WEST MIDLANDS REGION
PAEDIATRIC HIGH DEPENDENCY
ANNUAL REPORT

May 2006

**Covering the period
1st January 2005 – 31st December 2005**

Lisa Hydes - Project Administrator

Louise Edwards - Project Administrator (secondment)

Stuart Ordish – Systems Manager

Araceli Morgan - Systems Support Officer

Nicola Beamish – MANNERS Team Assistant

Gale Pearson – Paediatric Consultant Advisor

Jason Gardosi – Director Perinatal Institute

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Introduction

Background

Since the Framework for the Future DoH, Bridge to the Future DoH published in 1997, the model for the development of services for critically ill children has been "hub and spoke". It is intended that the bulk of intensive care for children be provided in Lead centres which provide support for the local hospitals to which acutely ill children may present. In the West Midlands a set of consensus standards applying to this model was produced in February 2002. It is agreed that all hospitals with in-patient facilities should be able to provide paediatric high dependency care for up to 48 hours.

In September 2002 the additional recurrent funding relating to the implementation of the Framework for the Future was increased. Part of this funding is dedicated to national audit of paediatric intensive care. In the West Midlands this approach (to incorporate audit of activity) has also been applied to the additional high dependency activity that has been commissioned in 6 sites (Birmingham Heartlands Hospital, Birmingham Children's Hospital, City and Sandwell Hospitals, New Cross Hospital, Walsgrave Hospital and UHNS).

Project

The Perinatal Institute was given a remit by the WM Specialised Services Agency to audit the activity of WM Paediatric High Dependency Units. A project team, clinical lead and professional advisory group were put in place, a standard dataset agreed by key stakeholders, and the MANNERS web based data collection system was programmed and implemented in all six units, with appropriate training and support.

Data collection commenced in October 2004 and this is the first annual report covering January – December 2005. It demonstrates the clinical activity in the high dependency units which have received additional funding over the winter period. It is anticipated that most centres will show a seasonal peak of activity in the winter although this may be less evident in Birmingham Children's Hospital, where regional specialty services and the paediatric intensive care unit provide additional activity.

From July 2005 the dataset was extended to include clinically useful fields that characterised the nature of the work in each unit. In addition, four units have begun to contribute data so that a more complete picture of the region can be obtained, however their figures are not included in this report as they are not commissioned centres.

Dr Gale Pearson   Professor Jason Gardosi
Consultant Intensivist & Clinical Advisor   Director, Perinatal Institute

Unit Profiles

Hospital	No. PHD beds In Audit	No. Commissioned Beds (WMSSA)
BCH	12	3
BHH	4	2
New Cross	4	3
SWBH	3	2
UHCW	4	2
UHNS	3	3

<u>Birmingham Children's Hospital</u>

<u>Ward 6</u>

Lead Consultant: Dr Ian Wacogne

Lead Nurse: Michelle Plaza

Paediatric High Dependency care is constantly available on the ward. A unit was established for a pilot period from September – December 2004 but is no longer available. The patients are now nursed on the main ward whilst requests are made for a separate high dependency unit. Over half of the nurses are PICU/PHDU trained and the patients are treated for asthma, diabetes, meningitis, organ failure etc.

<u>Ward 11</u>

Lead Consultant: Dr Rami Dhillon

Lead Nurse: Jackie Clinton

Paediatric High Dependency care has always been available; however since December 2004 there has been a designated area. The majority of staff within the ward have completed a PICU/PHDU course. The types of patients treated on the unit include pre and post PICU, cardiac and tracheostomy patients - all under one year old.

<u>Ward 12</u>

Lead Consultant: Dr Rami Dhillon

Lead Nurse: Allan Campbell

The majority of staff within the ward have completed a PICU/PHDU course. The types of patients treated include post PICU, tracheostomy and interventional cardiology patients over one year old. High Dependency care has always been available.

Birmingham Heartland's Hospital

Lead Consultant: Dr Titus Ninan
Lead Nurse: Karen Barber (Acting)

Paediatric High Dependency care has always been available and since May 2002 the Paediatric unit has had the opportunity to facilitate a separate four bedded unit. The unit cares for a variety of patients aged from newborn up to sixteen years old. This includes medical, surgical, Orthopaedic, ENT, post PICU, and Infectious diseases. All nurses are given the opportunity to rotate into the PHDU and 6 nurses have now successfully completed the PHD course at UCE Birmingham.

City and Sandwell hospitals Birmingham NHS trust

Lead Consultant: Dr Ali Akhbar (City), Dr Chizo Agwu (Sandwell)
Lead Nurse: Heather Bennett, Ruth Hartland, Emma Crawford

There are mixed ranges of acute medical and surgical illnesses cared for within the three Paediatric wards. High dependency care has been available for the past four years and there are a total of ten nurses who have completed the PHD course.

New Cross Hospital

Lead Consultant: Dr Penny Dison
Lead Nurse: Surinder Judge

There are four High dependency beds available that are situated in a bay within a paediatric ward. There are a variety of illnesses treated including general medicine, surgery, oncology and cystic fibrosis. Three nurses have a HDU qualification and a paediatric advanced nurse practitioner has recently been appointed.

UHNS Hospital

Lead consultant: Dr John Alexander
Lead Nurse: Rupert Todd, Caroline Whitehurst, Julie Peacock

The trust offers a three bedded HDU area situated within one of the general Paediatric wards which is only open during the winter months. The patients have a variety of illness, including general medical, surgical, oncology and step down care from the PICU. There are three nurses allocated to the HDU area and they all have completed the high dependency course.
*During the months March –September patients requiring PHD care are cared for in a number of settings within the paediatric directorate, including PICU. Some discrepancy occurred as to the classification of those patients on PICU receiving PHD and it was felt that this was reflected in the figures.

Walsgrave Hospital
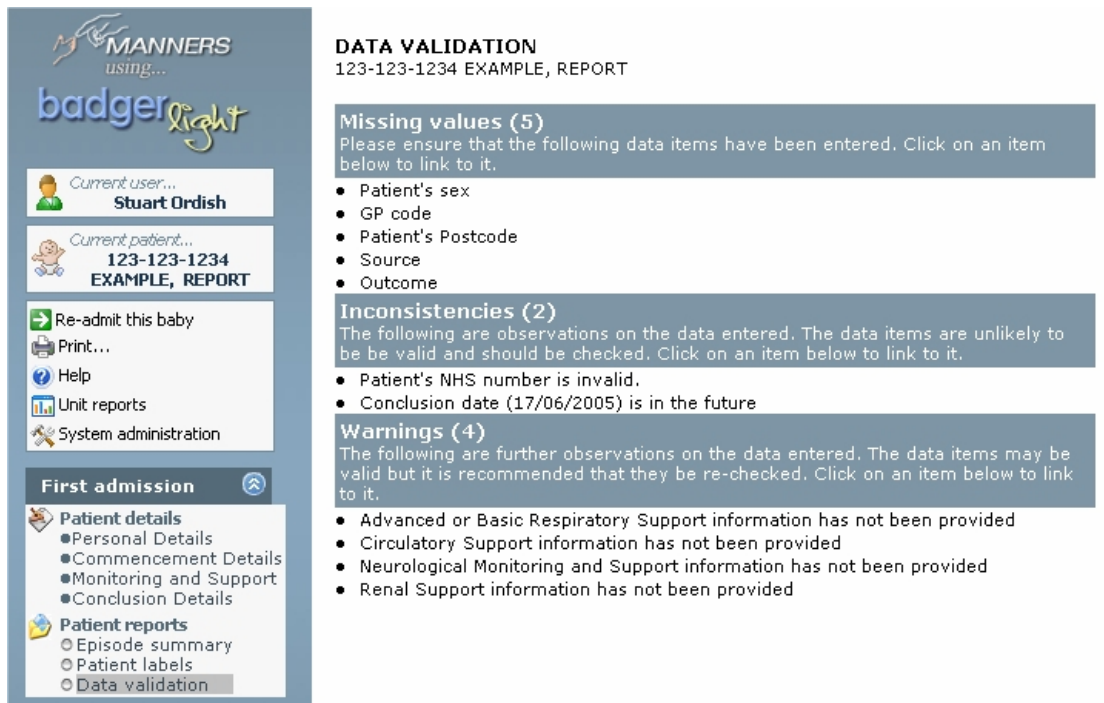
Lead Consultant: Dr Ed Simmonds
Lead Nurse: Jackie White, Emma Boyle, Leah Pritchard

Paediatric High Dependency care has been available at the hospital for eight years. There are seven designated PHD nurses, five of whom have completed a PICU/PHDU course. The patients on the unit are normally there for treatment after surgery, oncology or for general medical problems (respiratory, etc.) The unit will expand in July 2006 once the new hospital is opened and will include trauma and orthopaedic patients.

