

# West Midland Paediatric Retrieval Service



**WMPRS**

Serving the children of the West Midlands

## Annual Report

2010/2011

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## **1.0 Background**

The WM Paediatric Retrieval Service (WMPRS) provides a twenty four hour specialist intensive care support, advice and transportation service for children within the West Midlands. The service became operational on the 14<sup>th</sup> September 2009. The West Midlands has 20 District General Hospitals (DGH) and 2 Paediatric Intensive Care Units (PICU). There is a total population of 5.5 million of which 1.1 million fall within the neonatal and paediatric age group. The region's annual admission rate to PICU is currently 1.3 per 1000 children. The West Midlands has a mixture of densely populated urban areas and rural countryside stretching to the counties of Herefordshire to the south, Shropshire to the west, Staffordshire to the north and Warwickshire to the east. The infant and child mortality rate for the West Midlands is higher than the national average which requires service planning for this age group to be sensitive to the unique population and geographical characteristics of this region.

The West Midland PICUs are based at Birmingham Children's Hospital NHS Foundation Trust (BCH) and University Hospital of North Staffordshire NHS Trust (UHNS). The service operates a twenty four hour coordination centre, to provide immediate support and advice from a Consultant Paediatric Intensivist, to assist referring hospital clinicians with an appropriate solution for each referred child. WMPRS reached the regional final of the NHS Health and Social Care Awards in September 2010 in the 'acute care innovation category'.

## **1.1 Mission Statement**

To provide referring hospital clinicians with an appropriate solution for children who require expert paediatric critical care support and provide specialist paediatric intensive care transportation to an appropriate regional PICU bed when required.

The service will:

- Ensure there is sustained publicity available to all West Midland hospitals about how to access WMPRS and refer a child.
- Ensure there is twenty four hour uninterrupted provision of the coordination centre function with the ability to connect a referring hospital clinician to a Consultant Paediatric Intensivist within 5 minutes.
- Ensure there is a suitably trained Retrieval Team and dedicated ambulance provision available twenty four hours per day to transport children from their local hospital to a centre with PICU.

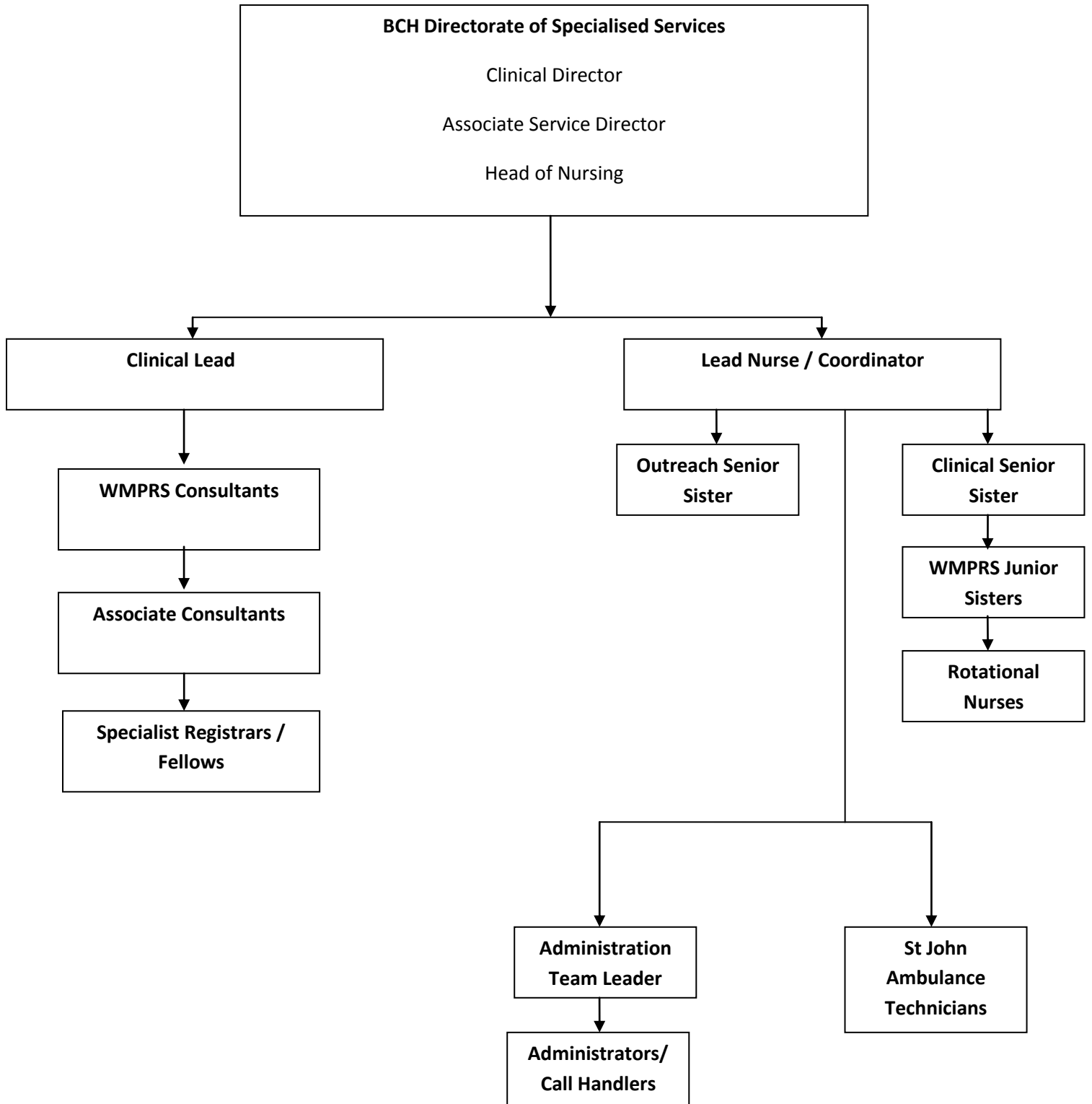
- Provide education and outreach to departments which care for children in the 20 West Midland Hospitals, assisting them to improve their clinical capability and have more suitable local infrastructure to care for children requiring care of higher dependency.
- To actively participate in the local community of the 2 lead centres and the 20 West Midland Hospitals; being sensitive to local paediatric service delivery, monitoring regional bed resource management issues and contributing to any other relevant regional strategic developments (especially where there is involvement with other service providers who care for sick babies or children).
- Ensure the children and families are provided with the opportunity to feedback to the service, and contribute to the direction of future service delivery.

