Pecyn dogfennau cyhoeddus

Y Pwyllgor Plant a Phobl Ifanc

Lleoliad:
Ystafell Bwyllgora 4 – Ty Hywel

Dyddiad:
Dydd Iau, 17 Mai 2012

Amser:
12:45

Cynulliad Cenedlaethol Cymru
National Assembly for Wales

I gael rhagor o wybodaeth, cysylltwch â:

Polisi: Claire Morris
Clerc y Pwyllgor
029 2089 8148 / 029 2089 8032
PwyllgorPPI@cymru.gov.uk

Agenda

1. Cyflwyniad, ymddiheuriadau a dirprwyon (12:45)

2. Ymchwiliad i ofal newyddenedigol (12:45 – 14:00) (Tudalennau 1 – 31)

Bwrdd Iechyd Prifysgol Betsi Cadwaladr
Geoff Lang – Prif Weithredwr Dros Dro
Dr Brendan Harrington – Pennaeth Staff

(Egwyl – 14.00 – 14.05)

3. Ymchwiliad i ofal newyddenedigol (14.05 – 15.05) (Tudalennau 32 – 194)

Bwrdd Iechyd Prifysgol Abertawe Bro Morgannwg
Paul Roberts – Prif Weithredwr
Hamish Laing, Cyfarwyddwr y Strategaeth Glinigol

Bwrdd Iechyd Hywel Dda
Trevor Purt – Prif Weithredwr
Dr Simon Fountain-Polley – Pediatregydd Ymgynghorol / Cyfarwyddwr y Rhaglen Glinigol – Iechyd Plant a Menywod

4. Cynnig o dan Reol Sefydlog 17.42 i benderfynu gwahardd y cyhoedd ar gyfer yr eitem a ganlyn ac Eitem 1 yn y cyfarfod ar 23 Mai 2012 (15:05)

5. Ymchwiliad i ofal newyddenedigol: Trafod y dystiolaeth (15:05 - 15:15)

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol
Betsi Cadwaladr
University Health Board

Ms C Chapman
Chair
Children and Young People Committee
National Assembly for Wales
Cardiff Bay
CARDIFF
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Dyddiad / Date: 15 March 2012

Dear Ms Chapman

CHILDREN AND YOUNG PEOPLE COMMITTEE – NEONATAL SERVICES

Thank you for your letter dated 21 February 2012 regarding the issues raised by your Committee.

The achievement of full compliance with the BAPM standards presents a very considerable challenge to all units in Wales in the present financial environment, as it does throughout the UK. We are aware that the average % compliance with the neonatal nursing ratios recommended by BAPM is in the 70s across Wales, and acknowledge that BCU Health Board is a low outlier.

I give below our response to your request for information:

1 A copy of your current local neonatal action plan, including information about the mechanisms you have put in place to monitor and evaluate the implementation of the key actions within these plans and timescales

A copy of the latest action plan and performance report, as presented to the last Neonatal Working group (13th February 2012) is attached for your information. The longer term actions in the Plan refer to the development of a Business Case for neonatal services as a key component of the wider review of maternity & child health services in North Wales. It is anticipated that this much larger review of services will report its recommendations to the Board of Betsi Cadwaladr LHB in summer 2012.

2 A copy of the latest annual report on quality of care (as set out in Standard 6.8 of the All Wales Neonatal Standards), alongside information on the number of instances of when patient safety has been compromised

Details of 'incidents' recorded on Neonatal Units in 2011 are set out below. These incidents are, as will be seen from the analysis, of varying nature and their impact upon care is also variable. It is important to note that not all incidents will have resulted in harm. However, all have been included in this response for completeness :

Ysbyty Glan Clwyd	
Drug dosage error	8
Unit closure	8
Patient injury	3
Pharmacy error	2
Ambulance delay	4
Instrument failure	2
Others	9
TOTAL	**36**

Wrexham Maelor	
Clinical incidents	7
Unit Closures	
Staff accident	2
Patient/visitor accident	2
Faulty equipment	1
Staff shortages	6
TOTAL	**18**

Ysbyty Gwynedd	
Clinical Incidents	6
Patient/relative accident	1
Medication error	1
Security	1
Needlestick injury	1
Medical devices	1
TOTAL	**11**

Latest Annual Reports:

Ysbyty Glan Clwyd, Ysbyty Maelor Wrexham and Ysbyty Gwynedd

3 An outline of any action taken and any plans for investing into neonatal services in the short, medium and longer term to ensure all services in your area are fully compliant with the Standards

The main short term action to improve capacity in North Wales has been the repatriation of investment and activity from Arrowe Park Hospital. This is one of the short-term priorities agreed by the Health Board to increase capacity to treat neonates within North Wales. To do this required increased staffing at all 3 Neonatal Units within North Wales, which is assisting in the move towards the BAPM standards. We have also provided additional training to existing staff at Ysbyty Gwynedd, Bangor to allow that unit to undertake a higher level of care. In turn, this will reduce the demands on Ysbyty Glan Clwyd and consequently Wrexham Maelor. This interim investment in our local network will reduce the number of transfers to England due to lack of local capacity.

As described earlier, the medium / long-term strategy for Neonatal services is presently being developed in the form of a Business Case which will inform the wider review of maternity & child health services in North Wales. The Business Case will outline the changes required to provide services which meet the requirements of the latest BAPM standards (2010). Recommendations for a future configuration of Neonatal Units will be explicit within the Business Case.

4 The costs associated with cross border transfers, including the amount paid to English PCTs for the transfer of neonates as well as the income generated for Welsh providers

The number of transfers to England due to lack of capacity in North Wales is as follows:

	2009/10	***2010/11***	***2011/12 (10 months / 18 January 2012)***
Total number of transfers (acute)	***4***	***3***	***8 (FO 11)***
Total number of transfers (non - acute)	***8***	***7***	***1***
Total Number of Transfers	**12**	**10**	**9 (FO 11)**

The charge per transfer for these journeys was £1200. These were facilitated by Cheshire & Merseyside Neonatal Transport Service.

The cost of care provided by Arrowe Park Hospital due to lack of local capacity in North Wales was as follows:

Wirral Hospital NHS Hospital
Arrowe Park - Neonatal Activity

		Special Care		High Dependency		Intensive Care	
		ITU Level 1		ITU Level 2		ITU Level 3	
	Month	Bed Days	Cost	Bed Days	Cost	Bed Days	Cost
Jan-11	10	2	824	0	0	0	0
Feb-11	11	12	4,944	2	1,490	28	29,120
Mar-11	12	0	0	7	5,215	24	24,960
Apr-11	1	3	1,217	26	19,079	20	20,488
May-11	2	0		0	0	2	2,049
Jun-11	3	0		0	0	0	0
Jul-11	4	33	13,392	4	2,935	11	11,268
Aug-11	5	10	4,058	1	734	14	14,342
Sep-11	6	0		0	0	31	31,756
Oct-11	7	6	2,435	24	17,612	11	11,268
Nov-11	8	0		0	0	0	0
Dec-11	9			0		23	23,561
	Total 2011	**66**	**26,870**	**64**	**47,065**	**164**	**168,812**

5 Whether you have had any discussions with WHSSC and neighbouring LHBs about the overall increase in cots needed and any joint planning as to where they are located and at what level of intensity

The number of cots and level of acuity required for the predicted catchment population of North Wales and some of North Powys has been guided by recommendations from the All Wales Neonatal Network Capacity Reviews. This guidance has been applied with local adaptations and projections to enable us to determine options for future configuration. We have also actively engaged with neighbouring services providers in England regarding potential to extend capacity across the border and to ensure alignment of future service plans.

6 Whether any work has been undertaken with neighbouring Boards, or the Welsh Government via WHSSC, on workforce planning to address what impact changes to junior doctor recruitment and the number of training places in the future will have on services in coming years

- **Work with Neighbouring Health Boards / NHS Trusts**

The Countess of Chester NHS Foundation Trust, Wirral NHS Foundation Trust, Liverpool Womens Hospital NHS Trust and the Merseyside and Cheshire Neonatal Network have been included as partner organisations in the dissemination of information and have been invited to the engagement events which have taken place. In addition to these more formal contacts, there have been ongoing and regular contacts with key individuals in these organisations (most notably, via the Chair of the BCU Children & Young People Clinical Programme Group's Neonatal Sub-Group) to keep them informed of planning.

Via the Office of the Executive Director of Planning, there have been similar ongoing contacts and engagement with Hywel Dda LHB and Powys LHB.

- **Working with WHSSC**

Plans for the development of neonatal intensive care come under the auspices of WHSSC (as a specialist service). Plans for development of Special and High Dependency Care (where delivered on a site not designated as an Intensive Care Unit) are explicitly excluded from WHSSCs responsibilities. These latter responsibilities rest with LHBs. BCU is taking a coordinated approach to developing services at all levels, in liaison with the all Wales Neonatal Steering Group. WHSSC is represented on this group, and is therefore aware of our planning on all levels even if it is not responsible for them all.

- **Workforce planning**

The supply of senior and junior doctors to work on neonatal units comes from the national paediatric training programmes. There are currently no plans at UK level to decrease the number of doctors in training for paediatrics. However, recommendations from both Deaneries and the Royal College of Paediatrics and Child Health require us to plan to concentrate trainees in fewer hospitals than presently, to improve the quality of their training. We are told that a failure to do this in the near future will result in these doctors (and their funding) being withdrawn. The trainees will then be reallocated to units which can offer this better experience. If we cannot rely on doctors in training to keep all our present units running, then the alternative option would be to employ other, non-training doctors. Even if alternative funding were available, the change in UK immigration rules has removed what was previously the main alternative - offering unfilled jobs to overseas doctors and therefore medical capacity and recruitment is a major challenge.

Given that nationally (UK), the number of training posts for paediatrics is not changing, it is essential to consider why Wales has a problem recruiting. There is no simple answer to this but factors which may impact include: the relative rurality of Wales, the practical difficulties faced by trainees who rotate between North and South Wales, the lower number of trainees on rotas compared to some areas of the UK, the greater proportion of our junior workforce who are non-training grades, the lack of academic opportunities, the statistic that the number of medical students and Foundation Programme doctors from Wales who seek jobs outside Wales is not matched by those seeking to come in to Wales.