Data Collection & Validation

There were two different procedures for validating the data presented in this report. The first was composed of a set of accepted conditions which have been written into the software.

Once data input has been made, the user can access a system report indicating its validity.

There are 3 levels within the report which denote:
- Missing values which are mandatory e.g. NHS numbers
- Inconsistent values e.g. Discharge occurs before admission
- Warnings which may be correct, but are unlikely to be

The second procedure involved a monthly submission to each unit with lists comprising of patients that still have outstanding data validity issues.

MANNERS Paediatric – Data validation and integrity checks

MANNERS Paediatric - Data validation and integrity checks

Completed Episodes, 01/10/04   to 31/03/05   as at 04-Apr-05

~~Birmingham Childrens Hospital~~

NHS No.	Episode	Lastname	Forename	Identified issues
~~Nnnnnn~~	1	~~MCGILLOWAY~~	~~EVAN~~	A, D, E
NO NUMBER	1	~~CHARLIE~~	~~MURPHY~~	A
NOT REG	1	~~COOK~~	~~AMY~~	A
~~xxxxxx~~	1	~~MCGLINCHEY~~	~~KAIDEN~~	A, D, E

Number of Records to be validated: 84

Manners Paediatric – Data Validation and Integrity Checks Index

Code	Description
A	Invalid NHS Number (Required format XXX-XXX-XXXX, where X is numeric, with valid check digit)
B	Missing or Invalid Postcode (Valid formats "AX XAA", "AXX XAA", "AAX XAA", "AAXX XAA", "AXA XAA" or "AAXA XAA" where A is alphabetic and X is numeric, parts 1 and 2 to be separated by a single space character)
C	Missing Gender
D	Missing or Invalid GP Code or Missing GP Name
E	Missing or Invalid GP Practice Code
F	Missing or Invalid Episode Commencement Date
G	Missing or Invalid Episode Conclusion Date
H	Missing Status on Conclusion
I	Missing Monitoring and Support Details
J	Missing Date of Birth
K	Missing Source of Admission
L	Missing, or Invalid, Ward Admitted to
M	Missing Discharge Destination
N	Died, but no Date of Death OR Alive and Date of Death recorded
O	Died, but no Cause of Death recorded
P	Died, but no Post Mortem information recorded
Q	Missing information leaflet

Following identification of the inconsistencies, results were sent back to the nominated individual for that unit, who then checked/changed/verified the requested items. This process was carried out on a monthly basis, final checks being completed by February 2006. All of the designated contacts were familiar with this system and understood the necessity for accuracy.

A copy of the data was taken on 28.02.06 therefore any changes made after that point will not be reflected within the report.

Unit Data

The data used for analyses is based on all episodes of paediatric high dependency care, covering the period January - December 2005.

Episodes of PHD Care (as commenced within the month)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
BCH	83	80	96	94	96	75	78	67	86	84	93	71	1003
BHH	31	29	37	19	45	19	27	28	18	35	34	40	362
New Cross	8	3	10	5	5	7	7	8	18	17	8	19	115
SWBH	5	5	13	3	2	3	6	3	8	5	10	9	72
UHCW	14	12	12	12	17	14	16	13	12	12	21	19	174
UHNS	48	75	48	32	47	27	26	20	34	17	28	17	419
Region	189	204	216	165	212	145	160	139	172	170	194	175	2145

Bed Days by Month

A bed day is defined as any day during which a patient receives High Dependency Care. Where a patient has multiple unique episodes of High Dependency Care on a single day, this is to be counted as a single bed day. (WMSSA)

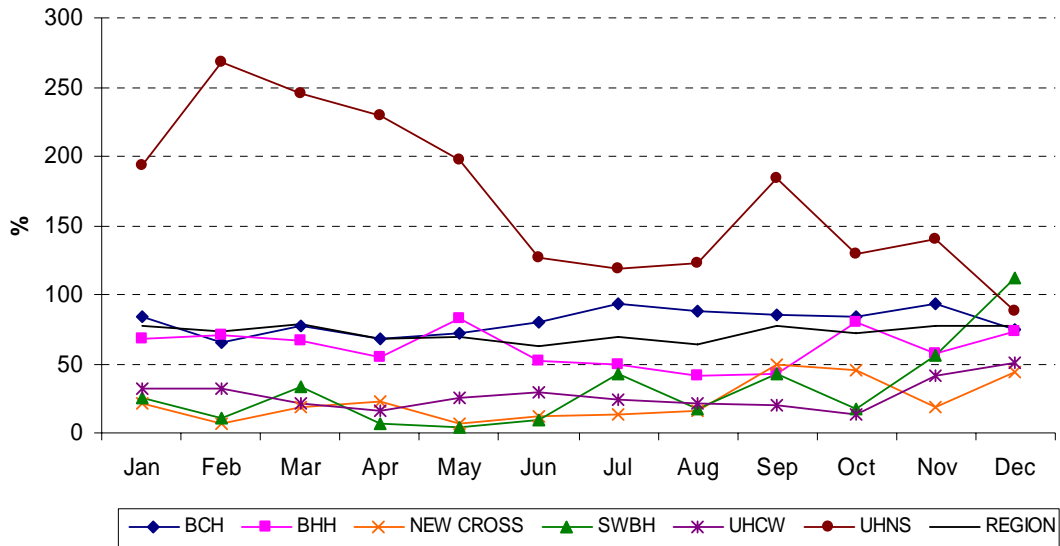|	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
BCH	314	220	287	245	267	287	346	329	305	314	334	277	3525
BHH	85	79	83	66	102	62	61	51	52	100	69	91	901
New Cross	26	8	23	27	9	15	16	20	60	57	23	55	339
SWBH	23	9	31	6	4	9	40	16	39	16	51	104	348
UHCW	40	36	27	19	31	35	29	26	24	17	50	63	397
UHNS	180	225	228	207	184	114	110	114	166	120	126	82	1856
Region	668	577	679	570	597	522	602	556	646	624	653	672	7366

PHD Episodes of Care and Bed Days
Janaury - December 2005
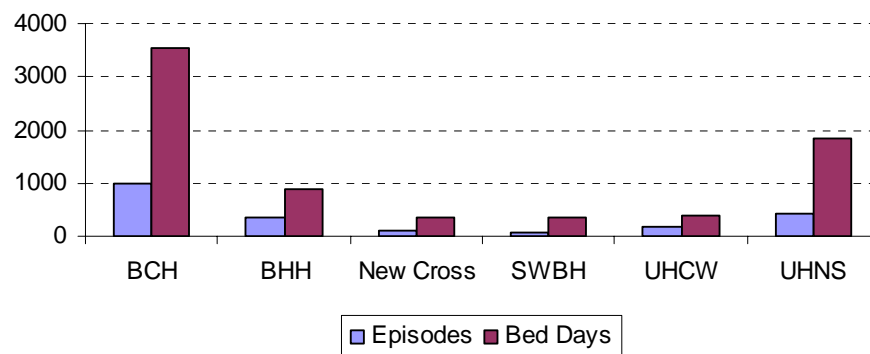
Bed Occupancy

Occupancy - The occupancy rate is generated by viewing the number of available bed days within the month against the number of occupied bed days within the month

Occupancy (of all PHD beds)

	PHD	Beds WMSSA	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
BCH	12	3	84	65	77	68	72	80	93	88	85	84	93	74	80
BHH	4	2	69	71	67	55	82	52	49	41	43	81	58	73	62
New Cross	4	3	21	7	19	23	7	13	13	16	50	46	19	44	23
SWBH	3	2	25	11	33	7	4	10	43	17	43	17	57	112	32
UHCW	4	2	32	32	22	16	25	29	23	21	20	14	42	51	27
UHNS	3	3	194	268	245	230	198	127	118	123	184	129	140	88	169
Region	30	15	72	69	73	63	64	58	65	60	72	67	73	72	67

Regional Overview

	Episodes	Patients	Deaths*
BCH	1003	702	6
BHH	362	295	2
New Cross	115	109	0
SWBH	72	68	0
UHCW	174	150	2
UHNS	419	246	5
Region	2145	1570	15

NB. Of the deaths documented only 3 contained information relating to the cause.