## 1.2 Service Standards Delivered by WMPRS

This standards were drawn up in 2009 and form part of the Service Level Agreement (SLA) between the West Midland Specialised Commissioning Team (WMSCT) and Birmingham Children's Hospital NHS Foundation Trust. They will be subject to review 2011/2012.

1. The WMPRS Call Centre Office/telephone must be staffed at all times.
2. All WMPRS referral telephone calls will be promptly answered and will be recorded.
3. Incoming referrals will be connected with the WMPRS Retrieval Co-ordination Consultant (RCC) within 5 minutes.
4. Destination hospital will be determined by referring centre preference unless clinical need requires an alternative destination e.g. neurosurgery to BCH.
5. If the referring centre has no preferred destination, the destination will be determined in accordance with the 're-direction' policy.
6. The duty WMPRS Retrieval Co-ordination Consultant must be involved with all decisions to accept or decline referrals.
7. The Retrieval Team will be available at least 95% of the time
8. The decision to accept or refuse patients for PICU admission can only be made by the duty PICU consultant.
9. Medical history and basic observations supplied by referring hospital must be recorded in all cases.
10. Advice given by WMPRS clinical staff taking the referral must be recorded, and countersigned in all cases.
11. Clinical information should be recorded and entered on the database within 24 hours of retrieval.
12. All delays and critical incidents must be recorded. Summary reports to be submitted to the monthly WMPRS Business Meeting and sent to BCH Clinical Governance Department, as per BCH critical incident reporting policy.