In response to the pressures placed upon our traditional medical staffing rotas we are looking carefully at alternative ways to sustain these roles by developing enhanced and advanced nursing roles. Whilst indications are that this is a more costly option, it is potentially a way to respond in part to the predicted shortages and provide high quality, safe and sustainable services in the future.

BCUHB is seeking a solution to all these negative pressures which not only prevent achievement of the improved standards which people expect, but also threaten to degrade the present level of service delivery. The mechanism to do this is via a coordinated review of Maternity & Child Health Services. This includes the attempted projection of realistic future manpower requirements. Talking about such issues is distressing for staff who have a strong affiliation to the present service and to the public who are accustomed to the present configuration. However, through our engagement sessions it is clear that many of our staff and service user representatives understand and agree that the status quo cannot deliver the standards proposed by the British Association of Perinatal Medicine, endorsed by Wales Government in the all Wales Neonatal Standards, and supported by the leading neonatal parent group, BLISS. BCU Health Board has the support of the All Wales Neonatal Group in terms of our plan which sets out the short, medium and long term steps to complete this journey. The process will not be easy and it presents a number of challenges which will take time to deliver, but we believe this is what we need to do to deliver a safe and high quality neonatal service for the future.

Yours sincerely

GEOFF LANG
ACTING CHIEF EXECUTIVE

CHILDREN & YOUNG PEOPLE'S CLINICAL PROGRAMME GROUP
NEONATAL SUB-GROUP PLANNING AND PERFORMANCE REPORT

Updated: 01/02/2012

PERFORMANCE SCORING CRITERIA
RED
AMBER
GREEN

Row Reference	PRIORITY	Objective	Action Ref	Actions / Milestones Include actions to mitigate risks to delivery	Quantifiable Output (what the specified action will achieve)	Risks (to delivering specified actions)	Identified Lead	TARGET: Action complete by end: (Mmm-yy)	Q4 Jan 2012	SELF-ASSESSMENT (January performance) Timescale any additional required actions and outcomes (This is a compulsory field if your self assessment is AMBER or RED)	Expected benefits realisation dates (mmm/yy) or FUTURE year
Neonatal Intensive Care											
1	**Interim Strategy**										
To provide Neonatal Intensive care within North Wales	1.1 To successfully repatriate Welsh Neonatal Intensive Care activity provided by Arrowe Park hospital	1.1.1	Approval of business case	Transfer of funding funding from BCUHB		Cilla Robinson	Oct-11	GREEN		Mar-12
		1.1.2	Develop, agree and progress an implementation plan	Implementation plan		Chris Jones / Paula Knight	Nov-11	GREEN		
		1.1.3	Execute actions described within the implementation plan	Increased capacity to undertake Intensive Care at Ysbyty Glan Clwyd and Ysbyty Maelor	Delayed recruitment during Xmas period	Paula Knight Liz Fletcher Gail Barton-Davies	Mar-11	GREEN	At shortlisting stage for Band 6 Community Neonatal post West and Band 5 Central and East.	Feb-12
	1.2 To successfully repatriate Welsh Neonatal Care activity provided by Liverpool Women's hospital	1.2.1	Develop business case:							
			a) Audit of activity at LWH during 2010/11 due to insufficient capacity within North Wales Units	Activity cost and volume for option appraisal		Chris Jones	Jan-12	GREEN		
2	**Long term Strategy**										
To agree a long-term strategy which clearly communicates a vision for Neonatal Intensive Care services and how this will be achieved	2.1 To generate and evaluate options for future provision of Neonatal Intensive Care as part of the BCUHB review of Maternity and Child Health service review	2.1.1	Ensure influence throuh involvement in the Maternity, Gynaecology and Neonatal work stream of the Maternity & Child Health review	List of potential options for appraisal via business case (2.1.2 below)			Jan-11	AMBER	Need to agree configuration and cot location in accordance with the BAPM 2010 terminology and new Categories of Care 2011.	
		2.1.2	BCU/Wirral Hospitals Contract Review meeting	Confirm status of Arrowe Park's business case proposing the provision of NICU for North Wales.			~~Dec 11~~ Jan-12	AMBER	Awaiting response	
		2.1.3	Video Conference North West Specialist Commissioners re:Neonatal transport charges - Cheshire and Merseyside Neonatal Network	Information for decision making and options appraisal			~~Dec 11~~ Jan-12	GREEN	Meeting deferred to 28th February	
		2.1.4	Develp a business case containing detailed options appraisal and recommendations for a preferred option for the provision of Neonatal Intensive Care	Business Case for submission to BCUHB Executive team		Chris Jones Michael Cronin Cilla Robinson		AMBER	Working group will be required to 'sign-off' draft business case March 2012	
	2.2 To consult with the public on proposals if change is deemed significant									
	2.3 To develop and agree an implementation plan									
High Dependency Care											

CHILDREN & YOUNG PEOPLE'S CLINICAL PROGRAMME GROUP
NEONATAL SUB-GROUP PLANNING AND PERFORMANCE REPORT

Updated: 01/02/2012

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3	**Interim strategy**										
To increase High Dependency capacity at Ysbyty Gwynedd	3.1 Increase the number of High Dependency cots at Ysbyty Gwynedd from 0 to 2		3.1.1	HD Training for existing nursing staff	Existing nurses trained in all aspects of HD care				GREEN		
			3.1.2	HD training for existing medical staff	Existing medical staff trained in all aspects of HD care						
			3.1.3	Develop carepathway for TPN	Carepathway		Michael Cronin	Feb-12	AMBER		
			3.1.4	Establish protocol for TPN transportation from YGC to YG	TPN available at YG				GREEN	2 Cool boxes have been purchased. Mark Oldcorn to establish a group to standardise procedures for parental nutrition as a longer-term strategy for Pharmacy.	
4	**Long term Strategy**										
Low Dependency / Special Care											
5											
	Reduce number of Low dependency cots	Reduce admission to Low dependency / Special care cots		admission criteria review					RED	Work to be covered by the Transitional Care group about to be established.	
				readmissions from community to neonatal units					AMBER	MC / GBD to progress	
				Discuss with Obstetricians the potential for reducing Ceasarean section rates for mothers whos babies are likely require special care						Action plan has been agreed to reduce CS rate.	
		Reduce Length of Stay		Review discharge criteria / LOS relating to Safeguarding issues particularly around emergency fostering services					AMBER	Met twice with Soc Serv. Looking at planninf prior to admission	
				Review transition care arrangements across all 3 sites					GREEN	Paula to meet with Heledd Jones 9/2 to establish T&F Group to consider development of transition care arrangements	
Use of North Wales Transport service											
	5										
	Ensure availability of 12 hour transportation service In north Wales	To ensure staff are in post and available to deliver the transport services for all levels of care					Mar-12		GREEN	Shortlisting stage	
Information Management											
	5										

CHILDREN & YOUNG PEOPLE'S CLINICAL PROGRAMME GROUP

NEONATAL SUB-GROUP PLANNING AND PERFORMANCE REPORT

Updated: 01/02/2012

PERFORMANCE SCORING CRITERIA

RED

AMBER

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	Information and data quality	Reporting workload for activating escalation		Adopt acuity tool all areas					GREEN	Complete	
				Develop the use of the Cot locator					GREEN	Complete	
		To provide timely, accurate and robust information for operational and strategic planning purposes		Daily stats - conistency and calculations					GREEN	Complete	
				Accurate and consistent recording of Transitional Care activity across BCU					GREEN	Complete	

		Neonatal Sub-group	Neonatal Working-group
	Members:		
1	Aled Pleming (BCUHB - Family Services)	Aled.Pleming@wales.nhs.uk	Aled.Pleming@wales.nhs.uk
2	BIDYUT KUMAR (Betsi Cadwaladr University Health Board - Gynae & Obstetrics)	BIDYUT.KUMAR@wales.nhs.uk	
3	BRENDAN HARRINGTON (Betsi Cadwaladr University Health Board - Paediatrics)	BRENDAN.HARRINGTON@wales.nhs.uk	BRENDAN.HARRINGTON@wales.nhs.uk
4	CILLA ROBINSON (Betsi Cadwaladr University Health Board - Child & Family)	CILLA.ROBINSON@wales.nhs.uk	CILLA.ROBINSON@wales.nhs.uk
5	Gail Barton Davies (Betsi Cadwaladr University Health Board - West, Women and Familie	GailBarton.Davies@wales.nhs.uk	GailBarton.Davies@wales.nhs.uk
6	Glynne Roberts (Betsi Cadwaladr University Health Board - West, Women and Families)	Glynne.Roberts@wales.nhs.uk	
7	Heledd Jones (Head of Women's Inpatient Services)	Heledd.Jones@wales.nhs.uk	Heledd.Jones@wales.nhs.uk
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10	Jane Trowman (BCUHB - Planning Department)	Jane.Trowman@wales.nhs.uk	
11	Karen Stapleton (Cwm Taf LHB - Welsh Health Specialised Services Committee)	Karen.Stapleton@wales.nhs.uk	
12	Lesley Bolton (BCUHB - Women & Families)	Lesley.Bolton@wales.nhs.uk	Lesley.Bolton@wales.nhs.uk
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15	Mark Drayton (Cardiff and Vale UHB - Neonatology)	Mark.Drayton@wales.nhs.uk	
16	Michael Cronin (Betsi Cadwaladr University Health Board - West, Women & Family)	Michael.Cronin2@wales.nhs.uk	Michael.Cronin2@wales.nhs.uk
17	Dr Miroslav Kotrec, Locum Consultant Neonatologist	Miroslav.kotrec@wales.nhs.uk	Miroslav.kotrec@wales.nhs.uk
18	NicolaT Owen (Betsi Cadwaladr University Health Board - West, Special Care Baby Unit)	NicolaT.Owen@wales.nhs.uk	
19	Nigel Bickerton	bick@elitemail.org	
20	Palghat Gopalakrishnan (BCUHB - Family Services)	Palghat.Gopalakrishnan@wales.nhs.uk	Palghat.Gopalakrishnan@wales.nhs.uk
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23	Sonia Thompson (Welsh Ambulance Service NHS Trust - 020 Regional Director (North)	Sonia.Thompson@wales.nhs.uk	
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28	Tracey Worthington	Tracy.worthington@wales.nhs.uk	Tracy.worthington@wales.nhs.uk