Episodes of PHD Care (Length of stay)

	Total Episodes	1 day		2 days		3 days		4 days		5-7 days		>7 days	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
BCH	1003*	408	40.8	173	17.3	192	19.2	98	9.8	83	8.3	47	4.7
BHH	362	84	23.2	156	43.1	62	17.1	29	8.0	25	6.9	6	1.7
New Cross	115	17	14.8	48	41.7	20	17.4	11	9.6	13	11.3	6	5.2
SWBH	72	6	8.3	26	36.1	11	15.3	8	11.1	8	11.1	13	18.1
UHCW	174	43	24.7	83	47.7	31	17.8	8	4.6	6	3.4	3	1.7
UHNS	419	107	25.5	140	33.3	79	18.8	34	8.1	32	7.6	28	6.7
Region	2145	664	31.0	626	29.2	395	18.4	188	8.8	167	7.8	103	4.8

NB. BCH had 2 admissions yet to be discharged.

Episodes of PHD Care (Median Days)

|	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BCH	2	2	2	2	2	3	2	2	2	2	2	2
BHH	2	2	2	2	2	2	2	2	2	2	2	2
New Cross	3	1	2	5	2	2	2	2	3	3	2	3
SWBH	4	2	2	2	2	4	2.5	4	3	4	4.5	5
UHCW	2.5	2.5	2	1.5	2	2	2	2	2	1.5	2	3
UHNS	2	2	2	2	2	2	2	3	2	2	2	3

The following provides information relating to the episodes of Paediatric High Dependency Care commenced, the number of bed days generated and the length of stay within Paediatric High Dependency.
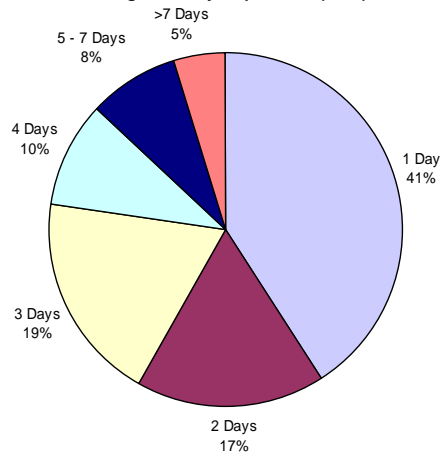
Birmingham Children's Hospital

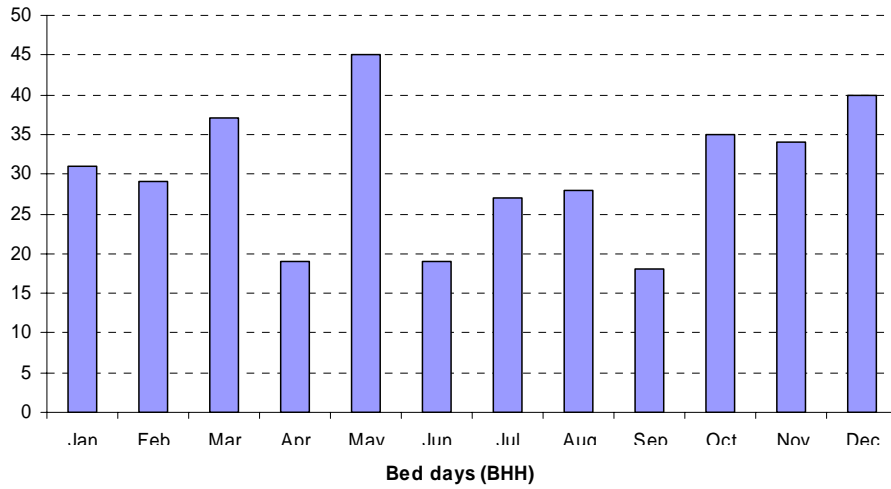**Episodes commenced (BCH)**
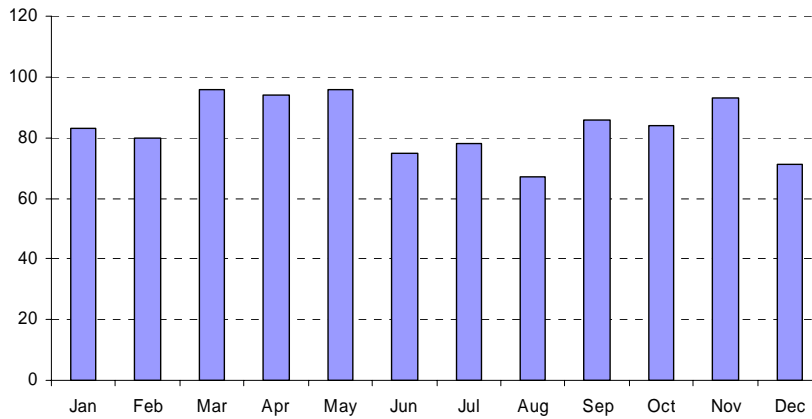
Bed days (BCH)
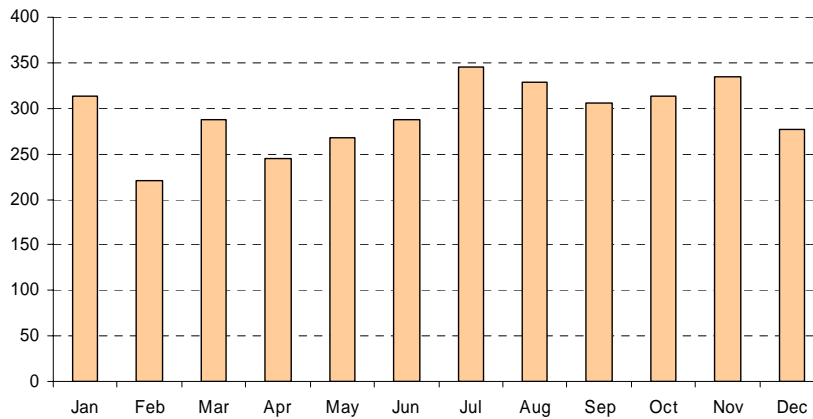
Length of stay of patients (BCH)
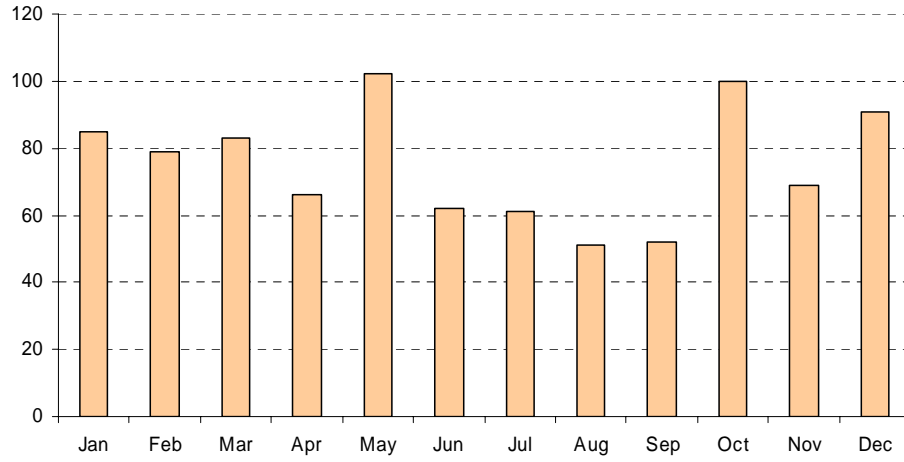
Birmingham Heartland's Hospital

Episodes commenced (BHH)

Bed days (BHH)

Length of stay of patients (BHH)
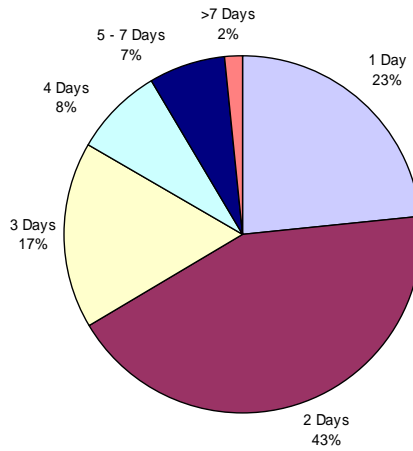
New Cross Hospital

