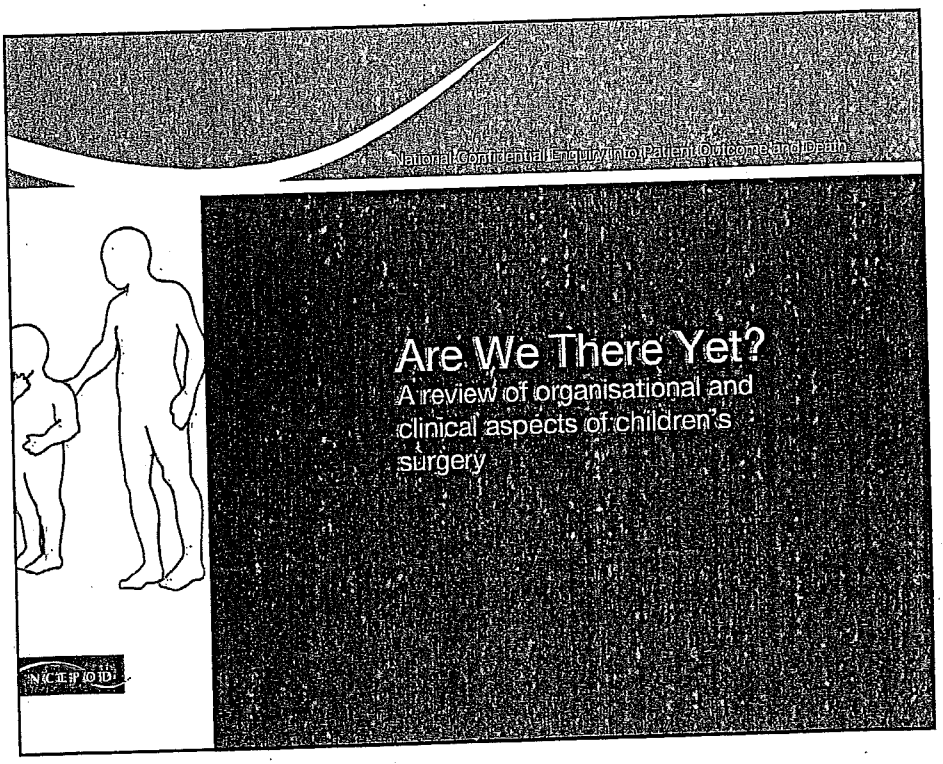
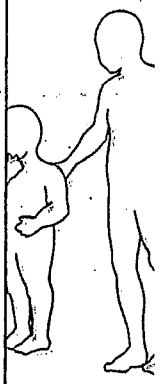

National Confidential Enquiry into Patient Outcome and Death
Are We There Yet?
A review of organisational and clinical aspects of children's surgery
NCEPOD

Background



- Many changes in the last 20 years
  - NCEPOD reports 1989/1999
  - Kennedy Report
  - NSF for children
- Clinical and organisational change to healthcare provision for children
- Specialisation and centralisation of children's services

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3

Aims

To explore remediable factors in processes of care of children 17 years and younger, including neonates, who died prior to discharge and within 30 days of emergency or elective surgery

1) Organisational structure of services

2) Quality of care received by individuals

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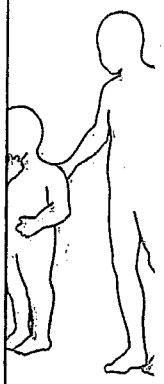
4

Data returns - organisational



373 hospitals identified as performing surgery in children 17 years and younger to which Organisational questionnaires were sent

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Organisational questionnaires returned 290

- 77% return rate

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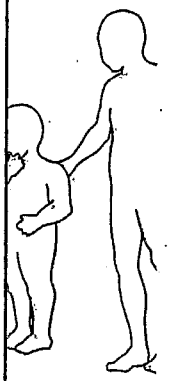
5