NEONATAL STATS 2009/2010/2011

Admissions

	2009	2010	2011
Admissions	239	288	334
Readmissions	9	8	11
Total	248	296	345

	2009	2010	2011
Level 1- Intensive care days	733	527	738
Level 2- High dependency days	792	815	710
Level 3 – Special care days	2392	3440	2997
Total number ventilation days	1133	749	953
Total number of nCPAP days	442	578	656

Admissions by Gestations
(All admissions whether booked at YGC or other hospitals)

	2009	2010	2011
>37 weeks	92	122	153
36	23	22	35
35	17	36	31
34	29	29	27
33	14	14	18
32	13	13	16
31	9	15	12
30	7	5	6
29	12	7	8
28	4	10	6
27	7	7	9
26	4	2	2
25	6	2	7
24	1	2	2
23	1	2	1

Admissions by birth weight
(all admissions admitted regardless of place of birth or unit booked in)

	2009	2010	2011
>2500	111	145	187
2250-2500	21	29	32
2000-2250	25	23	20
1750-2000	24	26	22
1500-1750	13	21	21
1250-1500	19	18	17
1000-1250	11	12	14
750-1000	10	10	13
500-750	5	3	7
<500	0	1	0

In –Utero Patients transferred into YGC (Patients born at YGC, but not booked to deliver at YGC)

	2009	2010	2011
Bangor	6	6	6
Wrexham	11	2	14
Other Wales	0	0	3
England	7	3	5

Ex-utero transfers into YGC

1) booked at YGC and delivered in another unit

	2009	2010	2011
Arrowe Park/ Chester/ LWH	3	9	5
Other units	0	0	3

2) Not booked at YGC

	2009	2010	2011
YG	11	14	18
WXH	0	6	4
Other Wales	2	1	1
Other - England	2*	2**	0

* 33 week twins, booked in YG, delivered Arrowe Park, referred for feeding.
**27 week twins, booked in YG, delivered in Coventry, referred in for TPN/CPAP

Transfers Out (not including back transfers)

	2009	2010	2011
Alderhay	11	13	13
Liverpool Womens	2	1	0
Wrexham	0	1*	0
Manchester	1	1	1
Other	0	0	0

- 24 week infant transferred to Wrexham as YGC full.

Mortality

2009

Gestation (weeks)	Weight (g)	Cause of death	Age at death (days)
Term	2880	Myopathy	6
Term	3623	HIE/MAS	1
29	827	Pulmonary insufficiency	124
24	633	Extreme prematurity	2
26	847	Group B strept sepsis	1
26	851	Group B strept sepsis	2
27	1298		1
28	995	Respiratory insufficiency	91
29	1790	Hydrops	1
25	524	Pulmonary Insufficiency	154
25	878	Pulmonary insufficiency	49

2010

Gestation (weeks)	Birth weight (g)	Cause of death	Age at death (days)
33	2054	Congenital abnormalities	1
30	1890	Pulmonary hypoplasia	1
23	475	Extreme prematurity	21
24	680	Extreme prematurity	9
23	595	Extreme prematurity	3

2011

Gestation (weeks)	Birth weight (g)	Cause of death	Age at death (days)
Term	2790	HIE	1
Term	3202	HIE	1
34	1417	Pulmonary insufficiency	56
25	866	Extreme prematurity	17
23	609	Extreme prematurity	2
29	1248	Congenital abnormality	1

Cumulative 3 year survival 2009-2011 – Babies <30 weeks age gestational age

Gestation (weeks)	Births	Deaths	Survival (%)
29	27	3	89
28	20	1	95
27	23	1	95
26	8	2	75
25	15	3	80
24	5	2	60
23	4	3	25

Annual Report

Special Care Baby Unit

Wrexham Maelor Hospital, 2010

Admissions, at first glance

Total babies admitted, *n*	298	
≥37 wks	154	51.6%
≤37 wks	144	48.4%
Transferred in	29	9.7%
Transferred out	34	11.4%

Admissions by gestation, *wks*

Gestation, wks	Babies, *n*	% total
23	1	0.33
24	5	1.7
25	7	2.3
26-27	7	2.3
28-31	21	7
32-33	27	9
34 - 36	83	27.8
≥37 wks	154	51.6

Admissions by birth weight, *gram*

Birth weight, *g*	**Babies, *n***	**% total**
500 – 749	9	3
750 – 999	11	3.7
1000 – 1249	12	4
1250 – 1499	6	2
1500 – 2499	85	28.5
≥2500	175	58.7

Care intensity

ET ventilated, *n*	53	17.8%
ET ventilated, days	257	
CPAP, *n*	76	25.5%
CPAP, days	564	
Level 1, days	415	
Level 2, days	583	
Level 3, days	2632	

Transfers out by age, *days*

Age	Babies, *n*	% total
Within 1st day	13	38.2
1 – 7	9	26.4
8 – 14	12	35.2
>14	3	8.8

Transfers out by gestation at birth, *wks*

Gestational groups, wks	Babies, *n*	% of babies within gestational group
≤25	8	61.5
26 - 27	2	28.6
28 - 31	4	19
32 - 33	3	11.1
34 - 36	9	10.8
Term	8	5.2

Transfers out by birth weight, *gram*

Birth weight group, g	**Babies, *n***	**% within the weight group**
<750	7	77.7
750 – 999	4	36.4
1000 – 1499	2	11.1
1500 – 2499	11	12.9
≥2500	10	5.7

Transfers out, *destination*

Destination	Babies, *n*	% total
AHCH	13	38.2
LWH	3	8.8
RMCH	1	2.9
YGC	9	26.4
YBangor	5	14.7
Other (local units)	3	11.7

Survival by gestation, *wks*

Gestation, *wks*	**Babies, *n***	**Survived, *n***	**Survival, %**
23	1	0	0
24	5	3	60
25	7	5	71.5
26-27	7	6	85.7
28-31	21	20	95.3
32-33	27	26	96.3
34 - 37	83	83	100
≥37 wks	154	154	100

Survival by birth weight, *gram*

Birth weight, *g*	**Babies, *n***	**Survived, *n***	**Survival, %**
500 – 749	9	5	55.5
750 – 999	11	10	90.9
1000 – 1249	12	10	83.3
1250 – 1499	6	6	100
1500 – 2499	85	84	98.8
≥2500	175	175	100

Mortality, *total neonatal deaths*

Gestation, wks	Birth weight, g	Place	Age, days	Cause of death
23	600	AHCH	>13	NEC
24	725	RMCH	>8	NEC
24	770	**WMH**	1	Extreme prematurity
25	530	LWH	>1	Extreme prematurity
25	640	LWH	>1	Extreme prematurity
26	1046	**WMH**	1	Holopros-encephaly
28	1232	**WMH**	1	PPHN
33	?	**WMH**	1	Anencephaly

Care Levels by Month

Report: Counts of care level and HRG4 days for a single neonatal unit broken down by month for a specified 12 month period. Shows the count of days based on BAPM 2001 definitions for level of care and HRG4 days.

Unit: *Ysbyty Gwynedd, Bangor.*

Date Range: Care days between '*01/01/2011*' and '*31/12/2011*'.

Generated: '*01/03/2012 12:54:43*' by *Nicola Owen (owenn)*.

BAPM

Month	BAPM 1	BAPM 2	BAPM 3	UNK	Total
January 2011	1	2	6	0	9
February 2011	0	0	0	0	0
March 2011	0	0	0	0	0
April 2011	2	14	42	0	58
May 2011	0	16	58	0	74
June 2011	8	0	34	0	42
July 2011	0	4	20	0	24
August 2011	10	19	95	0	124
September 2011	0	4	95	0	99
October 2011	15	10	115	0	140
November 2011	8	9	152	0	169
December 2011	15	29	75	0	119
Total	**59**	**107**	**692**	**0**	**858**

HRG

Month	HRG 1	HRG 2	HRG 3	HRG 4	HRG 5	UNK	Total
January 2011	0	1	1	6	0	1	9
February 2011	0	0	0	0	0	0	0
March 2011	0	0	0	0	0	0	0
April 2011	2	14	34	6	2	0	58
May 2011	0	16	47	6	5	0	74
June 2011	8	0	29	3	2	0	42
July 2011	0	4	11	6	3	0	24
August 2011	8	20	69	19	8	0	124
September 2011	0	4	60	33	2	0	99
October 2011	7	10	65	49	9	0	140
November 2011	4	5	89	52	19	0	169
December 2011	15	28	50	20	6	0	119
Total	**44**	**102**	**455**	**200**	**56**	**1**	**858**

Unit Discharges

Report Count of discharges from a single neonatal unit. Note: This is discharges and not number of babies. A baby may have more than one discharge from this unit during the specified time period.

Unit(s): *Ysbyty Gwynedd, Bangor.*

Date Range: Admissions between '*01/01/2010*' and '*31/12/2011*'.