Episodes commenced (New Cross)
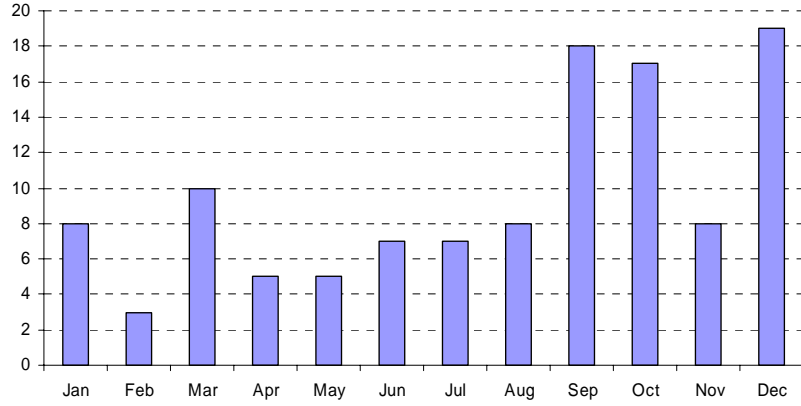
Bed days (New Cross)
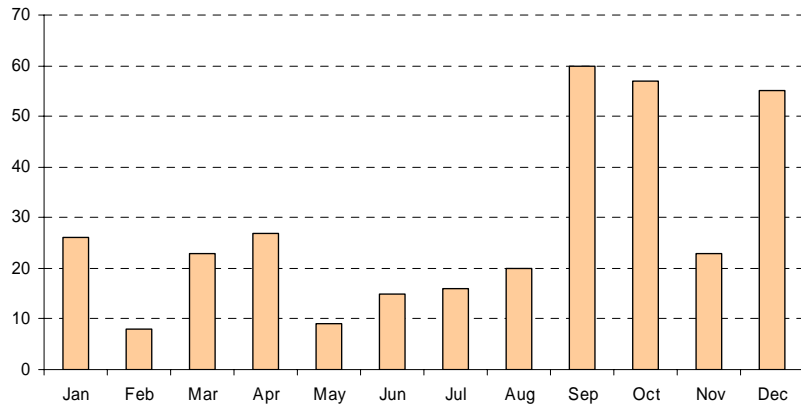
Length of stay of patients (New Cross)
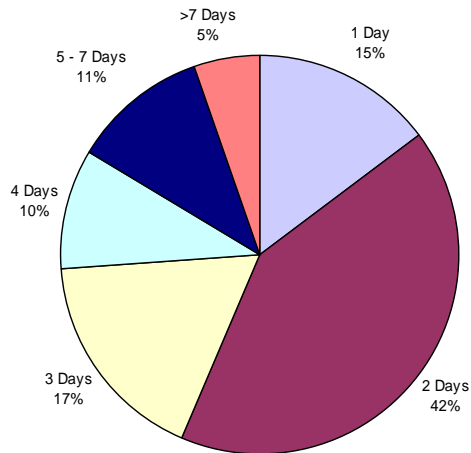
Sandwell and West Birmingham Hospitals

Episodes commenced (SWBH)
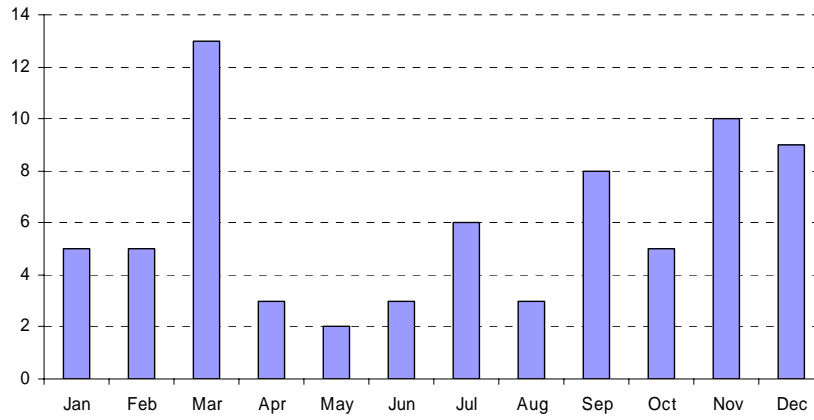
Bed days (SWBH)
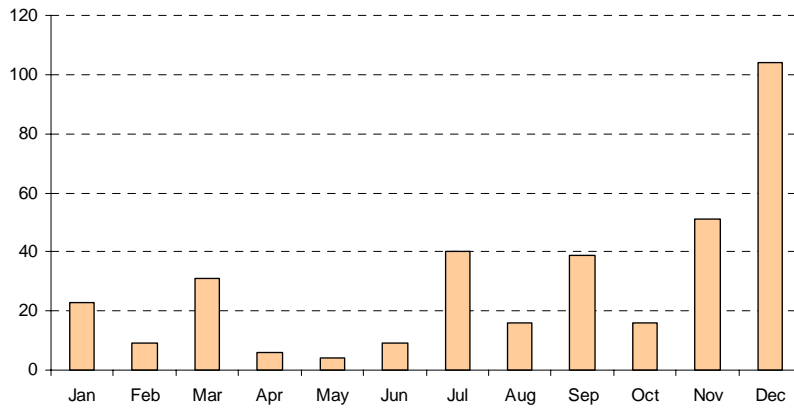
Length of stay of patients (SWBH)
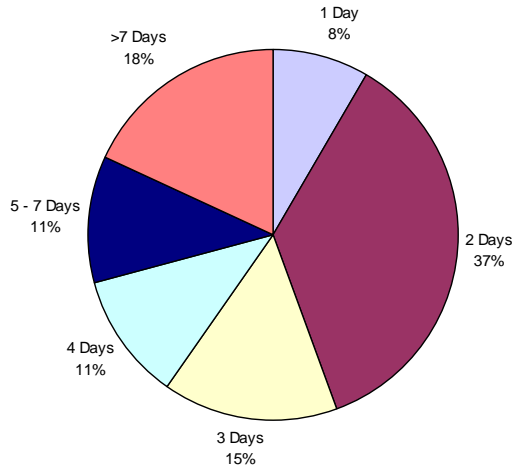
University Hospital of Coventry and Warwickshire

Episodes commenced (UHCW)
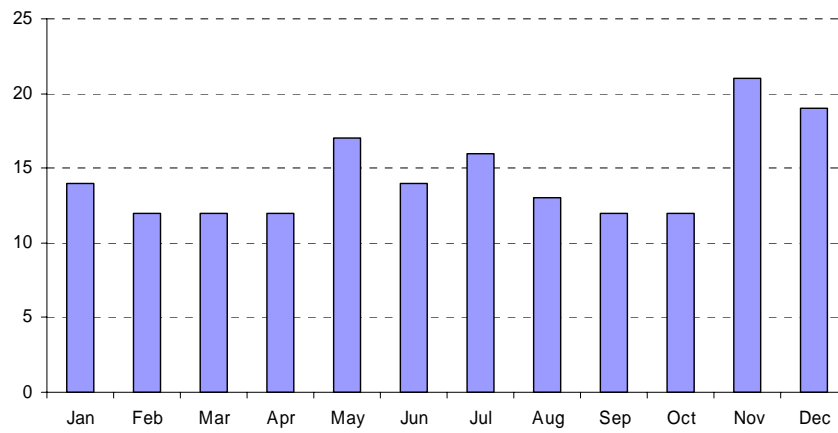
Bed days (UHCW)
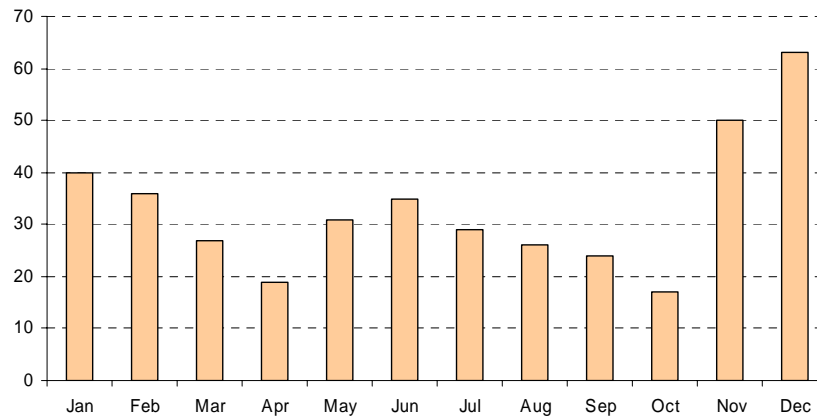
Length of stay of patients (UHCW)
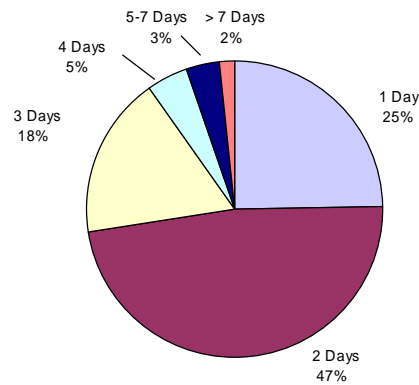
University Hospital of North Staffordshire