### 1.3 WMPRS Organisational Structure



## 1.4 Directorate of Specialised Services

### **Clinical Director**

Dr. Gill Derrick

### **Associate Service Director**

Amanda Baugh

### **Head of Nursing**

Helen Watson

### **WMPRS Clinical Lead**

Dr. Mary Montgomery

### **WMPRS Consultant**

Dr. Sanjay Revanna

### **Associate Consultants**

Dr. Reinout Mildner

Dr. Linda Edwards

Dr. Heather Duncan

Dr. Kevin Morris

Dr. Gale Pearson

Dr. Mark Bebbington

Dr. Tina Newton

Dr. Fiona Reynolds

Dr. Pavanasam Ramesh

Dr. Phil Hyde

### **Registrars / Fellows**

Dr. Richard Neal

Dr. Jeremy Tong

### **WMPRS Lead Nurse / Coordinator**

Phil Wilson

### **Clinical Senior Sister / Deputy Coordinator**

Anneke Gyles

### **Outreach Senior Sister**

Sophie Jones

### **Junior Sisters / Charge Nurses**

Emma Bull

Sharon Hale

Arwen Jobbins

Sarah Webb

Tracey Rowberry

Michael Newton

Dr. Balazs Fule

**BCH Rotational Nurses**

Kate Theophilus

Ruth Phillips

Natalie Read

Bricilla Selva-Saroja

Donna Smith

Jaqueline Nisbett

Kamlesh Jaiswar

Hannah McGregor

Alex McDonald

Natalie Edwards

Rachel Hancock

Amanda Hall

Nicole Bedson

Andy McKeown

**UHNS Rotational Nurses**

Jackie Somerfield

Sarne Rushton

Claire Boissery

Rachel Skinner

**Coordination Centre Administration Team Leader**

Katie Allen

**Coordination Centre Administrators**

Richard Murphy

Lorraine Rooker

Sarah Casey

Edward Flower

Kirsty Wixey

Hannah Toovey

**St John Ambulance Service Operational Manager**

Dave Belcher

**St John Ambulance Technicians**

Alan Jinks

Dawn Rossitor

Gemma Mellor

Jayne Wilson

Mick Smith

Phil Sprigg

Robert Bytheway

Christian May

Darren Elgerton



## 1.5 Service Management Meetings

WMPRS has established a sustained programme of meetings to review practice and operational issues

### **Morning Meeting**

Held: Every weekday at 8am

Purpose: Clarify all WMPRS operational issues for next 24 hours and review patient activity from previous 24 hours. All clinical notes are reviewed in detail and matters which need to be taken forward are allocated to an appropriate member of staff. All rotas for the administration, nursing, medical and ambulance staff are checked in detail. Regional weather and traffic activity is routinely monitored at this meeting

### **Retrieval Practice Group**

Held: Bi-Monthly

Purpose: Provide forum to review existing clinical practice and review new proposals. Relationship established with BCH PICU clinical practice meeting and UHNS PICU management to ensure relevant information is exchanged.

### **Flight Group**

Held: Bi-Monthly

Purpose: Provide forum to establish robust training programme, procedures and equipment needs for undertaking 'flight retrievals'.

### **WMPRS Team Meeting**

Held: Monthly

Purpose: Monthly operational meeting to review activity, matters arising, updates and operational issues which require addressing.

### **WMPRS Coordination Centre Administration Team Update**

Held: 3 Times per year

Purpose: Review coordination centre function, introduce new practices involving coordination centre team, feedback examples of good practice and areas where improvements may be needed. Update team with any changes elsewhere in the service. Provide training – eg new patients groups, service changes or switchboard training

### **WMPRS Core Nursing Team Meeting**

Held : Quarterly

Purpose: Review clinical nursing issues and the rotational programmes from PICU at BCH or UHNS. Important training needs may be addressed at this meeting. This meeting provides a forum for the nurses from the various sources that serve WMPRS to meet and exchange thoughts and ideas.

### **Ambulance Contract Review Meeting**

Held: Quarterly

Purpose: To meet contracted ambulance service management team to review, activity, incidents and any forthcoming issues which may affect WMPRS ambulance provision.

### **WMPRS Steering Group Meeting**

Held: Quarterly

Purpose: to act as a forum for clinicians, commissioners and managers to have an overview of the service and provide support and strategic direction for the development of the service

## 2.0 Referral Volume & Outcome 2010/11

WM Hospitals	Out of Region		Total	Crude Mortality [48 Hours post Referral]
830	114		944	1.8%