Data returns – peer review



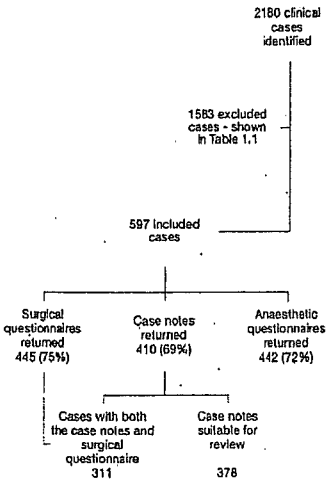


Figure 1.1 The data returns for the study

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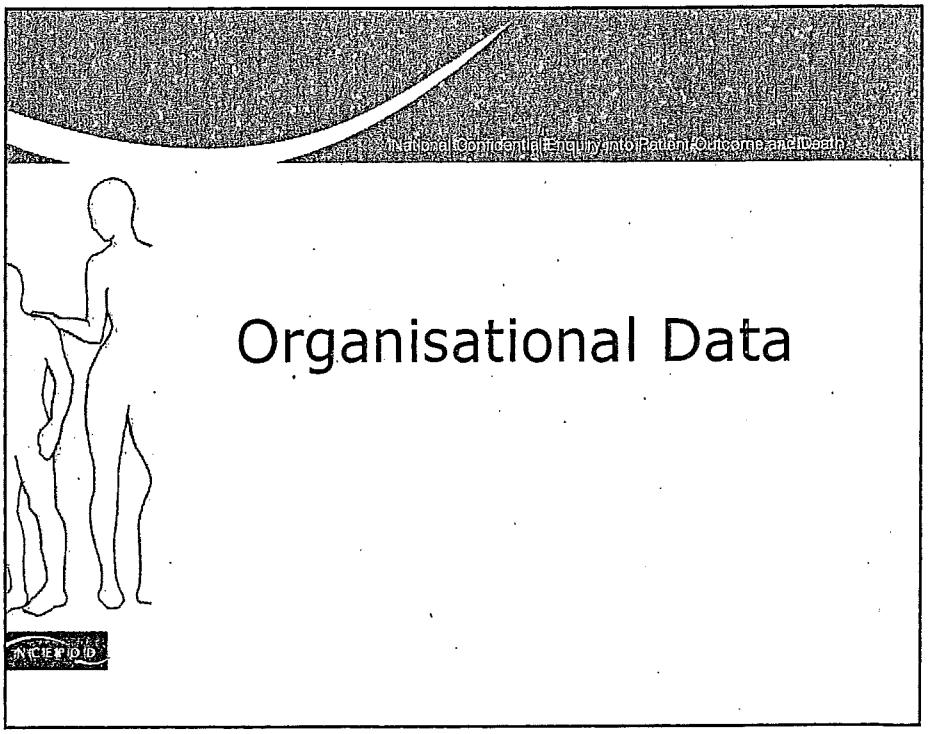
6

Comparisons 1989, 1999, and 2011 reports

Publication date Study duration	1989 1 year	1999 1 year	2011 2 years
Age (years, inclusive)	0-9	0-15	0-17
Population	Cardiac, Non cardiac	Non Cardiac	Cardiac, Non cardiac
Deaths reviewed	262/295	112	378
Deaths identified	417	139	597
%reviewed/ identified	62.8% anaes 70% surg	80%	63%



Overview data – organisational

Table 2.1 Hospital category

Hospital category	Total	%
DGH <500 beds	65	22.4
DGH >500 beds	59	20.3
STPC	27	9.3
UTH	27	9.3
PH	92	31.7
SSH	20	6.9
Total	290	