Episodes commenced (UHNS)
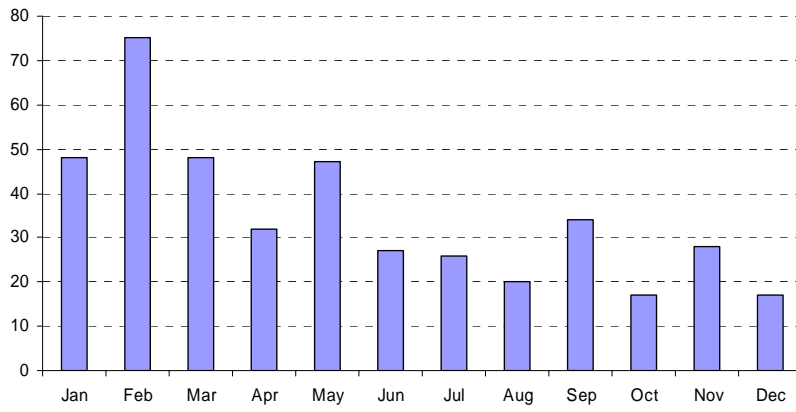
Bed days (UHNS)
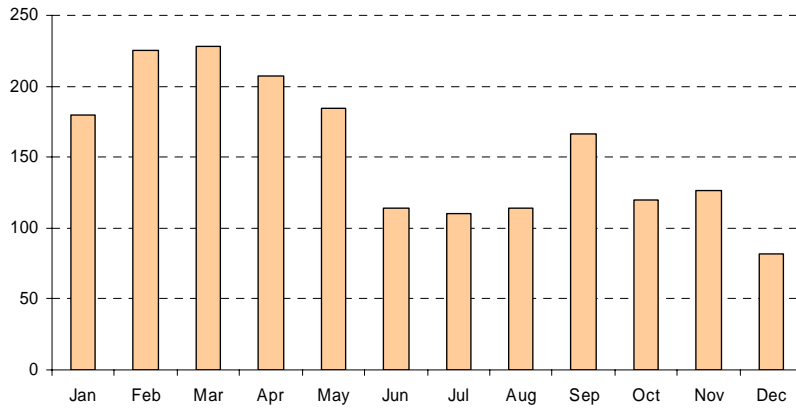
Length of stay of patients (UHNS)
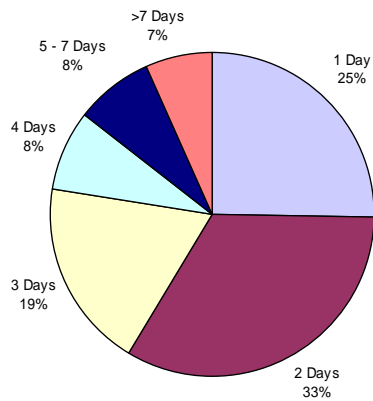
Monitoring and Support

From July 2005 the dataset was extended to enable units to document the type of monitoring and support patients within the High Dependency area were receiving (as outlined within the West Midlands Categories of Care). The percentages shown in the table do not include those patients where the type of monitoring and support received was not documented.

	Episodes (Jul – Dec)		Adv. Resp.		Basic Resp.		Circulatory		Neurological		Renal	
	Known	Unknown	No.	%	No.	%	No.	%	No.	%	No.	%
BCH	479	292	11	6	183	98	170	91	10	5	54	29
BHH	182	3	11	6	178	99	156	87	57	32	23	13
New Cross	77	3	5	7	70	95	72	97	37	50	11	15
SWBH	41	14	2	7	26	96	26	96	19	70	4	15
UHCW	93	2	9	10	90	99	85	93	28	31	5	5
UHNS	142	95	2	4	38	81	35	74	8	17	15	32
Region	1014	409	40	7	585	97	544	90	159	26	112	19

Episodes requiring Monitoring and Support
July - December 2005
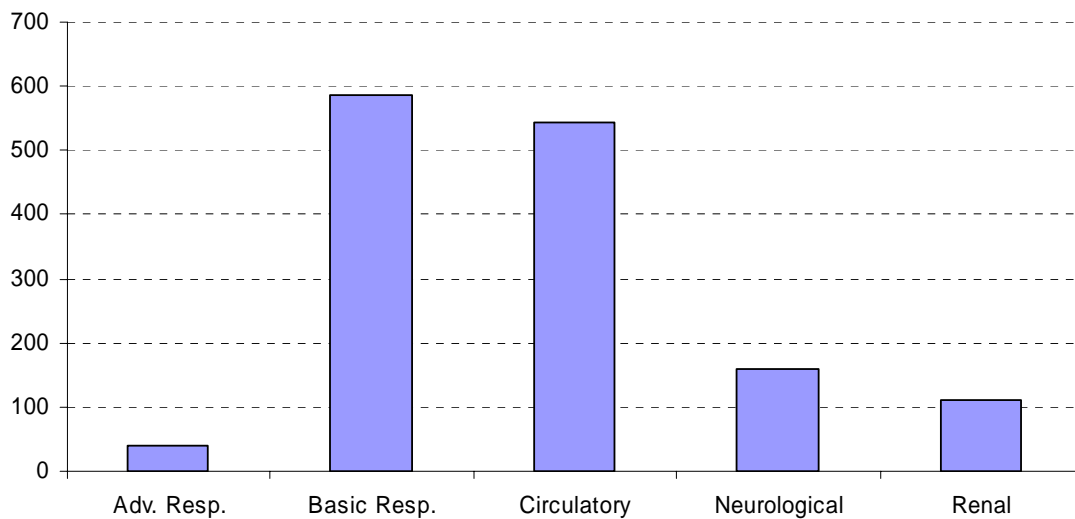
Advanced Respiratory Support

Advanced Respiratory Support can be classified as the following:

- Care of intubated patient (endotracheal tube only)
- Post-op Tracheostomy during the first 24 hours
- Mechanical ventilation including CPAP, CNEP, PEEP and CPAP via face mask

*Please note that 'other artificial airway' is no longer represented under Advanced Respiratory Report so as to reflect the West Midlands Standards guidelines. All data collected under this heading is now represented within 'basic respiratory support'.

Episodes of Advanced Respiratory Support
July - December 2005

	No.	Intubated	Post-op trach.	Mechanical
BCH	11	1	0	11
BHH	11	4	0	10
New Cross	5	1	0	4
SWBH	2	0	0	2
UHCW	9	8	0	6
UHNS	2	0	0	2
Region	40	14	0	35
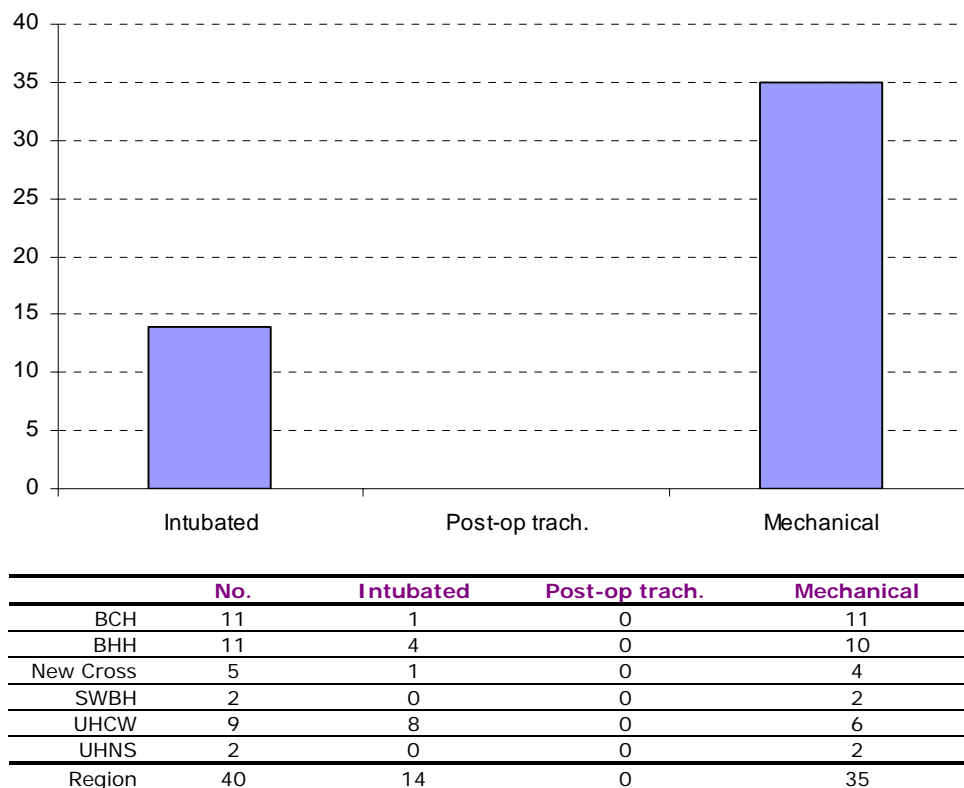
Basic Respiratory Support