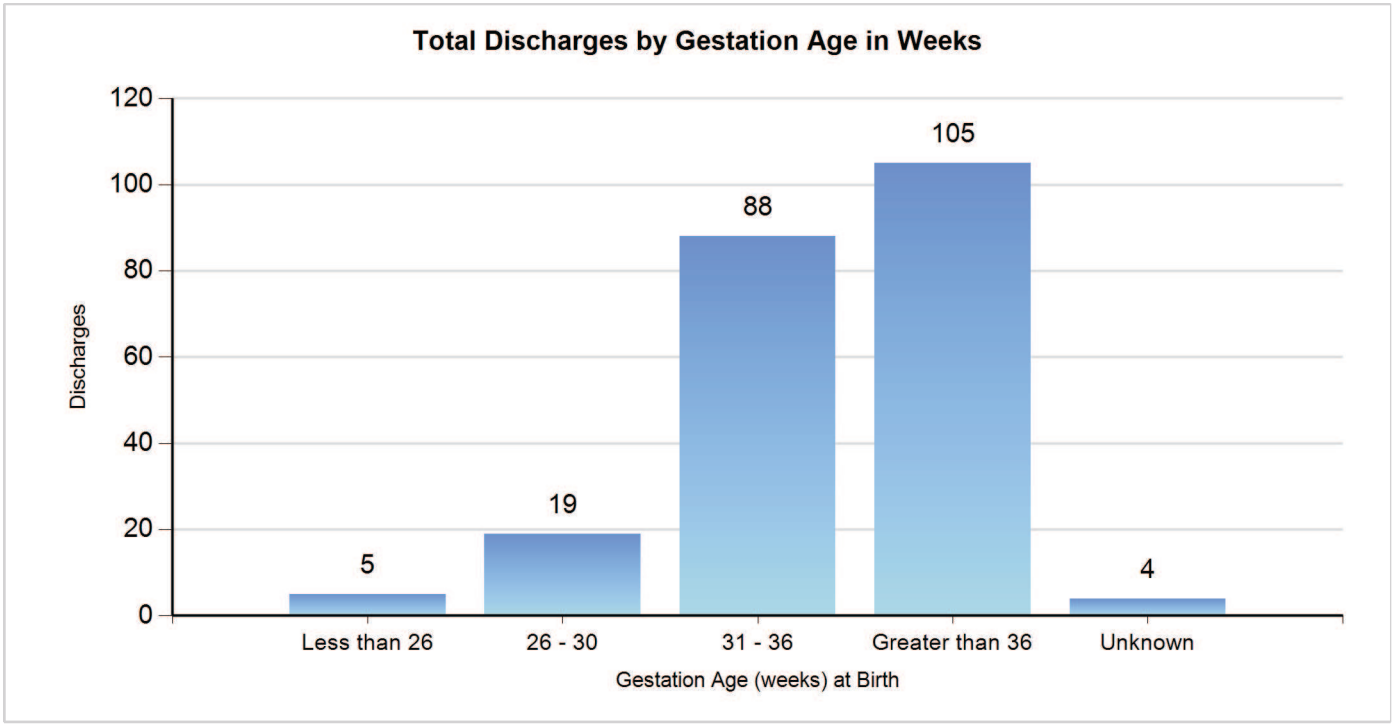
Generated: '*01/03/2012 12:56:53*' by *Nicola Owen (owenn)*.

Gestation by Discharge Type

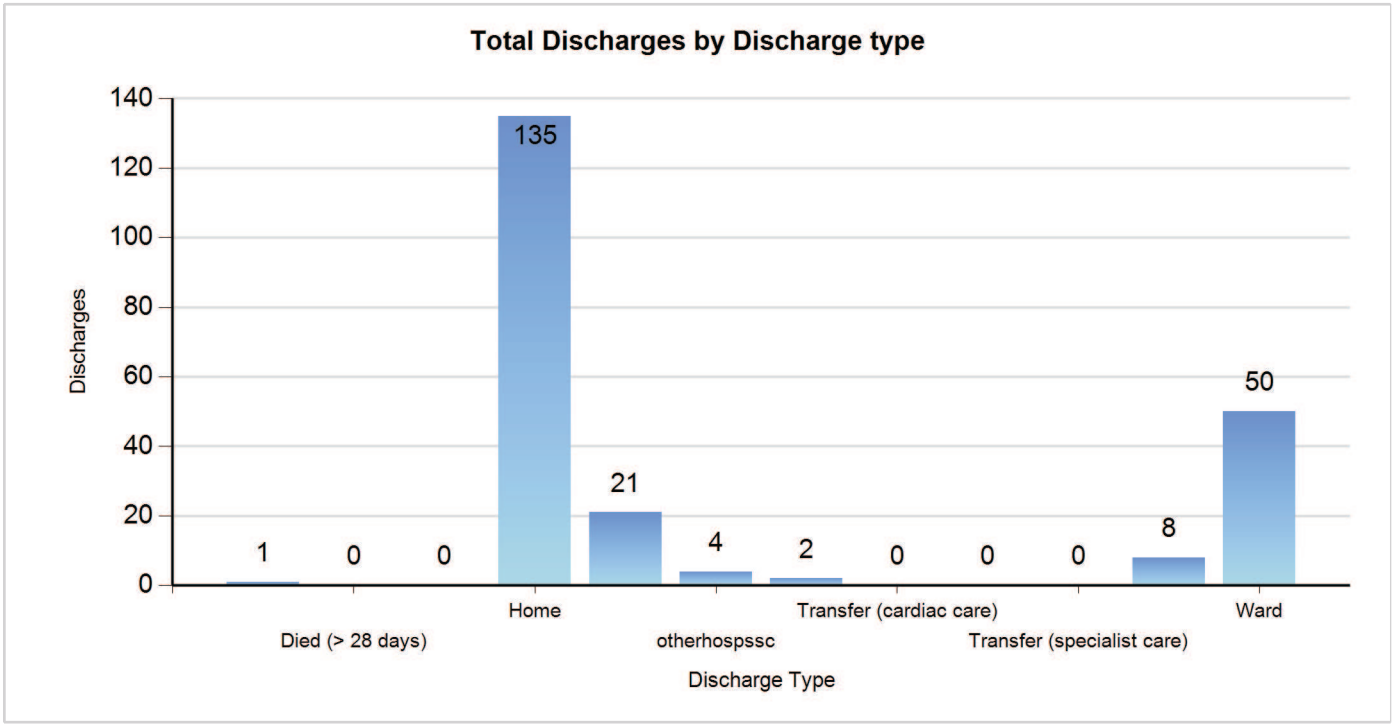
Discharge Type	< 26	26 - 30	31 - 36	> 36	Unknown	Total
Died (< 7 days)	0	1	0	0	0	1
Died (> 28 days)	0	0	0	0	0	0
Died (7-28 Days)	0	0	0	0	0	0
Home	2	9	70	54	0	135
otherhospcc	2	7	8	3	1	21
otherhospssc	1	0	1	2	0	4
otherhospsurg	0	1	0	1	0	2
Transfer (cardiac care)	0	0	0	0	0	0
Transfer (continuing care)	0	0	0	0	0	0
Transfer (specialist care)	0	0	0	0	0	0
Unknown	0	1	1	4	2	8
Ward	0	0	8	41	1	50
Total	**5**	**19**	**88**	**105**	**4**	**221**

Total Discharges by Gestation

Unit Discharges



Total Discharges by Discharge Type



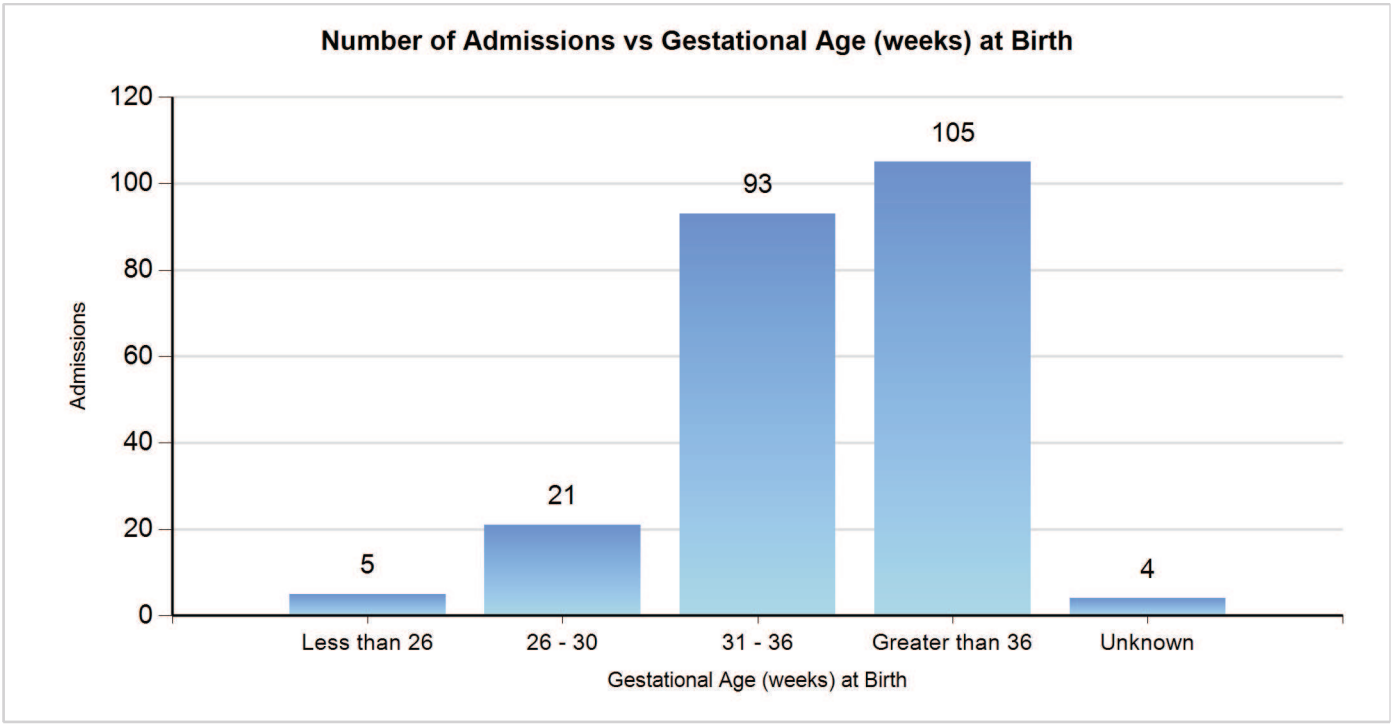
Unit Admissions

Report	Count of admissions to a single neonatal unit. Note: This is admissions and not number of babies. A baby may have more than one admission to this unit during the specified time period.
Unit(s):	*Ysbyty Gwynedd, Bangor.*
Date Range:	Admissions between '*01/01/2010*' and '*31/12/2011*'.
Generated:	'*01/03/2012 12:58:53*' by *Nicola Owen (owenn)*.