9

Workload

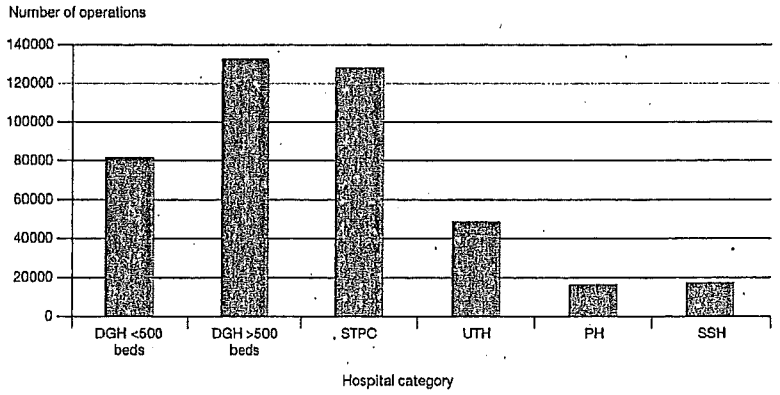


Figure 2.1 Total number of operations performed in children by hospital category during 2008-2009

Workload

Table 2.3. Volume (in ranges) of operations (in 0-17 year olds) performed per annum by hospital category

Number of operations	DGH <500 beds	DGH >500 Beds	STPC	UTH	PH	SSH	Total
1-100	2	0	0	1	37	3	43
101-500	8	3	0	3	38	3	55
501-1000	16	5	0	5	2	4	32
1001-2000	24	17	7	6	3	5	62
2001-4000	9	19	4	7	0	1	40
4001-10000	2	6	11	3	0	1	23
>10000	0	1	2	0	0	0	3
Subtotal	61	51	24	25	80	17	259
Not answered	4	8	3	2	12	3	32
Total	65	59	27	27	92	20	290

Networks

- 'Clinical network for children's surgery'
  - Informal / formal

Table 2.4 Hospital category and whether they were included in a network

Hospital category	Yes	No	Unknown	Subtotal	Not answered	Total
DGH <500	24	35	4	63	2	65
DGH >500	28	27	3	58	1	59
STPC	22	4	0	26	1	27
UTH	13	13	1	27	0	27
PH	11	70	9	90	2	92
SSH	9	11	0	20	0	20
Total	107	160	17	284	6	290

- 49% (96/194) of NHS hospitals included in a network

Networks

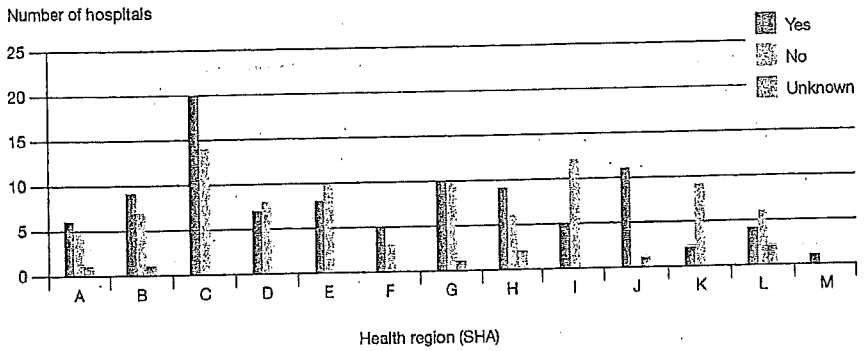


Figure 2.4 Health regions by presence of NHS hospitals included in a children's surgical network

Recommendations

- *Clinical networks for children's surgery*

  There is a need for a national Department of Health review of children's surgical services in the UK to ensure that there is comprehensive and integrated delivery of care which is effective, safe and provides a high quality patient experience.

  National NHS commissioning organisations including the devolved administrations need to adopt existing recommendations for the creation of formal clinical networks for children's surgical services. These need to provide a high quality child focused experience which is safe and effective and meets the needs of the child.