## 2.1 Mobilisation, Stabilisation & Episode Times 2010/2011

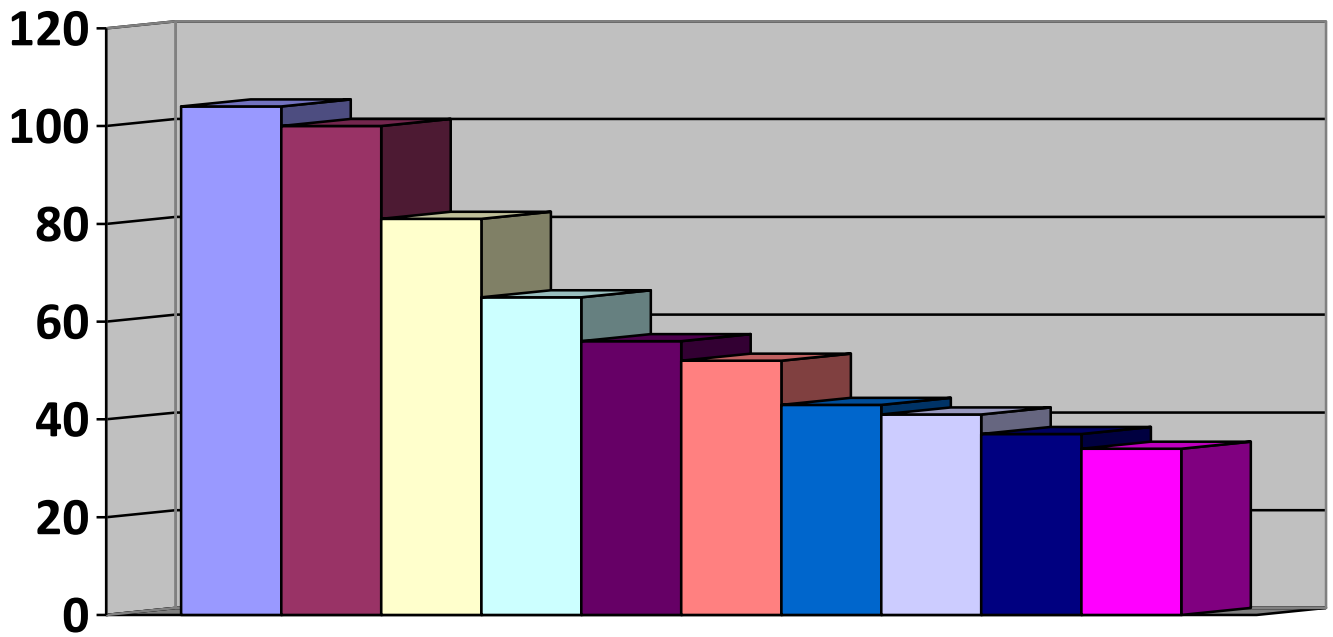
	Median (Hrs)	IQR (Lower)	IQR (Upper)
Referral Time → Retrieval Decision Time	00:15	0:09	0:35
Mobilisation Time (Decision to Mobile)	00:34	0:24	0:45
Stabilisation Time (Time at DGH)	01:55	1:20	2:27
Retrieval Decision Time → Arrival at DGH	01:50	1:10	2:25
Retrieval Decision Time → Arrival on PICU	04:45	03:42	5:55

## 2.2

## WM Hospital Referrals 2010/11

Hospital	Number
Coventry	104
Heartlands	100
BCH	81
Wolverhampton	65
Russells Hall	56
Walsall	52
Birmingham Women's Hospital	43
Good Hope	41
Sandwell	37
Burton	34
Warwick	31
City	30
Worcester	29
UHNS	27
Alexandra	21
Shrewsbury	18
Hereford	18
Telford	16
George Eliot	16
Stafford	8
Orthopaedic	2
Kidderminster	1
Total	830

# Top 10 Referrers



## 2.3 Out-Of Region Hospital Referrals

Hospital	Number
Nottingham QMC	13
Derby	7
GOSH	7
Northampton	7
Kettering	5
RMCH	5
Banbury	4
Leighton	4
Belfast	4
LRI	3
Milton Keynes	3
Newport	3
Boston	2
Cardiff	2
Kings Mill	2
Lincoln	2
Newcastle	2
Oldham	2
Peterborough	3
Bridgend	2
UHB	2
Glamorgan	2
Sheffield	2
Bangor	1

Hospital	Number
Bath	1
Blackburn	1
Bradford	1
Bristol RI	2
Camp Bastion	1
Chester	1
Evelina	1
Glan Clywd	1
Inverness	1
Kidderminster	1
Kingston	1
Leeds GI	1
Northwich Park	1
Oxford	1
Rhyll	1
Swansea	1
South Mead	1
Stoke Mandeville	1
Swindon	1
West Wales	1
Whittington	1
York	1
Yorkhill	1
Bristol Southmead	1