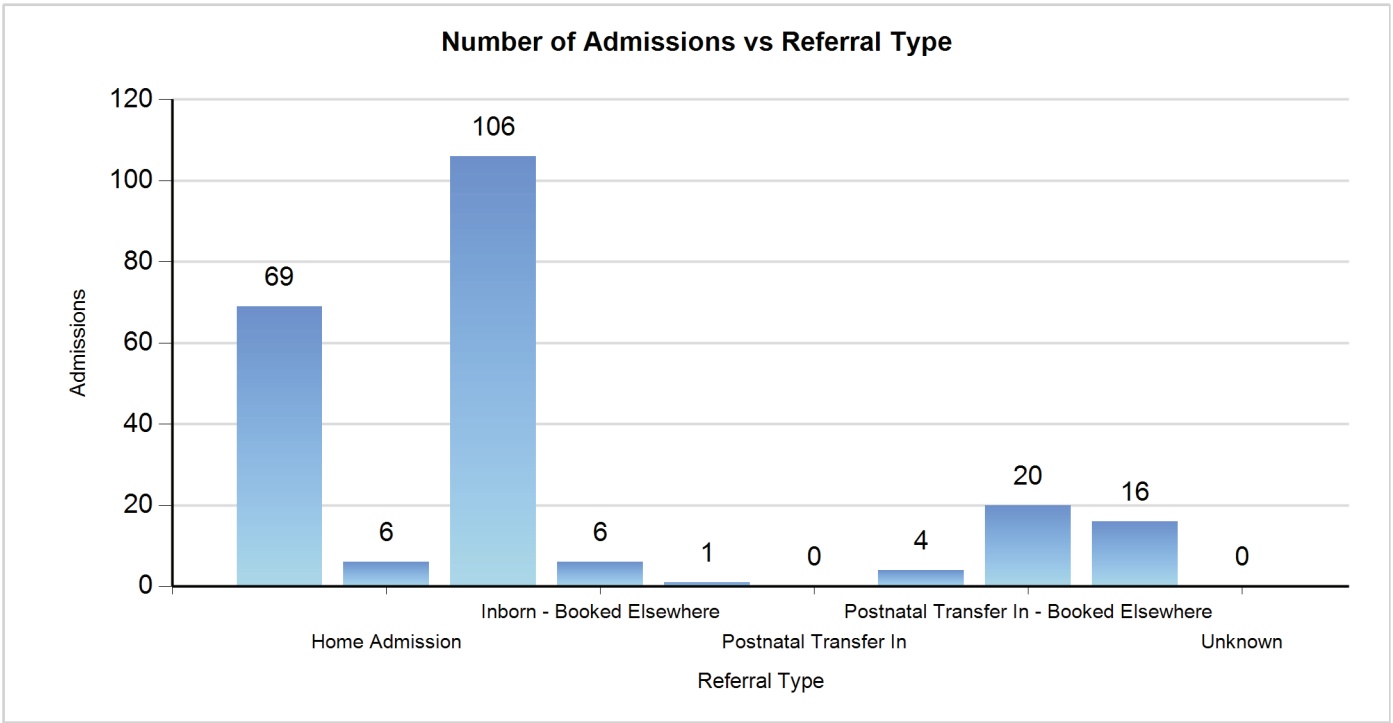
Gestation by Referral Type

	Gestation (weeks)					
Referral	**< 26**	**26 - 30**	**31 - 36**	**> 36**	**Unknown**	**Total**
Cannot Derive	0	6	24	35	4	69
Home Admission	0	0	2	4	0	6
Inborn - Booked	1	6	45	54	0	106
Inborn - Booked Elsewhere	0	1	4	1	0	6
Inborn - Unbooked	0	0	0	1	0	1
Postnatal Transfer In	0	0	0	0	0	0
Postnatal Transfer In - Booked	1	1	2	0	0	4
Postnatal Transfer In - Booked Elsewhere	1	4	9	6	0	20
Readmission	2	3	7	4	0	16
Total	**5**	**21**	**93**	**105**	**4**	**228**

Admissions by Gestation



Admissions by Referral Type



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University Health Board

☎Direct line/Rhif llinell union: 01639 683302
Fax/ffacs: 01639 687675 and 01639 687676
Your ref/Eich Cyf:
Our Ref/Ein Cyf: MMT/PR/GB

Dyddiad/Date: 12th March 2012

Mrs. Christine Chapman,
Chair – Children and Young People Committee,
Welsh Government,
Cardiff Bay,
Cardiff.
CF99 1NA

Dear Mrs. Chapman,

Neonatal Services.

Thank you for your letter of the 21st February 21st February 2012 concerning your on going review of Neonatal Services within Wales.

I am pleased to supply the attached information in response to the questions raised, and look forward to discussing these further as appropriate.

Yours sincerely,

PAUL ROBERTS
CHIEF EXECUTIVE.

Enc.

Abertawe Bro Morgannwg University Health Board

Response to Questions raised by the Children's and Young People Committee

- **A copy of your current local neonatal action plan, including information about the mechanisms you have put in place to monitor and evaluate the implementation of the key actions within these plans and timescales.**

Please see attached Action Plan for your information.

- **A copy of the latest annual report on quality of care (as set out in Standard 6.8 of the All Wales Neonatal Standards), alongside information on the number of instances of when patient safety has been compromised.**

*I enclose a copy of the latest **annual report** on Quality of Care which covers the neonatal service in Singleton. This is for the Year 2010 as we have not yet analysed the outcomes for 2011. The Vermont Oxford Network (VON) only publishes outcomes from the preceding year following September. Therefore we will not be able to complete the 2011 report for at least 7 or 8 months.*

The Vermont Oxford Network (VON) provides outcomes for babies less than 1500 g birth weight compared with those from about 850 neonatal centres worldwide. These include most large neonatal units in the USA and many in Europe. Babies less than 1500 g are the most vulnerable babies.

The methodology for the VON report is described on pp 37-38. The data provides assurance that the quality of care to these babies at Singleton hospital falls within the expected range. This is shown on pages 39-81. Page 43 shows the main outcomes corrected (or standardised) for risk factors such as degree of prematurity, multiple births etc. Whilst these results are acceptable, we would like still like to see further improvements.

Information on the number of instances where patient safety has been compromised.

Capacity issues and closures of the neonatal unit at Singleton

Capacity issues on the neonatal unit are a recurring problem due to a number of variable factors.

The unit is staffed (nursed) to provide an annual contract of 1,631 cot days for level 1(ITU), 1,807 cot days for Level 2 (HDU) with this roughly equates to 4.5 ITU cots and 5 HDU cots being available each day.

This assumes a100% occupancy each day of each week. However, we tend to plan our nursing resource to staff 5 level 1 and 4 level 2 cots per day. Our staffing levels meet the current BAPM and All Wales Standards for Nursing for this number of cots per day as detailed below:

Singleton NNU
BAMP standards require 60.20 WTE
All Wales standards require 59.71 WTE
Actual in post = 61 WTE

There are of course peaks and troughs, and the department are as flexible as possible in managing these changes in cot occupancy. These changes can see utilisation of ITU level cots increase substantially each day. Additionally, we ought to provide sufficient cots being available each day at a 70% occupancy in order that capacity is always available to accommodate unexpectedly high numbers of admissions from within our service boundaries and support other maternity/Neonatal services across South Wales. This is based on information from several years worth of data, and the neonatal capacity review taking into account displaced activity. Our current neonatal accommodation has the physical spaces for 6 ITU cots and 6 HDU cots. Ideally, In order to provide sufficient cot spaces to deliver our "contract" activity we would need in Swansea 7 ITU cots and 7 HDU cots staffed according to BAPM and Welsh standards.

However, there are many examples where the Singleton unit has had to limit admissions because of capacity has reached a maximum safe level. This has repercussions for the obstetric service and the ambulance service.Closures necessitate mothers from ABM or Hywel Dda needing to be transferred to other units elsewhere in Wales or England for their care. This uses resources of the ambulance service and also takes midwives away from the labour ward as they need to accompany the mothers during the journey.

In 2010 the Singleton neonatal unit had to limit admissions to above 36 weeks for 102 days of the year because the occupied cots exceeded the nurse staffing. The unit closed to all admissions on 7 days of the year. 86 women were transferred elsewhere to be delivered.

In 2011 the Singleton neonatal unit was limited to admissions above 36 weeks on 82 days and closed completely to admissions on 6 days due to all critical care cots being full. We refused requests for in-utero transfers of 107 babies.

In January and February 2012 the unit in Singleton was fully open for only 4 days in total. For 20 out of 60 days the unit was restricted and for a further 25 out of 60 days the unit was restricted to a >36 week obstetric model because of lack of available cots and only one stabilisation cot available. On 11 out of 60 days the unit was closed completely due to no cots available.

For these two months in 2012 to date we have refused requests for in-utero transfers or transferred out 52 mothers to be to other units.

The occupancy levels of the cots are high. In 2010 the staffed intensive care cots at Singleton were at an average of 91 % capacity and the high dependency cots at 145 % capacity.

In 2011 the 5 intensive care cots were at an average of 77% occupancy and the 4 high dependency cots at average 95 % occupancy. These figures belie the fact that the unit was severely restricted due to infection in November and December 2011 (see below).

Some of the data which we have included within this report clarifies (see page 10 of the annual report) that the activity we provide is primarily for the population of ABMU but that there is fluidity with some days of care being provided for all the Health Boards in South Wales.

The Health Board has funded additional 2 ITU level cots at the Princess of Wales Hospital in Bridgend, and plans to transfer these cots across to Singleton during the next 12 months as additional capacity is made available through its refurbishment programme.

Infection outbreak

An outbreak of infection with ESBL Ecoli resulted in the death of one premature baby in November 2011. A potential factor which possibly contributed was the overcrowded unit with little space between cots, and the high occupancy level. We are planning to address the issue of space between the cots with a refurbishment of the current unit which should be complete by December 2012.

- **An outline of any action taken and any plans for investing into neonatal services in the short, medium and longer term to ensure all services in your area are fully compliant with the Standards.**

The Health Board has committed to refurbishing the existing neonatal facility at Singleton Hospital. This programme of work which involves a temporary transfer of the existing unit to another area of the hospital is well underway and should be completed by the end of this calendar year.

Additionally, the Health Board has funded and plans to transfer 2 ITU cots from the Princess of Wales to Singleton Hospital following that refurbishment being completed.

- **The costs associated with cross border transfers, including the amount paid to English PCTs for the transfer of neonates as well as the income generated for Welsh providers.**

The Health Board does not pick up the costs of those babies born in England as a consequence of being transferred out, as this is a tertiary funded service commissioned by the Welsh Health Specialised Services team.