Team working

Table 2.15 Presence of operational policies for surgery for children by hospital category

Policies:	DGH <500 (n=65)	DGH >500 (n=59)	STPC (n=27)	UTH (n=27)	PH (n=92)	SSH (n=20)	Total (n=290)
The referral of surgical patients to hospital	33	34	19	9	62	11	168
Who can operate on children	40	35	19	14	70	11	189
The management of emergency surgery for children	36	31	22	14	22	9	134
Pre-operative preparation of children	43	47	26	18	79	16	229
Out of hours medical cover for children	37	37	25	15	41	8	163
Admission criteria for surgical patients	36	34	20	18	82	14	199
Who can anaesthetise children	47	45	22	19	66	15	214
The management of emergency anaesthesia for children	35	35	21	12	16	10	129
Handover between clinical teams	35	25	24	9	31	11	135
The named consultant who has overall clinical responsibility of children who undergo surgery	36	31	25	15	51	12	170
Answered YES to all policies	14	10	15	4	9	2	54
Not answered at all	1	2	0	1	3	1	8

*(*answers may be multiple)*

Recommendation

- *Team working*

  All hospitals that provide surgery for children should have clear operational policies regarding who can operate on and anaesthetise children for elective and emergency surgery, taking into account on-going clinical experience, the age of the child, the complexity of surgery and any co-morbidities. These policies may differ between surgical specialities.

Clinical governance

Table 2.19. Presence of audit and morbidity and mortality meetings that included children, by hospital category

	Morbidity and Mortality meetings undertaken					
Hospital category	Yes	No	Unknown	Subtotal	Not answered	Total
DGH <500 beds	33	22	4	59	6	65
DGH >500 beds	38	15	5	58	1	59
STPC	27	0	0	27	0	27
UTH	16	8	2	26	1	27
PH	19	65	2	86	6	92
SSH	14	6	0	20	0	20
Total	147	116	13	276	14	290

- 53% of hospitals held audit and M&M meetings for children
- 4/26 hospitals with a >4000 operations/year did not undertake meetings

Recommendations

- *Clinical governance and audit*

  All hospitals that undertake surgery in children must hold regular multidisciplinary audit and morbidity and mortality meetings that include children and should collect information on clinical outcomes related to the surgical care of children.

Children's operating theatres

Table 2.23 Presence of one or more dedicated children's operating theatres by hospital category

Hospital category	Yes	No	Unknown	Subtotal	Not answered	Total
DGH<500 beds	4	60	0	64	1	65
DGH >500 beds	8	51	0	59	0	59
STPC	25	2	0	27	0	27
UTH	7	19	0	26	1	27
PH	3	88	1	92	0	92
SSH	8	12	0	20	0	20
Total	55	232	1	288	2	290

- 9 hospitals of all categories that reported >4000 operations/year did not have dedicated children's operating theatres

Theatre scheduling

Table 2.27 Scheduling arrangements for children's elective surgery

Scheduling arrangements for children's surgery	DGH <500 beds	DGH >500 beds	STPC	UTH	PH	SSH	Total
Children only operating lists	44	44	27	21	19	11	166
Adult operating list with a segregated time slot for children	45	46	12	18	67	8	191
Mixed into an adult operating list in no particular order	15	18	5	6	22	3	64
Other	0	2	2	1	2	4	11

*Answers may be multiple

Recovery

Table 2.29 Presence of a recovery ward separate from adults

Hospital category	Yes	No	Subtotal	Not answered	Total
DGH <500 beds	43	20	63	2	65
DGH >500 beds	44	15	59	0	59
STPC	22	3	25	2	27
UTH	18	7	25	2	27
PH	47	43	90	2	92
SSH	9	11	20	0	20
Total	183	99	282	8	290

- 35% (99/277) children were not recovered in separate area from adults

Recommendations

- *Theatre scheduling for children*

  Hospitals that have a large case load for children's surgery should consider using dedicated children's operating theatres.

  Hospitals in which a substantial number of emergency children's surgical cases are undertaken should consider creating a dedicated daytime emergency operating list for children or ensure they take priority on mixed aged emergency operating list.