Basic Respiratory Support can be classified as the following:

- Care of long term Tracheostomy
- Other artificial airway (e.g. guedel airway, nasopharyngeal airway)
- Oxygen 60% or more at any time
- Oxygen 40% or more at any time in neonate less than 28 days
- Nebulised medication >1 per hour for >6 hours (e.g. salbutamol, adrenaline)
- Four apnoeic episodes within 12 hours requiring stimulation
- Care of chest drains for the first 24 hours
- Monitoring (e.g. ECG and oxygen saturations)
- Postoperative tonsillar and adenoidal bleeds

Episodes of Basic Respiratory Support
July - December 2005
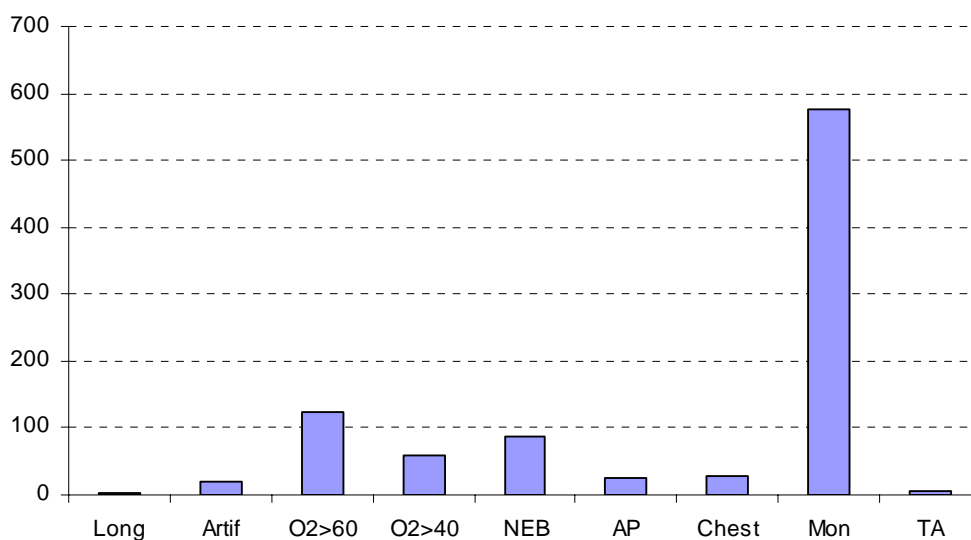
	No.	Long	Artif	O_2>60	O_2>40	NEB	AP	Chest	Mon	TA
BCH	183	2	9	38	31	16	14	24	180	1
BHH	178	1	1	13	10	35	2	1	176	4
New Cross	70	0	3	18	4	7	4	1	69	0
SWBH	26	0	0	6	1	8	2	0	26	0
UHCW	90	0	6	46	12	19	4	1	87	1
UHNS	38	1	0	2	0	2	0	2	37	0
Region	585	4	19	123	58	87	26	29	575	6

Circulatory Support

Circulatory Support can be classified as the following:

- Cardio Pulmonary Resuscitation in the last 24 hours
- Intravenous fluid bolus - greater than 20mls/Kg on any occasion
- Arterial line monitoring
- Central Venous Pressure monitoring
- Inotropic support (e.g. dobutamine, dopamine, adrenaline)
- External cardiac pacing – using a pacing box
- Hourly urine output
- Hourly Blood Pressure recordings or close visual observation
- Bleeding – concern over volume of blood loss

Episodes of Circulatory Support
July - December 2005
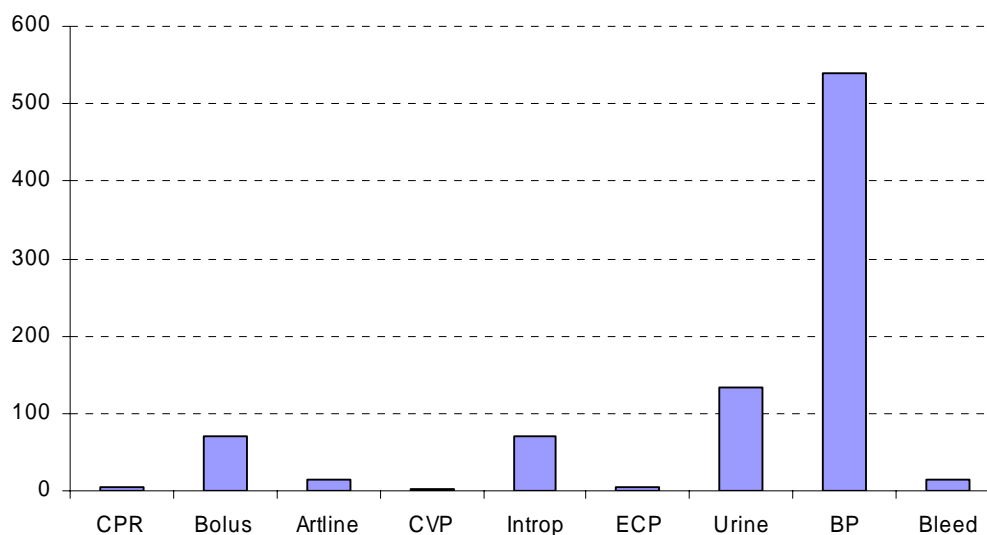
	No.	CPR	Bolus	Artline	CVP	Introp	ECP	Urine	BP	Bleed
BCH	170	1	14	0	0	67	3	71	169	3
BHH	156	1	14	5	1	2	0	26	156	3
New Cross	72	1	14	4	0	0	0	14	71	4
SWBH	26	0	3	0	0	0	0	7	26	1
UHCW	85	2	18	5	1	2	1	10	84	4
UHNS	35	0	8	0	0	0	0	5	33	0
Region	544	5	71	14	2	71	4	133	539	15

Neurological Support

Neurological Support can be classified as the following:

- Continuous neuro-observations
- Continuous seizures for >1 hour
- Intra Cranial Pressure bolt monitoring
- Intraventricular catheter insitu -for drainage/monitoring
- Patient receiving patient controlled analgesia (PCA) – concern over sedatory effect

Episodes of Neurological Support
July - December 2005
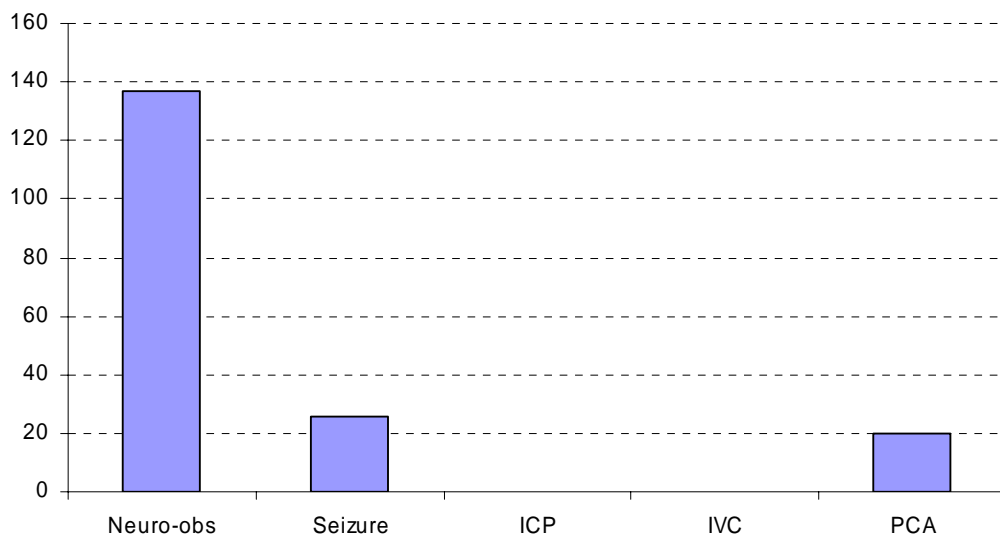
	No.	Neuro-obs	Seizure	ICP	IVC	PCA
BCH	10	9	5	0	0	0
BHH	57	52	8	0	0	4
New Cross	37	26	10	0	0	11
SWBH	19	19	1	0	0	0
UHCW	28	28	2	0	0	0
UHNS	8	3	0	0	0	5
Region	159	137	26	0	0	20