However, when Singleton is under pressure the activity tends to be displaced eastwards and may be absorbed by units in Bridgend, Royal Glamorgan, UHW etc. Hence it is probably rarer for ABMU mothers to be transferred to England than for mothers in the Royal Gwent Hospital for example.

Nevertheless for the Year 2012 so far we are aware of at least four ABMU mothers who have been transferred to England because of lack of capacity in Wales. These include mothers transferred to Birmingham (a mother with triplets), Taunton (a mother with twins), Portsmouth (a mother with twins) and Gloucester (a mother with twins). We know that costs have been incurred for at least 14 intensive care days, 15 high dependency days and 17 special care days in England in 2012 alone plus the costs for obstetric care and those incurred by CHANTS in doing the repatriations. This takes the CHANTS service away from Wales for long periods leaving the services in Wales exposed. We have not provided any care to babies from England within this time.

In 2011 there were 10 mothers from ABMU who delivered their babies in the South West region of England (e.g. Bristol, Taunton etc) but we do not have any further details at present about women who may have delivered in other regions of England.

In 2010 we have data on 5 mothers booked at Singleton and delivered in Bristol (including 1 set of twins) 1 who delivered in Bath and 1mother from Aberystwyth who delivered in Liverpool because of capacity issues.

- **Whether you have had any discussions with WHSSC and neighbouring LHBs about the overall increase in cots needed and any joint planning as to where they are located and at what level of intensity.**

Discussions are on going with WHSSC and the Network around capacity and funding arrangements for this service. The Lead clinician and General Manager for this service within the Health Board have instigated a local network meeting with Hywel Dda to discuss future developments and closer collaboration arrangements.

- **Whether any work has been undertaken with neighbouring Boards, or the Welsh Government via WHSSC, on workforce planning to address what impact changes to junior doctor recruitment and the number of training places in the future will have on services in coming years.**

We would like to train additional advanced neonatal nurse practitioners but would need to find the costs of their training and backfilling the nursing posts. However, the costs are substantial - to train 1 ANNP would be round £60,000 per annum including course fees, backfilling the post, transport and accommodation. This is currently under review but is a significant pressure in the context of the current financial environment.

We already provide considerable support to Hywel Dda neonatal service.

Examples are as follows

- *Neonatal roads shows twice a year where ABMU neonatal consultants go to Carmarthen to give lectures and teach skills to the doctors and nurses*
- *All our protocols are freely available to all the neonatal units in Hywel Dda*
- *Any new doctors commencing work in Hywel Dda may attend our 3 day induction program for neonatal doctors*
- *Neonatal stabilisation and transport training days twice yearly available for all neonatal doctors, paediatricians and neonatal nurses. (lectures, case discussions, skills stations and workshops)*
- *Training of paramedics and ambulance drivers involved in neonatal resuscitation eg from home deliveries*
- *Free telephone advice whenever required*

Our "Changing for the Better " programme will also consider further how our Maternal and new baby services are delivered within ABMU HB and how those service changes will impact on our neighbouring Health Boards as part of the over arching Regional Changes Programme Board activities.

Bwrdd Iechyd Prifysgol
Abertawe Bro Morgannwg
University Health Board

ABMU Neonatal Action Plan 2012

ACTION	TIMESCALE	LEADS	STATUS	FURTHER ACTION/TIMESCALE
IMPROVE NEONATAL ENVIRONMENT AND CAPACITY				
Improve Neonatal Unit environment at Singleton by refurbishing the unit and improving space around cots	March 2013	Malcolm Thomas / Paul Stauber	• Following ESBL EColi outbreak November 2011, Neonatal Unit will decant to temporary area (Level 2) April 17th 2012. • Plans for refurbishment of old unit advanced. • Tendering process undertaken. • Refurbishment to commence May 2012. • Improve spacing around cots to meet standards. • Improved hand washing facilities and general environment	Completion planned for March 2013
Increase cot numbers	March 2013	Paul Stauber, Malcolm Thomas, Jean Matthes, Wendy Davies	Increase cot numbers to 7 intensive care plus 1 stabilisation, plus 7- 10 high dependency cots.	Transfer Level 1 cots from Princess of Wales to Singleton 1st cot May 2012, 2nd cot December 2012

					Funding required for 3 more high dependency cots and resolve any outstanding nurse staffing, equipment and revenue costs
Change obstetric model at POW	March 2013	Cathy Dowling, Malcolm Thomas, Myriam Bonduelle		Change from 29 weeks and above to 32 weeks and above for those mothers that currently deliver at PoW and will need to be transferred to Singleton in order to access appropriate Neonatal services	Change may be undertaken in stages– this will need to be agreed as part of any proposed reconfiguration exercise as part of "Changing for the Better"

Establish 12 bedded transitional care area at Singleton		James Moorcraft Malcolm Thomas, Sian Passey, Wendy Davies, Cathy Dowling		Paper being prepared to identify possible areas and staffing requirements.	Review of space utilisation at Singleton December 2012
Decant special care to separate area	December 2012	Malcolm Thomas / Paul Stauber		As above	As Above
Improve parent facilities	June 2013	Malcolm Thomas / Paul Stauber		Current Facilities to be enhanced to rooms being adjacent to neonatal facilities	
STAFFING AND EDUCATION ISSUES					
Due to potential shortages of medical trainees – to undertake review of neonatal services across ABMU	End of September 2012	Malcolm Thomas, Sian Passey, Jean Matthes, Myriam Bonduelle		Ongoing. Part of "Changing for the Better" review.	
ANNP's to undergo training to enable independent prescribing	End of Sept 2012	Jean Matthes		Course places and funding are obtained.	Funding needs to be identified.
Identify funds to train one more ANNP Year commencing 2012 and	June 2012	Sian Passey, Malcolm Thomas		Two ANNP's have applied for training in Southampton. Costs of backfilling their posts have not been identified. Service	

one more ANNP Year commencing 2013.				pressures require funds to be put in place.	
To introduce Neonatal Life Support Course in ABMU	September 2012	Carol Sullivan		To apply to ALSG and book facility for delivery of course	
To apply for neonatal transport trainee from Deanery for ABMU	June 2012	Carol Sullivan Jean Matthes		On Going	
EQUIPMENT ISSUES					
Undertake review of possible mechanisms to provide CPAP and recommend policy to improve and enhance the service for babies	June 2012	Sujoy Banerjee, Pinki Surana		A number of methods of delivering CPAP are available. Many of our CPAP machines are in need of replacement. In addition we require ability to deliver CPAP to more babies.	Need to arrange additional investment for replacement of existing equipment and to purchase additional new CPAP equipment. 2012 / 2013
Ensure that each cot station on the neonatal unit has facilities for resuscitation in air or air/oxygen mix	End 2012	Sujoy Banerjee, Pinki Surana		At present babies on neonatal unit can only be resuscitated in 100% oxygen. This is in contravention of existing recommendations which recognise that this is harmful to babies and recommend resuscitation in air or air oxygen mix. This will reduce retinopathy, chronic lung disease, possibly improve neurological outcomes. The refurbished neonatal unit will provide the necessary air and oxygen points but blenders will need to be purchased.	To be fitted as part of refurbishment of Neonatal facility March 2013
Replace old cardiac respiratory monitors in special care area	End 2013	Paul Lawrence		Monitors are > 10 years old, no longer supported and need replacing	Requires capital purchase - forms part of capital Equipment

Also central monitor needs to be replaced					replacement bid.
Equip additional high dependency and intensive care	December 2012	Paul Lawrance, Paul Stauber, Malcolm Thomas		4 incubators, ventilators , monitors, 12 syringe pumps	Funding will need to be addressed as part of future funding for increase capacity.
Replace neonatal resuscitaires in POW and Neath Port Talbot and ensure ability to resuscitate in air when necessary	December 2013	Paul Lawrance, Paul Stauber			Requires capital purchase - forms part of capital Equipment replacement bid.
INFECTION CONTROL					
Introduce MRSA screening for all babies admitted to the Neonatal Unit	June 2012	Jean Matthes, Ann Lewis (Consultant Microbiologist)		NICE recommends that all babies admitted to the Neonatal Unit should be screened for MRSA. To date only babies admitted from other Neonatal Units are screened. Following the infection outbreak on the Neonatal unit in November 2011 the neonatal outbreak group recommended introduction of MRSA screening.	Business case has been prepared. Revenue costs not yet identified.
PARTNER ORGANISATIONS					
Support Hywel Dda to provide safe care as close to home wherever possible	ongoing	Malcolm Thomas Kevin Tribble Jean Matthes Simon Fountain Polley		Series of meeting arranged Support provided re training needs	Ongoing support / partnership working

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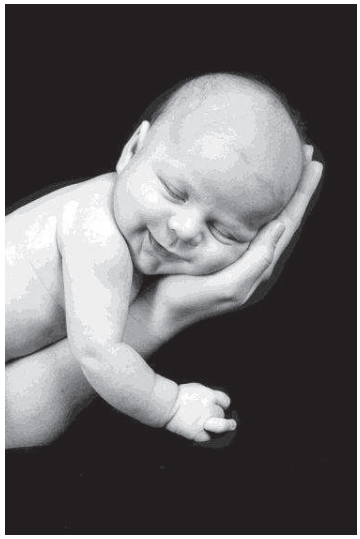
Neonatal Intensive Care Unit

Annual Report 2010

Parts I & II



Singleton Hospital
Sketty Lane
Sketty
Swansea, SA2 8QA

Prepared by:

Dr James Moorcraft	DM, FRCP, FRCPCH, Consultant Neonatologist
Dr. Jean Matthes	MB, BCh, MD, FRCP, FRCPCH, Consultant Neonatologist
Dr. Sujoy Banerjee	MBBS, DCH, MD, MRCP (UK), MRCPCH, Consultant Neonatologist
Dr. Pinki Surana	MBBS, DCH, MRCPCH, FRCPCH, Consultant Neonatologist
Hilary Berry	Data Manager, Singleton Neonatal Unit

Published: February 2012

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PART I
ALL BABIES

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Outline Report on Births during 2010

Table 1a. Singleton Hospital registered births

Deliveries	Number
Total Babies born including Singleton Midwifery Led Unit (live and stillborn)	3780
Births on Midwifery Led Unit	579
Total Deliveries including stillbirths and homebirths	3725
Home Births	106
Born Before Arrival	27
Still Births	22
Deaths on Labour Ward	4
Twin deliveries	60
Triplet deliveries	1
Quad deliveries	1

Table 1b. Princess of Wales Hospital registered births

Deliveries	Number
Total Babies born (live and stillborn)	2519
Total Deliveries including stillbirths and homebirths	2480
Home Births	185
Born Before Arrival	14
Still Births	22
Deaths on Labour Ward	0
Twin deliveries	39
Triplet deliveries	0
Quad deliveries	0

Table 1c. Neath Port Talbot Hospital

Deliveries	Number
Total Babies born including Midwifery Led Unit (live and stillborn)	471
Births on Midwifery Led Unit	425
Total Deliveries including stillbirths and homebirths	471
Planned Home Births	32
Born Before Arrival	14
Still Births	0
Deaths on Labour Ward	0
Twin deliveries	0
Triplet deliveries	0
Quad deliveries	0

Abertawe Bro Morgannwg University NHS Trust

Outline Report on Births during 2010

Introduction

During 2010, 6666 women gave birth whilst under the care of ABM Maternity Services with 6770 babies being born (99 sets of twins plus 1 set of triplets and 1 set of quads).