East Midlands

**Total = 114**

## 2.4 Preference and Destination of All Referrals

Preference	No.	BCH	BCH Ward	UHNS	Other WM	None	UHL	QMC	Alder Hey	Manchester	Bristol	GOSH	Cardiff	Sheffield	Addenbrookes	Glasgow	Leeds	Southampton	Other OOR	Oxford	Newcastle
BCH	354	221	30	30	7	45	5	7	4	0	1	1	1	0	0	0	0	0	0	1	1
UHNS	42	0	0	38	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
None	464	96	8	87	3	231	16	8	4	1	1	1	1	1	1	1	1	1	0	1	1
UHL	16	1	0	1	0	2	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other WM	33	0	0	0	29	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alder Hey	4	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Addenbrookes	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manchester	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Sheffield	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Nottingham	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Newcastle	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
GOSH	17	0	0	0	0	1	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0
Other OOR	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Total	944	318	38	157	39	287	34	18	11	3	2	18	2	3	1	1	1	1	1	2	7

## 2.5 Transportation teams mobilised by Coordination Consultant

Team	Number
WMPRS	526
Primary Transfer	53
WM NTS	48
UHNS	10
UHL	9
QMC	4
Other OOR	7
Not Admitted / Advice Only	287
<b>Total</b>	<b>944</b>

## 2.6 Referrals received when WMPRS engaged on previous patient

2010/2011	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Total Occasions	14	14	9	8	6	11	10	28	69	50	29	34
Another team activated	7	2	4	0	5	5	2	6	6	11	12	3
Retrieval 'stacked' – done by WMPRS once free	2	3	5	4	1	3	4	14	31	23	12	13
Only Advice required	5	9	0	4	0	3	4	8	32	16	5	18



## 2.7 Diagnostic Categories of Referred Patients

PICAnet Diagnostic Category	Number
Respiratory	384
Neurological	138
Gastrointestinal	122
Cardiovascular	103
Infection	76
Endocrine / Metabolic	35
Trauma	32
Unknown	25
Body Wall / Cavity	11
Multi-System	9
Other	5
Blood / Lymph	4
<b>Total</b>	<b>944</b>

## **3.0 Ambulance Contract**

WMPRS awarded the long-term ambulance contract to St John Ambulance (West Midlands) Service in March 2011. This followed a 2 year tendering process. The contract provides for 3 new custom-designed Mercedes WAS vehicles specifically designed for Intensive Care Retrieval. The vehicles are being built in Germany and are compliant with the highest safety standards and provision for quality and comfort.

St John Ambulance Service have a robust, clear and accessible management structure which interfaces well with WMPRS to ensure that service standards are high, and that there are mechanisms in place to swiftly address crew or vehicle problems. St John have nominated eight experienced ambulance technicians to work upon the WMPRS contract. In order to speed up the WMPRS response time, and to encourage a good working relationships, the ambulance technicians have all been given BCH Honorary contracts and are based at WMPRS (with the vehicle) during all 'out of hours' periods. The ambulance technicians are all receiving training about the retrieval process, and the required safety standards expected by WMPRS. Further work about inter-facility driving, use of exemptions and 'Blue Lights' will be explored in 2011/2012.

## **3.1 Child and Family Involvement**

### **Parent Feedback Cards**

WMPRS issues feedback cards to parents whose children have been retrieved to PICU. Parents are asked to complete a card before they leave hospital, they are given out and collected by nursing staff. 90 feedback cards were received, representing 17% of the patients. Comments are largely favourable to the timeliness, professionalism and communication skills of the team. Where WMPRS were unable to accommodate a parent in the ambulance was commented was a concern for some families. WMPRS' new ambulances which will be delivered in late 2011 will have 4 seats in the rear cabin which will allow a parent to be accommodated upon most journeys.

## **3.2 Clinical Governance and Risk**

WMPRS' interface with all the DGHs of the West Midlands, and work with the PICUs at UHNS and BCH requires a strong culture of open, transparent, proactive governance and risk management. This is provided through a multifaceted approach.

There is a strengthening relationship between BCH governance and DGHs/Specialist Services/other services. This is essential, as WMPRS is part of a complex clinical interface - the critically ill child is a rare, high risk occurrence at the DGH, where there may be limited expertise at the bedside, with additional difficult and complex team interactions in a system with high anxiety.