Specialised staffing

Anaesthetic assistance

Table 2.34 Presence of at least one anaesthetic assistant with competencies in children's anaesthesia 24 hours a day (for hospitals that provide non-elective surgery for children)

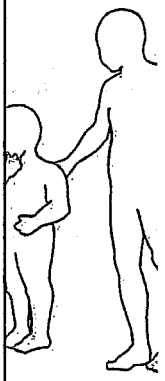
Hospital category	Yes	No	Unknown	Subtotal	Not answered	Total
DGH <500 beds	26	21	6	53	4	57
DGH >500 beds	37	14	2	53	2	55
STPC	24	1	2	27	0	27
UTH	12	5	4	21	0	21
PH	4	1	0	5	0	5
SSH	5	6	0	11	0	11
Total	108	48	14	170	6	176

Recommendations

- *Specialised staff for the care of children*

  There is a need for those professional organisations representing peri-operative nursing and operating department practitioners to create specific standards and competencies for staff that care for children while in the operating theatre department.

National Confidential Enquiry into Patient Outcome and Death



Peer review data

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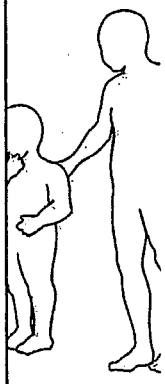
Age and gender



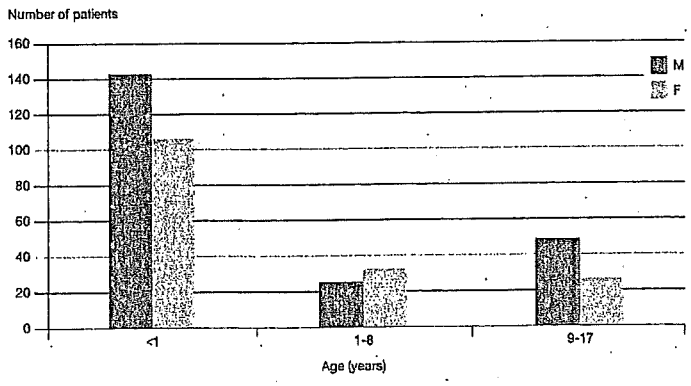


Figure 3.1 Age of patients

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26

Location of death

Table 3.1 Location of deaths by category of hospital

Hospital type	n	%
DGH <500 beds	3	0.9
DGH >500 beds	5	1.5
STPC	281	84.6
UTH	36	10.8
PH	2	0.6
SSH	5	1.5
Subtotal	**332**	
Not answered	46	
Total	**378**	

27

Diagnostic group

Table 3.2 Diagnostic category

Case type	n	%
Congenital paediatric general surgery	22	7.1
Ear, nose and throat	10	3.2
General paediatric (not congenital) surgery	22	7.1
Trauma- including head injury	25	8.0
Neurosurgical - non trauma	36	11.6
Necrotising enterocolitis (NEC)	103	33.1
Congenital cardiac surgery	62	19.9
Unknown	7	2.3
Other	24	7.7
Subtotal	**311**	
Not answered	67	
Total	**378**	

28

Admission urgency

Table 3.3 Urgency of admission

Urgency of admission	n	%
Elective	50	16.1
Emergency	254	82.3
Unknown	5	1.6
Subtotal	**309**	
Not answered/No surgical questionnaire	69	
Total	**378**	