Number of births

Singleton Hospital - 3780

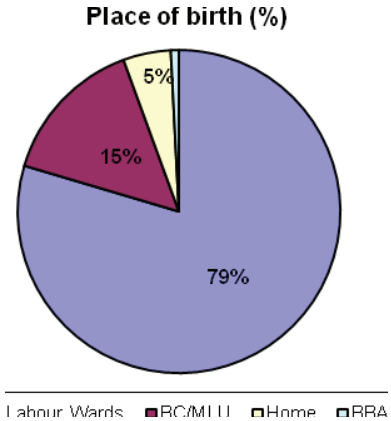
Labour Ward	-	3068
Midwifery Led Unit	-	579
Home	-	106
BBA/In Transit	-	27

Princess of Wales/Neath Port Talbot - 2990

Labour Ward	-	2320
Birth Centre	-	425
Home	-	217
BBA/In Transit	-	28

Mode of Birth

	S	POW/NPT
Normal birth	2349 (62.1%)	2105 (70.4%)
Instrumental	427 (11.3%)	247 (8.3%)
C-Section Emergency	487 (12.9%)	249 (8.3%)
Elective	486 (12.9%)	385 (12.9%)
Breech	31 (0.8%)	4 (0.1%)
Stillbirth	*22 (0.6%)*	*22 (0.7%)*



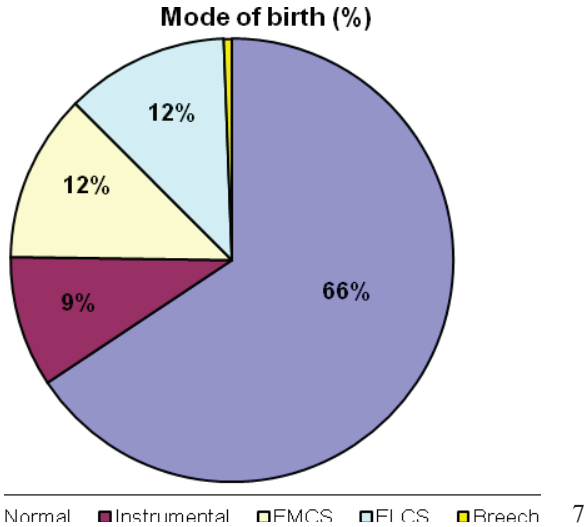


Table 2a. Activity of Neonatal Unit - Singleton

	Number	%
Admissions	352	
Re-admissions	29	8.2
Admissions and Re-admissions	381	
Primary Discharge	335	
Deaths prior to discharge	17	4.8

Table 2b. Activity of Neonatal Unit - Princess of Wales

	Number	%
Admissions	289	
Re-admissions	13	4.5
Admissions and Re-admissions	302	
Primary Discharge	286	
Deaths prior to discharge	3	1

Table 3a. Singleton Hospital Dependency Levels

Level of Care	Number of days	Occupancy per funded level
Intensive Care	1562	91%
High Dependency Care	1857	145%
Special Care	3521	64%

Funding was for 4.7 Intensive Care Cots, 3.5 HDU Cots and 15 SC Cots.

Table 3b. Princess of Wales Hospital Dependency Levels

Level of Care	Number of days	Occupancy per funded level
Intensive Care	229	31%
High Dependency Care	594	54%
Special Care	2670	146%

Funding was for 2 Intensive Care Cots, 3 HDU Cots and 5 SC Cots.

Table 4(a) Admission to Singleton by Locality According to Mother's Post Code

	Number	%
Swansea	200	57
Carmarthenshire	38	11
Neath & Port Talbot	52	15
Bridgend	21	6
Powys	7	2
Pembrokeshire	9	2.5
Rhondda Cynon Taf	3	<1
Ceredigion	7	2
Caerphilly	3	<1
Cardiff	4	1
Cardiganshire	1	<1
Vale of Glamorgan	1	<1
Gwynedd	1	<1
Other	5	1.4
TOTAL	**352**	

Table 4(b) Admission to Princess of Wales by Locality According to Mother's Post Code

	Number	%
Bridgend	157	54
Neath & Port Talbot	76	26
Swansea	22	7.6
Vale of Glamorgan	12	4
Rhondda Cynon Taf	5	1.7
Ceredigion	4	1.4
Cardiff	4	1.4
Powys	2	<1
Pembrokeshire	2	<1
Caerphilly	1	<1
Carmarthenshire	1	<1
Other	3	1
TOTAL	**289**	

Table 5(a) Singleton - Total Care Days Attributable to Maternal Area of Residence

Post Code Locality	Intensive Care	High Dependency	Special Care	Total Care Days
Swansea	697	1194	2422	**4313**
Carmarthenshire	177	194	392	**763**
Neath & Port Talbot	207	239	531	**977**
Bridgend	181	50	44	**275**
Powys	49	33	43	**125**
Pembrokeshire	50	85	15	**150**
Rhondda Cynon Taff	19	0	11	**30**
Ceredigion	32	32	38	**102**
Caerphilly	71	17	2	**90**
Cardiff	23	1	7	**31**
Cardiganshire	4	4	1	**9**
Vale of Glamorgan	5	4	0	**9**
Gwynedd	4	0	0	**4**
Other	43	4	15	**62**
TOTAL	**1562**	**1857**	**3521**	**6940**

Table 5(b) Princess of Wales - Total Care Days Attributable to Maternal Area of Residence

Post Code Locality	Intensive Care	High Dependency	Special Care	Total Care Days
Bridgend	128	366	1500	**1994**
Neath & Port Talbot	49	92	668	**809**
Swansea	23	70	198	**291**
Vale of Glamorgan	3	23	97	**123**
Rhondda Cynon Taff	7	0	41	**48**
Ceredigion	7	10	35	**52**
Cardiff	0	4	58	**62**
Powys	3	0	7	**10**
Pembrokeshire	1	1	19	**21**
Caerphilly	6	4	0	**10**
Carmarthenshire	0	23	36	**59**
Other	2	1	11	**14**
TOTAL	**229**	**594**	**2670**	**3493**

Table 6. Source of Admission to Neonatal Unit - Singleton

	Number	%
Labour Ward or Theatre - Singleton Hospital	237	67
Postnatal Wards - Singleton Hospital	58	16
Princess of Wales Hospital - Bridgend	16	4.5
Withybush Hospital - Haverfordwest	8	2
UHW - Cardiff	6	1.70
Bristol	5	1.4
Bronglais Hospital - Aberystwyth	5	1.4
Home	4	1
Glangwili Hospital - Carmarthen	4	1
Neath	2	0.6
Royal Glamorgan	2	<1
Ambulance	1	<1
Morriston	1	<1
Newport	1	<1
Birthing Centre - Singleton Hospital	1	<1
Main Theatre - Singleton Hospital	1	<1
TOTAL	**352**	

Table 7. Primary Disposition - Singleton

	Number	%
Home	149	42
Postnatal Ward - Singleton	94	27
Transferred	81	23
Deaths	17	5
Foster Care	10	3
Labour Ward - Singleton	1	<1
TOTAL	**352**	
Post-mortem examinations performed	2	

Table 8. Source of Readmission - Singleton

	Number
UHW - Cardiff	13
Bristol	8
Bridgend	4
Home	1
Leicester	1
Postnatal Ward - Singleton	1
Withybush	1
TOTAL	**29**

Table 9a. Limitations to Neonatal Service - Singleton

Number of days unit was on 'amber' alert - 80% acuity (open to own)	124
Number of days unit was on 'red' alert - 100% acuity 36 week model (only taking >36 week gestation)	102
Number of days unit was on 'black' alert - Closed, no stabilisation cot	7
Total number of **babies** where requests for in-utero transfer to the unit were refused or women were transferred out for reasons of capacity	87

For further details see Appendix 1 - Singleton Hospital Pages 83-89

Table 9b. Limitations to Neonatal Service - Princess of Wales

Number of days unit was on 'amber' alert - 80% acuity (open to own)	110
Number of days unit was on 'red' alert - 100% acuity 36 week model (only taking >36 week gestation)	65
Number of days unit was on 'black' alert - Closed, no stabilisation cot	1
Total number of **babies** where requests for in-utero transfer to the unit were refused or women were transferred out for reasons of capacity	19

For further details see Appendix 2 - Princess of Wales Hospital Page - 90

Table 10(a) Admissions by Birth-weight (grams) - Singleton

Birth-weight	TOTAL 352	In-born 297	Out-born 55	Deaths In-born 11	Deaths Out-born 6
= or > 3,500g	55	48	7	1	
2,500 - 3,499g	92	74	18	2	2
1,500 - 2,499g	109	101	8	1	
1,250 - 1,499g	29	28	6		
1,000 - 1,249g	31	26	5		2
750 - 999g	16	11	5		
500 - 749g	16	11	5	5	2
<500g	4	3	1	2	0