For WMPRS, a system which is open and transparent is essential – 'Mobile' PIC is high risk and the children which engender the highest risk often have more reason to be moved.

The system in place to ensure safety is made up of several parts including: Daily morning 'ward round'; Daily operational review; Low threshold for IR1s; Regular process review; Standard Operating Procedures; Morbidity and Mortality Review.

The service structure encourages open reporting and staff can improve systems themselves, as well as seeing the results of their feedback improving process – easing the process of change yet further to allow for rapid improvements will assist – and may include the introduction of electronic patient records.

DGH and other service feedback for more serious events is overseen by BCH governance. This has included medical director involvement where necessary. However, this is not yet systematic at the WMPRS end, and time constraints mean that there are delays in the system. A Risk Action Group of steering group members will be set up in 2011/2012 to improve the robustness of this process. Further interaction with the SCT is likely to ensue to develop these systems.

## **4.0 Outreach Education**

WMPRS is committed to providing Outreach Education which is accessible, high quality and responsive to the service delivery needs of the regional acute hospitals. This programme has been led by a Band 7 Senior Sister (Sophie Jones) who previously worked for over ten years upon PICU at BCH.

The outreach provision which arises from this programme has engaged with the Emergency Departments (ED), the Paediatric Wards and the Adult Intensive Care Units (AICU) across the West Midlands. The availability of this service has been comprehensively promoted through letters, leaflets and electronic communication targeted at every relevant ward or department throughout the West Midlands. This has included direct correspondence to the Clinical Leads, Nurse Managers and Ward Managers of all of these departments.

The provision of mobile education to the region's hospital has been a key feature of this programme. Over 60 teaching sessions about paediatric critical care have been delivered to doctors and nurses across the 20 hospitals. This has included sessions jointly led by a consultant and the outreach nurse where feedback about patients taken to PICU was given, followed by teaching about the stabilisation of children with paediatric critical illness. The outreach nurse has provided numerous sessions to nursing and medical staff about paediatric critical care skills such as the fixation of endotracheal tubes, preparation of intravenous infusions, management of invasive monitoring and preparation for the retrieval team's arrival. 2 one day courses entitled 'Stabilisation of the Sick Child' were held at Birmingham Children's Hospital in late 2010, these were oversubscribed and were attended by nurses and doctors from across the region. Further courses are running this year, also oversubscribed.

The outreach programme has acted as a resource for many other requests from the region's hospitals. This has included; reviewing the equipment inventory in the paediatric resuscitation areas, assisting with the reorganisation of a ward or departmental areas, providing expertise to assist with critical incident investigation, supporting nursing staff with management of children receiving non-invasive ventilation and feeding back any issues which the WMPRS team noticed when retrieving a child. The positioning of the outreach education programme within the WMPRS Team has allowed Sophie Jones to monitor and respond to the vast amount of regional knowledge captured by the WMPRS Team. The bi-directional exchange of information between Sophie Jones and the WMPRS Team takes place every day when the service holds its 'Morning Meeting' to review the previous 24 hours activity. This includes detailed discussion about how regional hospitals had managed critically ill children prior to the WMPRS team's arrival and how cohesively the 2 teams worked together.

WMPRS function is to find appropriate solutions for critically ill children who are referred to the coordination centre. The provision of 24 hour Consultant advice has resulted in nearly three hundred children being able to remain in their local hospital, rather than be transported to PICU. This is a better solution for the child and family, allows the retrieval team to be available for children who require rapid transportation and keep the scarce PICU beds available. The provision of the outreach programme has undoubtedly supported these successes. The outreach nurse post is currently only funded until April 2012. Work began in April 2011 to secure the permanent continuation of funding for this post. A business case was written and submitted to the Directorate Management Team in June 2011, and an activity report from Sophie Jones was submitted in September 2011. Consultation with WMSCT is set to continue in the Autumn of 2011 in order to secure robust funding for beyond April 2012.

## 5.0 Research and Audit

WMPRS is committed to research and audit of transportation, mobile paediatric intensive care, coordination of critical care resources, regional outreach, management and cost improvement.

During 2010/2011 WMPRS staff presented work at national and international conferences, as well as undertaking internal audit of service delivery.