29

Assessment of care

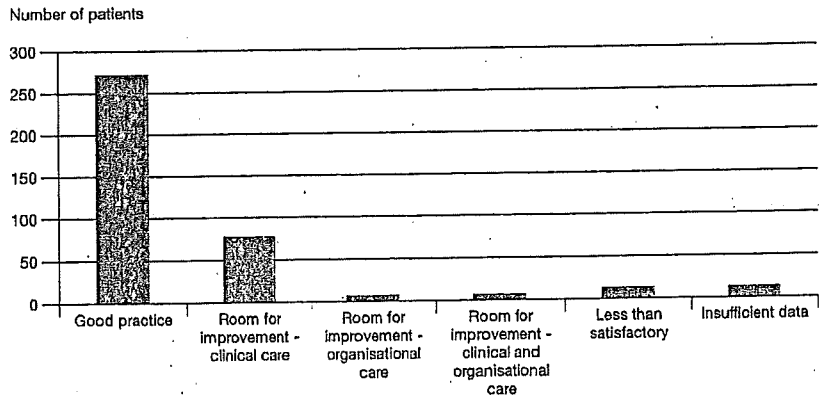

Figure 3.3 Overall assessment of care - Advisors' opinion

30

Timing of admission and surgery

Table 3.5 Time of admission

Time of admission	n	%
08:00-17:59	159	43.6
18:00-23:59	84	23.0
00:00-07:59	122	33.4
Subtotal	365	
Insufficient data	13	
Total	378	

Table 3.6 Time of surgery

Time of operation	n	%
08:00-17:59	207	66.3
18:00-23:59	71	22.8
00:00-07:59	34	10.9
Subtotal	312	
Insufficient data	66	
Total	378	

Transfer for surgery

Table 3.8 Deterioration in patients' condition on transfer - Advisors' opinion

Deterioration occurred	n	%
Yes	28	13.8
No	175	86.2
Subtotal	203	
Insufficient data	43	
Total	246	

32

Care during transfer

Table 3.9 Appropriateness of the care given to the patient during transfer - Advisors' opinion

Care appropriate	n	%
Yes	163	97.0
No	5	3.0
Subtotal	168	
Insufficient data	78	
Total	246	

33

Case study

Poor care during transfer

A small child presented to the local DGH with a reduced conscious level and a GCS of 8 after a fall. An early CT scan revealed an acute subdural cerebral bleed. Transfer by the local team was arranged. Blood gases on arrival at the tertiary centre revealed that ventilation had been inadequate for some time (pCO_2 13.8, pH 6.99). In theatre as well as a large bleed, there was considerable oedema and a "non-pulsatile" brain was noted by the neurosurgeon. The prognosis was considered hopeless, and after full review and discussion, treatment was withdrawn.

Advisors commented that whilst the outcome may well have been very poor, substandard management on transfer with failure to maintain basic ventilation clearly worsened the prognosis of this very serious injury.

Delays in transfer

Table 3.10 Transfer delayed at any stage - Advisors' opinion

Transfer delayed	n	%
Yes	34	19.3
No	142	80.7
Subtotal	**176**	
Insufficient data	70	
Total	**246**	

35

How long did transfer take?

Table 3.11 Time taken from decision to transfer to admission in receiving hospital

Time taken	n	%
Within 3 hours	25	15.7
Within 6 hours	43	27.0
Within 12 hours	25	15.7
Within 24 hours	54	34.0
More than 24 hours	12	7.5
Subtotal	**159**	
Not answered/ No surgical questionnaire	87	
Total	**246**	

36

Case study 5

Lack of ability to diagnose and operate on an acute surgical problem

A child presented to their local hospital with a short history of abdominal pain. Local paediatricians referred the patient to general surgery who in turn asked for an urgent anaesthetic assessment as they believed that the patient was in need of pre-operative resuscitation. After this occurred surgeons requested transfer to the tertiary hospital which occurred after a 10 hour delay. The patient was found to have a gangrenous appendix at surgery. Following this transfer the patient developed multi-organ failure and died one week later.

Advisors were concerned that the local team was insufficiently confident to operate on this child and that despite appropriate attempts at resuscitation subsequent transfer was delayed.

Recommendation

- National standards, including documentation for the transfer of all surgical patients, irrespective of whether they require intensive care need to be developed by regional networks.