Renal Support

Renal Support can be classified as the following:

- Peritoneal dialysis
- Multiple infusions – concern over fluid overload/balance
- Fluid replacement (e.g. naso-gastric losses, drain losses, insensible losses)
- Multiple blood products

Episodes of Renal Support
July - December 2005
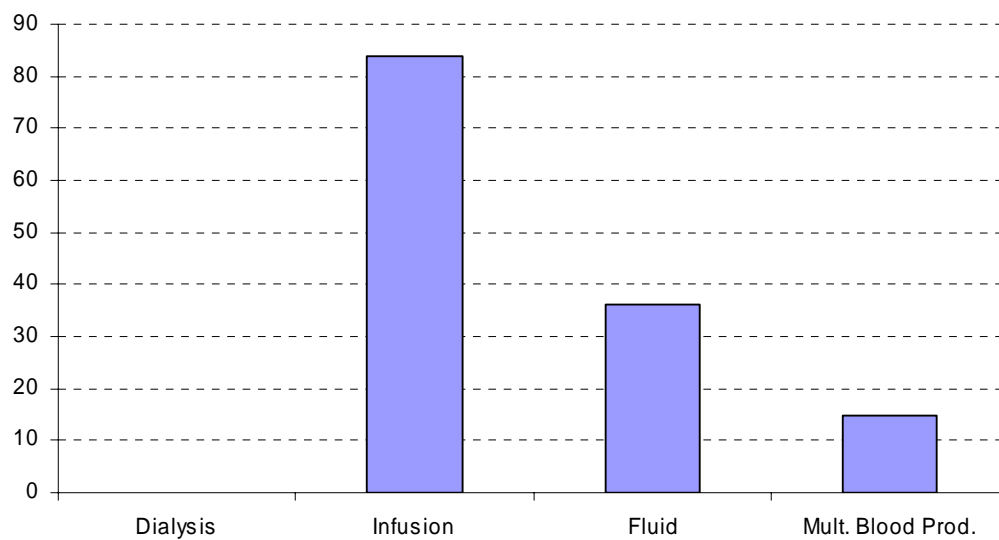
	No.	Dialysis	Infusion	Fluid	Mult. Blood Prod.
BCH	54	0	47	14	4
BHH	23	0	17	7	3
New Cross	11	0	9	3	0
SWBH	4	0	1	3	1
UHCW	5	0	1	4	2
UHNS	15	0	9	5	5
Region	112	0	84	36	15

Consent

An audit was undertaken in the week commencing 13th March 2005.

Unit	Returned Proforma	Total notes reviewed	Notes stamped but not signed	Notes signed but not stamped	Notes stamped and signed by caregiver	Neither completed
BCH w6	Yes	4	0	0	4	0
BCH w11	Yes	12	0	0	12	0
BCH w12	Yes	7	3	0	4	0
Heartlands	Yes	9	1	0	8	0
City	Yes	*No Patients*				
Sandwell	Yes	5	0	0	4	1
New Cross	Yes	4	0	4	0	0
UHNS	Yes	3	0	0	3	0
Walsgrave	No					

Since July 2005, the dataset was extended to demonstrate whether consent in relation to the use of the data collected, was being discussed and whether patients/carers required interpretation.

	Discussed (%)			Interpreter needed (%)		
	Yes	No	?	Yes	*No	?
BCH	32	6	63	0	96	4
BHH	100	0	0	0	99	1
New Cross	73	8	19	11	89	0
SWBH	75	6	19	0	100	0
UHCW	36	21	43	0	100	0
UHNS	62	34	4	6	90	4

* The percentage rates are representative of occasions when it was stated that consent had been discussed.

Consent Protocol for
Secondary Use of Paediatric Data

September 2004

This protocol is built around the Parent Information Leaflet - "A guide to recording information on your child's high dependency care" - which is in standard use in the West Midlands.

1. All parents/guardians should be given the leaflet as soon as possible following admission of their child to the Unit.

2. The caregiver should complete the <u>stamp</u> in the child notes that information concerning data collection / purpose of use etc has been explained.

3. Details should be given about where further information can be obtained, including local contacts and details of the Perinatal Institute, as detailed on the back page of the leaflet.

4. If the parent/guardian does not have sufficient understanding of the English language, an interpreter (rather than family member) should be made available.

5. If the parent/guardian decides, at any time, that they do not want any details about their child to be used for secondary analysis, this information should be recorded in the child's notes and the MANNERS support team should be notified, by the mother directly: Phone 0121 687 3434 or Email: manners@perinatal.nhs.uk

6. The MANNERS team will ensure that an 'opt-out' form is sent to the parent/guardian for completion and the unique identifier (NHS Number) will be used to ensure that their child's data is blocked from extraction for secondary analysis.

West Midlands Paediatric High Dependency
Professional Advisory Group
Terms of Reference

Aim

The aim of the Advisory Group is to advise the West Midlands Perinatal Institute and the West Midlands Specialised Services Agency on clinical issues relating to the maintenance, development, analysis and dissemination of findings of the Paediatric High Dependency Register. The Advisory Group will be chaired by the Director of the Perinatal Institute.

Remit:

1. Review and comment on the operational structure and function of the Paediatric High Dependency Register

2. Review the collection and ascertainment of data and recommend improvements as required, liaising with units directly to establish validity of their data

3. Review and advise on data and consider recommendations on measures likely to improve paediatric high dependency care

4. Advise on implications of data for paediatric high dependency services within the West Midlands region

Composition

- Director of the Perinatal Institute (Chair)

- Paediatric staff representatives (Medical and Nursing)

- Representative of West Midlands Specialised Services Agency

- Parent's representative

- Consultant Advisor to the Paediatric High Dependency Register

- Perinatal Institute - Clinical Informatics Manager and PHDU Project Administrator

- Additional members co-opted as required

Meetings

Meetings will be held quarterly, with administrative support provided by the Perinatal Institute.

West Midlands Categories of High Dependency Care

Advanced Respiratory Support

- Care of intubated patient (endotracheal tube only)
- Post-op Tracheostomy during the first 24 hours
- Other artificial airway (e.g. guedel airway, nasopharyngeal airway)

  (this will no longer be included under advanced respiratory support)
- Mechanical ventilation including CPAP, CNEP, PEEP and CPAP via face mask

Basic Respiratory Monitoring and Support

- Care of long term Tracheostomy
- Other artificial airway (e.g. guedel airway, nasopharyngeal airway)
- Oxygen 60% or more at any time
- Oxygen 40% or more at any time in neonate less than 28 days
- Nebulised medication >1 per hour for >6 hours (e.g. salbutamol, adrenaline)
- Four apnoeic episodes within 12 hours requiring stimulation
- Care of chest drains for the first 24 hours
- Monitoring (e.g. ECG and oxygen saturations)
- Postoperative tonsillar and adenoidal bleeds

Circulatory Support

- Cardio Pulmonary Resuscitation in the last 24 hours
- Intravenous fluid bolus - greater than 20mls/Kg on any occasion
- Arterial line monitoring
- Central Venous Pressure monitoring
- Inotropic support (e.g. dobutamine, dopamine, adrenaline)
- External cardiac pacing – using a pacing box
- Hourly urine output
- Hourly Blood Pressure recordings or close visual observation
- Bleeding – concern over volume of blood loss

Neurological Monitoring and Support

- Continuous neuro-observations
- Continuous seizures for >1 hour
- Intra Cranial Pressure bolt monitoring
- Intraventricular catheter insitu -for drainage/monitoring
- Patient receiving patient controlled analgesia (PCA) – concern over sedatory effect

Renal Support

- Peritoneal dialysis
- Multiple infusions – concern over fluid overload/balance
- Fluid replacement (e.g. naso-gastric losses, drain losses, insensible losses)
- Multiple blood products

Any child with impending single or multiple organ failure should be categorised under the most appropriate group according to their clinical condition.