### Audits Undertaken in 2010/2011

1. Paediatric high dependency care delivery across West Midlands Hospitals
2. Infection control care bundle compliance during Retrieval
3. Audit of Clinical Procedural Activity
4. Audit of 'Blue Light' usage
5. Audit of Paediatric Infant and Mortality (PIM2)
6. Documentation Audit
7. Compliance with equipment checking
8. Ambient temperature during transfer

### Research Commenced in 2010/2011

SHINE Young Lives; Remote Telemedicine – McLaren Formula 1 and Vodafone

To evaluate if remote telemetry from continuous patient monitoring systems can be transmitted via the mobile phone network to a Consultant in real time.

### Conference Poster Presentations

Wilson P and Gyles A (2010) *Every Referred Child Gets a Solution*

Manchester; Paediatric Intensive Care Society Conference [Abstract – Poster]

Gyles A and Wilson P (2011) *Successful Establishment of West Midland Paediatric Retrieval Service – A 24 hour Retrieval Nursing Team Staffed from to Paediatric Intensive Care Units.*

Sydney; Paediatric Critical Care World Congress [Abstract – Poster]

## 6.0 WMPRS Nursing Staff Training

WMPRS is committed to having the highest achievable standard of professional nursing. WMPRS nursing staff come from varying different backgrounds and have various professional nursing extended roles. In 2010/11 WMPRS reviewed the nursing staff's professional extended roles and brought all staff from both BCH and UHNS up to the maximum compliance standard of BCH.

### BCH Nursing Standard

### WMPRS Compliance by end of 2010/11

Intravenous Drug Administration – Central	:	100%
Intravenous Drug Administration – Peripheral	:	100%
Blood Sampling from Art/CVP Lines	:	100%
Blood Product Collection	:	100%
Blood Product Administration	:	100%
Cross Matching	:	100%

## **6.1 WMPRS Education Programmes**

WMPRS operates and contributes to a number of education programmes concerning paediatric transportation and critical care provision.

The following was provided in 2010/11

- In-service provision of education and training to new doctors and nurses
- In-service provision for ambulance technicians about the retrieval process, safety standards and their role in working with the retrieval team
- Update training provision for current WMPRS team members
- Placement opportunities for medical students and student nurses
- Placement opportunities for work experience students
- Update training for the coordination centre administration team every 4 months
- Siemens Switchboard Training

## **7.0 University Teaching**

Senior Members of the WMPRS Nursing Team have lectured on pre and post graduate nursing programmes at Birmingham City University and the University of Birmingham.

## **8.0 Health Record Management**

WMPRS has modern, sustainable and well governed health records systems. WMPRS achieved the status of being a 'patient access' centre by BCH prior to the launch in 2009. This has allowed all

patients to be contemporaneously registered upon the Lorenzo iPM system and be governed by the secure measures of the BCH health records system.

The WMPRS Lorenzo iPM system is linked to the national spine and allows WMPRS clinical staff to benefit from the information upon this network. Previous hospital admissions and accurate demographic details can be rapidly accessed enhancing the standard of care delivered to patients at referral. Mortality information can be retrieved facilitating very accurate auditing and monitoring of the service. The WMPRS coordination team have all received Lorenzo and Spine training and are proficient in using these systems. The retrieval notes are able to be stored safely in the BCH Medical records department.

To allow WMPRS staff to review notes at a later point, all retrieval records are scanned and stored upon a secure drive on BCH Server. This can be accessed by WMPRS staff who have secure access rights. Registering all patients onto Lorenzo iPM, including those who are able to be supported to remain in the local hospital has allowed accurate measurement and coding of this very important patient group.

## **8.1 Information Technology & Telecommunication**

WMPRS has purchased a database application entitled the "Children's Transport Database" from Hertfordshire based 'Lifestyle IT'. There has been a delay installing this application due to systems upgrades at BCH. Therefore, all WMPRS activity continues to be recorded upon an Excel Spreadsheet. WMPRS is now receiving one day per week IT support from an information manager appointed in May 2011. This individual has added functionality to the raw data WMPRS possesses allowing summary reports to be produced, including information used in this document.

WMPRS made 2 upgrades to its telecommunication infrastructure during 2010/2011. Alterations to the interface between the WMPRS Switchboard and the BCH network allowed faster answering and cross-patching of referring clinicians to the retrieval consultant and other specialists. A telephone call recording system was added which allows immediate playback and secure storage of conversations.