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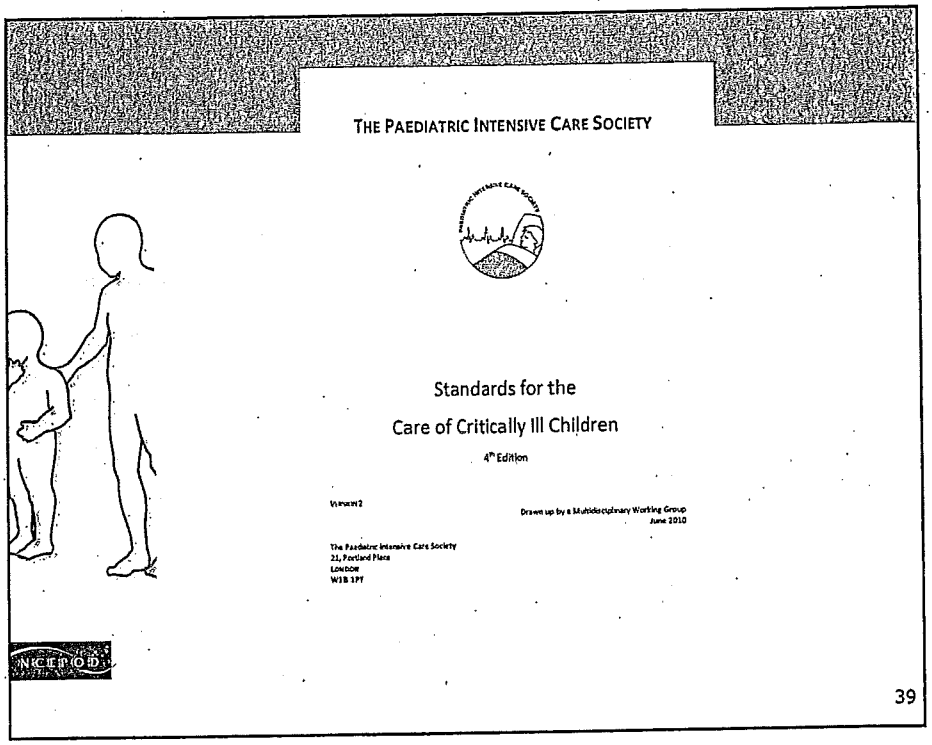
38



Should risk of death have been documented?

Table 3.26 Risk of death should have been documented - Advisors' opinion

Risk should have been documented	n	%
Yes	316	84.7
No	57	15.3
Subtotal	**373**	
Not answered	5	
Total	**378**	

40

Recommendation

- In surgery which is high risk due to co-morbidity and/or anticipated surgical or anaesthetic difficulty, there should be clear documentation of discussions with parents and carers in the medical notes. Risk of death should be formally noted even if difficult to quantify.

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41

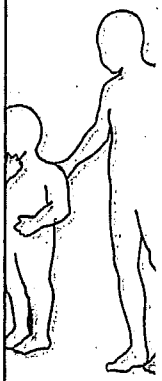
Morbidity and mortality meetings

Table 3.47 Evidence of a morbidity and mortality discussion following death - Advisors' opinion

Morbidity and mortality discussion	n	%
Yes	126	68.5
No	58	31.5
Subtotal	**184**	
Insufficient data	194	
Total	**378**	

42

Recommendation



- Confirmation that a death has been discussed at a Morbidity and mortality meeting is required. This should comprise a written record of the conclusions of that discussion in the medical notes.

43

Neurosurgery – Trauma
Quality of care

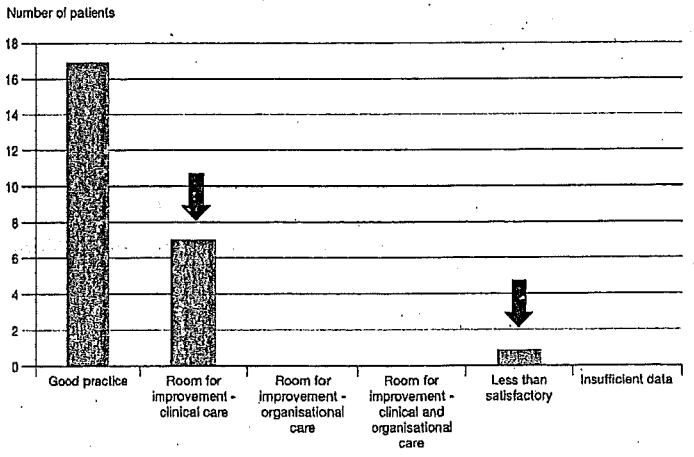


Figure 4.5 Advisors' assessment of the quality of care in trauma/head injury cases