Paediatric High Dependency Core Data Index

Data Item, Basis, Explanation, Values and Origin

Version 3: July 2005

Data items: 20

Crystal Court
Aston Cross
Birmingham
B6 5RQ

For further information contact:

Nicola Beamish

Tel: 0121 687 3434

Email: nicola.beamish@perinatal.nhs.uk

REFERENCE DATASETS

BNDS   Birth Notification Data Set

CAR   WM Congenital Anomalies Register

CCICIC   Standards for the Care of Critically Ill & Critically Injured Children in the
            West Midlands

CDS   Commissioning Data Set

CEMACH   Confidential Enquiry into Maternal and Child Health

CMDS   Commissioning Minimum Data Set

HES   Hospital Episode Statistics

NSC   National Screening Committee

ONS   Office for National Statistics

SS   SureStart

REFERENCE MATERIAL

High Dependency Care for Children Report of an expert advisory group for Department
of Health 2001
http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuida
nce/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4010058&chk=GcyIXt

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A. DEMOGRAPHIC DETAILS

DATA ITEM   **NHS Number of patient**
BASIS   Unique person identifier
EXPLANATION   Unique identifier for use at local level and for record linkage in patients
receiving care in more than one unit and for subsequent outcome data
INPUT OPTIONS   3-3-4 numerical format
DATA ORIGIN   BNDS, CDS, CEMACH, HES

DATA ITEM   **Postcode of patient at time of care episode**
BASIS   Identification of residence at time of admission
EXPLANATION   To derive geographical distribution of patients
Link to district code to compare with ONS data
To derive deprivation score
INPUT OPTIONS   Alphanumerical format (Post Office Preferred Format)
DATA ORIGIN   CAR, CDS, CEMACH, HES, SS

DATA ITEM   **Date of birth**
BASIS   Date of birth
EXPLANATION   Required to derive age for analysis by age at death
INPUT OPTIONS   DD/MM/YYYY
DATA ORIGIN   BNDS, CDS, CEMACH, HES

DATA ITEM   **Gender**
BASIS   Phenotypic classification of appearance of sex of patient at admission
EXPLANATION   Required to analyse outcome by sex
INPUT OPTIONS   *Mutually exclusive*
Male
Female
Not specified
Not known
DATA ORIGIN   BNDS, CDS, CEMACH, HES

DATA ITEM   **GP code**
BASIS   Unique GP identifier
EXPLANATION   Requirement for commissioning
INPUT OPTIONS   Linked to National GP database
DATA ORIGIN   BNDS, CDS, HES

DATA ITEM   **Practice code**
BASIS   Practice location identifier
EXPLANATION   Requirement for commissioning
INPUT OPTIONS   Linked to National GP database
DATA ORIGIN   BNDS, CDS

B. COMMENCEMENT OF HD CARE DATA

DATA ITEM	**Commencement date of HD care**
BASIS	Date at which an inpatient episode of care commences
EXPLANATION	Used in the calculation of number of care days given.
	Required to analyse patient age at admission and discharge, length of stay
	Assists in record linkage in patients transferred between units
INPUT OPTIONS	DD/MM/YYYY
DATA ORIGIN	HES

DATA ITEM	**Source of referral**
BASIS	Each separate care episode of the patient on the paediatric high
dependency area	
EXPLANATION	Required to analyse outcome differences between patients.
	Describes movement of a high risk patients
INPUT OPTIONS	*Mutually exclusive*
	Home
	This hospital – same ward
	This hospital – other ward (free text)
	Other hospital (free text)
	Hospital at home
DATA ORIGIN	HES

C. MONITORING AND SUPPORT DATA

DATA ITEM	**Advanced Respiratory Support**
BASIS	A record of need for advanced respiratory support
EXPLANATION	Identifies whether patient required paediatric high dependency care
INPUT OPTIONS	*Non-mutually exclusive*
	Care of intubated patient (ETT only)
	Postoperative Tracheostomy during the first 24 hours
	Other artificial airway
	Mechanical ventilation including CPAP, CNEP, PEEP and CPAP via face mask
DATA ORIGIN	CCICIC Standards

DATA ITEM	**Basic respiratory monitoring and support**
BASIS	A record of need for basic respiratory monitoring and support
EXPLANATION	Identifies whether patient required paediatric high dependency care
INPUT OPTIONS	N*on-mutually exclusive*
	Care of long term tracheostomy
	Other artificial airway (e.g. guedel airway, nasopharyngeal airway)
	Oxygen 60% or more at any time
	Oxygen 40% or more at any time in neonate less than 28 days
	Nebulised medication >1 per hour for >6 hours (e.g. salbutomol, adrenaline)
	Four apnoeic episodes within 12 hours requiring stimulation
	Care of chest drains for the first 24 hours
	Monitoring (combined ECG and oxygen saturations)
	Postoperative tonsillar and adenoidal bleeds
DATA ORIGIN	CCICIC Standards

DATA ITEM	**Circulatory Support**
BASIS	A record of need for circulatory support
EXPLANATION	Identifies whether patient required paediatric high dependency care
INPUT OPTIONS	*Non-mutually exclusive*
	Cardio Pulmonary Resuscitation in the last 24 hours
	Intravenous fluid bolus – greater than 20mls/Kg on any occasion
	Arterial line monitoring
	Central Venous Pressure monitoring
	Inotropic support (e.g. dobutamine, dopamine, adrenaline)
	External cardiac pacing – using a pacing box
	Hourly urine output
	Hourly blood pressure recordings or close visual observation
	Bleeding (e.g. concern over volume of blood loss)
DATA ORIGIN	CCICIC Standards

DATA ITEM	**Neurological Monitoring and Support**
BASIS	A record of need for neurological monitoring and support
EXPLANATION	Identifies whether patient required paediatric high dependency care
INPUT OPTIONS	*Non-mutually exclusive*
	Continuous neuro-observations
	Continuous seizures for >1 hour
	Intra cranial pressure bolt monitoring
	Intraventricular catheter insitu – for drainage/monitoring
	Patient receiving Patient Controlled Analgesia (concern over sedatory effects)
DATA ORIGIN	CCICIC Standards

DATA ITEM	**Renal Support / Fluid Balance**
BASIS	A record of need for renal support and fluid balance monitoring
EXPLANATION	Identifies whether patient required paediatric high dependency care
INPUT OPTIONS	*Non-mutually exclusive*
	Peritoneal dialysis
	Multiple infusions
	Fluid replacement (e.g. naso gastric losses, drain losses, insensible losses)
	Multiple blood products
DATA ORIGIN	CCICIC Standards

D. HD Outcome

DATA ITEM	**Status at conclusion of HD care**
BASIS	Record of patient status at conclusion of HD care
EXPLANATION	An important outcome indicator
INPUT OPTIONS	*Mutually exclusive*
	Alive
	Dead
DATA ORIGIN	CEMACH

DATA ITEM	**Date of death**
BASIS	A record of the date of death of the patient
EXPLANATION	Used to calculate duration of survival. An important outcome indicator which has resource implications
INPUT OPTIONS	DD/MM/YYYY
DATA ORIGIN	CEMACH

DATA ITEM	**Time of death**
BASIS	A record of the time of death of the patient
EXPLANATION	Used to calculate duration of survival. An important outcome indicator which has resource implications
INPUT OPTIONS	HH:MM (24 hour clock)
DATA ORIGIN	CEMACH

DATA ITEM	**Cause of death**
BASIS	A description of cause of death of a patient
EXPLANATION	An important outcome indicator
INPUT OPTIONS	As per Medical certificate of cause of death ONS
DATA ORIGIN	CEMACH, ONS

DATA ITEM	**Post Mortem examination**
BASIS	A record of whether post mortem performed
EXPLANATION	Used to determine post mortem rate and refusal rate
INPUT OPTIONS	*Mutually exclusive*
	No
	No – consent declined
	Yes
DATA ORIGIN	CEMACH

DATA ITEM	**Discharge destination**
BASIS	Record of disposition of patient on completion of episode of care on paediatric high dependency area
EXPLANATION	Allows analysis of movement of patients within hospital and within region or Network.
	Assists record linkage of patients who move within a hospital and between hospitals.
INPUT OPTIONS	*Mutually exclusive*
	Home
	This hospital – other ward (free text)
	This hospital – adult ICU
	This hospital - PICU
	Other hospital – PICU (free text)
	Other hospital – ward (free text)
	Hospital at home
DATA ORIGIN	HES

DATA ITEM	**Conclusion date of HD care**
BASIS	Date on which inpatient completes an episode of care either because of discharge or death
EXPLANATION	Used in the calculation of number of care days given.
	Required to derive length of stay and to assist in record linkage
INPUT OPTIONS	DD/MM/YYYY
DATA ORIGIN	CDS, HES