WMPRS website has remained updated throughout 2010/11 and has slowly increased its portfolio of clinical guidelines, an on-line drug calculator was added and there is detailed advice on how to refer a child to WMPRS.



## **8.2 Expansion of Nursing Roles in 2010/11**

Members of the KIDS Nursing Team undertook cannulation training and male catheterisation training during this year. This and other additional training will continue into 2011/12.

## **8.3 Safe and Sustainable Congenital Cardiac Surgery**

Throughout 2010/11 there has been significant preparation, consultation and submission of information from BCH to the national review into the future provision of congenital cardiac surgery in England. Either 4 or 5 paediatric cardiac surgery centres may be closed resulting in a higher critical mass of patients being managed by a smaller number of centres. It is anticipated the outcome will be published in late 2011.

BCH is certain to remain a centre which delivers paediatric cardiac surgery, the consequences for the WMPRS will depend upon which other centres close. WMPRS has been directly involved throughout the process. Senior Nursing and Medical staff have attended the weekly BCH cardiac operational meeting and have participated in planning the optimisation of PICU capacity, patient flow, provision for non-cardiac referrals for PICU and the necessary transportation infrastructure which will be required both now and following the final decision. WMPRS has sent representation to all the Birmingham based public consultations, the specialised commissioning reviews and actively participated upon the day the national review team visited.

## **8.4 Surge Extra Corporeal Membrane Oxygenation (ECMO) provision at BCH PICU**

During 2010/11 BCH PICU was designated as a centre which would flex up to provide additional capacity for paediatric ECMO during the winter of 2011/12. The need for this was identified following the 2 recent winters where capacity at University Hospital's Leicester NHS Trust was filled with adults. WMPRS has been consulted throughout this commissioning process because of the transportation needs which will arise from this. The issues which will require addressing concern the provision of additional teams for both normal increased winter activity and for patients being brought to BCH for ECMO, including their repatriation. WMPRS will begin a series of departmental

winter planning meetings in September 2011 and is required to actively participate in the Trust wide plans.

## **8.5 High Dependency Care**

In 2010/11 WMPRS contributed to various region-wide initiatives which are reviewing the provision of high dependency care for children, both within BCH and across the 20 DGHs. WMPRS itself undertook a study of activity on the children's wards in all of the WM DGHs in December 2010 and January 2011, this data is still being analysed. WMPRS has worked alongside parallel work undertaken by Kevin Morris and Nicola Holdback from BCH PICU which has conducted observational studies in key centres in the region. This work has also has some links with the Outreach Service, and this will expanded on in 2011/2012 when the outcomes of the 2 studies are released.

WMPRS has additionally demonstrated its commitment to high dependency care by transporting children who were not receiving mechanical ventilation but required an increased level of monitoring or non-invasive respiratory support at either one of the 2 tertiary centres or a larger district general hospital.

## **8.6 WM Newborn Transport Service**

The WM Newborn Transport Service (WMNTS) appointed its first full-time clinical lead in 2010/2011, Dr. Alex Philpott. WMPRS, WMNTS and the WM Newborn Network continue to work well together and are committed to progressing with expansion of the coordination centre to provide 'one number' access for both paediatric and neonatal referrals. WMPRS wrote a business plan in April 2011 and began the process of upgrading the telecommunication infrastructure further to handle the increased in calls which would arise. The 2 services continue to work closely with the WMSCT regarding for commissioning intention in 2011/2012.

## **8.7 BCH PICU Expansion**

BCH PICU is proposing to expand capacity to 22 beds in 2011/2012 and following a major capital building project a further 9 beds will be built over the next 5 years. WMPRS is closely engaged in this development for both planning patient flow, capacity management and sustainable clinical workforce development for both services.

## **9.0 Plans for 2011/2012**

Relocation of service to 3 storey premises at 1 Printing House Street, Birmingham

Bring into service 2 new paediatric retrieval trolleys and 1 transport incubator

Fund place for senior WMPRS nurse to undertake PICU ANP Training programme

Appoint 2 more Consultants

Bring 3 new custom-built retrieval ambulances into service

Undertake rebranding and renaming of WMPRS following appropriate consultation

Secure permanent funding for Outreach Education Service

Begin coordinating referrals for non-ventilated surgical neonates