44

Neurosurgery - Trauma
Transfer delays

Table 4.13 Examples of transfer delay

Examples of delay (Trauma/head injury)
Delay in finding a paediatric intensive care bed at the receiving hospital
No beds available in neurosurgical centre
Patient unstable and appropriately required further treatment at the referring hospital before transfer
Delay of >2hours in obtaining results of a CT scan
Unable to contact neurosurgeon (in theatre)
Unable to transfer CT images to neurosurgical centre
Delay in obtaining Factor VIII from National Blood Service: unlikely to have affected outcome

*answers may be multiple (n/112)

- Delay in 5/10 cases where this could be assessed

45

Neurosurgery: Non-trauma
Quality of care

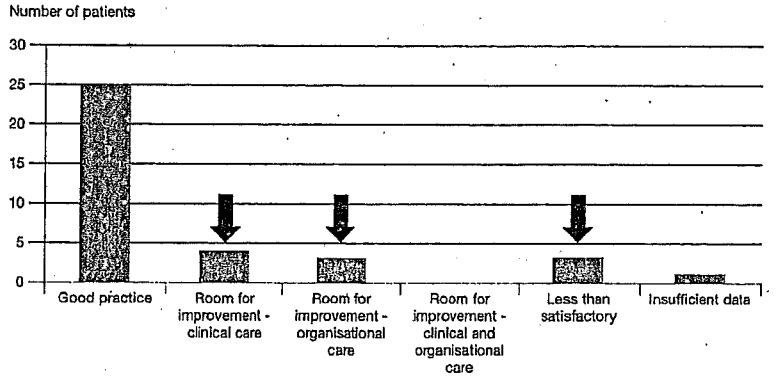


Figure 4.7 Advisors' assessment of the quality of care in non-trauma neurosurgical cases

- Peaks during infancy and teenage years
- Majority related to haemorrhage or tumour

46

Neurosurgery: Non-trauma Delays

Delay in obtaining specialist review
A teenager presented with a history of headache, weight loss and had a GCS of 14. A head CT was performed the next day and revealed a possible cerebral abscess or tumour. The neurosurgical unit advised antibiotics and an MRI was requested. The patient deteriorated and despite transfer to the neurosurgical unit they died.

Comment from the consultant neurosurgeon who completed the surgical questionnaire was that "the diagnosis of an abscess was made immediately, and correct advice given. However, it is notable that the referral occurred at a handover period, and no consultant neurosurgeon was involved in the management decisions."

Advisors commented that this was a totally unacceptable level of care. Waiting for an MRI scan when the CT scan at the local hospital showed clear pathology was unnecessary and urgent specialist review and surgery was required.

47

Recommendations

- Urgent completion of the "Safe and Sustainable Review of Children's Neurosurgical Services" is required with implementation of the appropriate pathways of care that this is likely to recommend.
- This should be followed by a further audit to ensure compliance with national standards and models of care for all children requiring neurosurgery.

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48

Summary

- NCEPOD has presented a wide ranging review of the organisation and delivery of children's surgical services
- Overall the peer review demonstrated a good standard of care
- There is room for improvement both in hospital service provision and clinical care

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49

Summary

- There is a need for children's surgical services in the UK to be organised in a comprehensive and fully integrated fashion
- National leadership is required to ensure networks are fully developed
- Existing national standards for children's surgery and anaesthesia requires rationalisation

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50