Table 10(b) Admissions by Birth-weight (grams) - Princess of Wales

Birth-weight	TOTAL 287	In-born 246	Out-born 41	Deaths In-born 3	Deaths Out-born 0
= or > 3,500g	64	59	5		
2,500 - 3,499g	88	84	4	1	
1,500 - 2,499g	87	78	9	1	
1,250 - 1,499g	25	14	11		
1,000 - 1,249g	10	6	4	1	
750 - 999g	10	3	7		
500 - 749g	3	2	1		
<500g	0	0	0	0	0

Table 11(a) Admissions by Gestation (weeks) - Singleton

Gestation	TOTAL 352	In-born 297	Out-born 55	Deaths In-born 11	Deaths Out-born 6
> 41	3	3	0		
37 - 41	132	109	23	4	1
34 - 36	89	81	8		1
33	13	13	0		
32	18	16	2		
31	14	12	2		
30	16	16	0		
29	12	10	2		
28	17	12	5		1
27	18	10	8	1	1
26	4	2	2		
25	5	5	0		
24	4	3	1	3	
23	7	5	2	3	2
<23	0	0	0	0	0

Table 11(b) Admissions by Gestation (weeks) - Princess of Wales

Gestation	TOTAL 287	In-born 246	Out-born 41	Deaths In-born 3	Deaths Out-born 0
> 41	19	19	0		
37 - 41	112	106	6	1	
34 - 36	69	64	5	1	
33	16	15	1		
32	23	17	6		
31	9	6	3		
30	12	7	5		
29	10	3	7		
28	12	7	5	1	
27	1	0	1		
26	1	0	1		
25	1	0	1		
24	0	0	0		
23	2	2	0		
<23	0	0	0	0	0

Table 12. Multiple Births and Fertility Treatment - Singleton Neonatal Unit, Swansea

Multiple Pregnancies	Babies admitted to Neonatal Unit	Fertility treatment		
		Y	N	Not/Doc
22 sets & 6 single babies of twin pregnancy	50	4 sets	24 sets	0
1 set of Triplets	3	Yes	0	0
1 set of Quads	4	Yes	0	0

Table 13. Multiple or Single Births Admitted to the Singleton Neonatal Unit, Swansea

	Singleton	Twins	Triplets	Quads
> 41	3			
37 - 41	131	1 baby		
34 - 36	70	6 sets + 4 babies	1 set	
33	13			
32	12	3 sets		
31	9	2 sets + 1 baby		
30	10	3 sets		
29	6	3 sets		
28	15	1 set		
27	10	2 sets		1 set
26	4			
25	3	1 set		
24	4			
23	5	1 set		
<23	0			
TOTAL	**295**	**50**	**3**	**4**

Table 14. Respiratory Support Delivered at Singleton Hospital, Swansea

	Number	
Days of mechanical ventilation (IPPV) delivered	524	
Days of CPAP delivered	2106	
Days of HFOV (SLE) delivered	252	
		% of total admissions
Number of infants receiving mechanical ventilation (IPPV)	115	33
Number of infants receiving CPAP but not mechanical ventilation	237	67
Numbers of infants receiving HFOV (SLE) and IPPV	66	19
Number of infants receiving supplemental oxygen at 36 weeks gestation	21	
Number of infants discharged home on oxygen therapy	19	

Table 15. Infants receiving Nitric Oxide - Singleton Hospital

Babies on Nitric Oxide	12
Babies Referred for ECMO	1

Table 16. Breastfeeding - Singleton Hospital

Type	No. of Babies	% of total admissions
Received some expressed milk	244	69
Breast fed at discharge	68	19
Donor milk used	34	10

Table 17. Screening and Surveillance - Singleton Hospital, Swansea

a) Retinopathy of Prematurity

	No. of Babies	%
Inpatients having retinal examination	212	100% (of eligible)
Outpatients having retinal examination	109	
Babies receiving treatment for retinopathy	6	3% of screened

b) Hearing Screening

	No. of Babies	%
Babies admitted to unit	**352**	
Babies who died prior to screening	17	
Babies who were not screened (palliative care)	1	
Babies who had hearing screening	334	100% (of eligible)
Babies who had clear responses in both ears	297	
Babies who had clear response in one ear	21	
Babies who had no clear response in either ear	16	

Table 18. Babies with congenital malformations who were admitted to Singleton Neonatal Unit

Date of Birth	Diagnosis	ICD 10 Code
05/01/2010	Mild mitral stenosis Hydronephrosis Double outlet right ventricle Ventricular septal defect Stenosis of pulmonary artery Microcephaly	Q23.2 Q62.0 Q20.1 Q21.0 Q25.6 Q02.X
10/01/2010	Penoscrotal hypospadias	Q54.2
21/01/2010	Mitochondrial myopathy with associated lactic acidosis - complex 4 deficiency	G71.3
03/02/2010	Plagiocephaly Hypotonia	Q67.3 P94.2
24/02/2010	Stridor Bicuspid aortic valve	Q31.4 Q23.1
21/03/2010	Gastroschisis	Q79.3
23/03/2010	Tetralogy of Fallot Hypospadias Patent ductus arteriosus	Q21.3 Q54.9 Q25.0
27/03/2010	Congenital absence, atresia and stenosis of duodenum Congenital absence, atresia and stenosis of jejunum Annular pancreas	Q41.0 Q41.1 Q45.1
07/04/2010	Cleft Palate Micrognathia	Q35.9 K07.0
09/04/2010	Bilateral talipes equino varus	Q66.0
15/04/2010	Absent septum pellucidum	Q04.8
13/04/2010	Bilateral moderate sensori-neural hearing loss	H90.3
23/04/2010	Bilateral sensorineural hearing loss Branch pulmonary artery stenosis Patent foramen ovale	H90.3 Q25.6 Q21.11
02/05/2010	Trisomy 18 (Inlet) Inlet Ventricular septal defect Atrial septal defect	Q91.0 Q21.0 Q21.1
08/05/2010	Cardiomyopathy	Q24.8
16/05/2010	Hypospadias	Q54.0
25/05/2010	Bilateral hydronephrosis Bilateral vesico-uretero-renal reflux, - Grade 3 on the right and Grade 4 on the left	Q62.0 Q62.71
11/06/2010	Extra digit both feet	Q69.29
16/06/2010	Multiple Rhabdomyomas Tuberous sclerosis	D15.1 Q85.1

Date of Birth	Diagnosis	ICD 10 Code
23/06/2010	Critical aortic stenosis Bicuspid aortic valve Mitral regurgitation Left ventricular dysfunction	Q23.0 Q23.10 Q23.3 Q24.8
26/06/2010	Hypopolasia and dysplasia of lung	Q33.6
07/07/2010	Hypospadias	Q54.9
03/08/2010	Ladd's band Frontal bossing - Large anterior fontanelle	Q43.30 Q75.9
09/08/2010	Agenesis of corpus callosum Severe bilateral ventriculomegaly	Q04.00 Q03.9
11/08/2010	Agenesis of corpus callosum Ventriculomegaly	Q04.00 Q03.9
11/08/2010	Hypospadias Emerging hypothyroidism Right sided hydrocele	Q54.9 E03.1 P83.5
12/08/2010	Bilateral inguinal hernia	K40.2
26/08/2010	Bilateral inguinal hernia	K40.2
28/08/2010	Gastroschisis	Q79.3
02/09/2010	PUJ obstruction right side	Q62.10
07/09/2010	Iris pigmentation epithelial cyst	Q13.2
08/10/2010	Dandy walker malformation Multiple capillary haemanginonas Congenital hypothyroidism without goitre	Q03.1 D18.00 E03.1
08/10/2010	Trisomy 21 Mild insufficiency of aortic valve Facial dysmorphism	Q90.0 Q23.1 Q18.9
21/10/2010	Ventricular septal defect Fetal alcohol syndrome (dysmorphic)	Q21.0 Q86.0
27/10/2010	Trisomy 21 Dysmorphic features characteristic of Trisomy 21 Single palmar crease	Q90.0 Q18.9 Q82.80
29/10/2010	Bilateral inguinal hernia	K40.2
02/11/2010	Muscular ventricular septal defect	Q21.0
08/11/2010	Bilateral dysplastic kidneys Bilateral hydronephrosis Posterior urethral valves Bilateral vesico-uretero-renal reflux	Q61.4 Q62.0 Q64.20 Q62.71
20/11/2010	Tracheo-oesophageal fistula without atresia	Q39.2
24/11/2010	Cystic adenomatoid malformation of left lung Mild left sided pulmonary stenosis	Q33.80 Q25.6

Date of Birth	Diagnosis	ICD 10 Code
27/11/2011	Atresia of oesophagus with tracheo-oesophageal fistula	Q39.1
05/12/2010	Ventricular septal defects x 3	Q21.0
06/12/2010	Congenital laryngomalacia	Q31.5
20/12/2010	Perimembranous ventricular septal defect with extension to right ventricle outlet Coarctation of aorta	Q21.0 Q25.19
TOTAL:		**44**

Table 19a) NEC b) Maternal Drugs c) Surgery for PDA d) Exchange Transfusions

	No. of babies
a) Necrotizing Enterocolitis	**6**
b) Neonatal Abstinence Syndrome	**12**
c) Surgery for PDA	**3**
d) Exchange Transfusions	**5** (3 were partial)

Table 20. Rate of Inborn babies with HIE between 2002-2010

Year	**Liveborn infants**	**No. of HIE (inborn)**
2002	3207	2
2003	3320	5
2004	3713	5
2005	3616	5
2006	3495	3
2007	3457	3
2008	3648	4
2009	3531	2
2010	3780	7
TOTAL	**31767**	**36**
OVERALL RATE	**1.13 per 1000 live births**	

Number of babies cooled in 2010 - 13

Table 21. Stillbirth Rate by Hospital

	2006-2010	2010
Singleton	6.5	6.6
UHW	6.9	6.6
Royal Gwent	5.3	6.6

Table 22. Crude Perinatal Mortality Rate by Hospital

	2006-2010	2010
Singleton	9.5	11.4
UHW	10.6	9.9
Royal Gwent	7.6	8.0

Table 23. Crude Early & Late Neonatal Mortality Rate by Hospital

	2006-2010	2010
Swansea	4.2	5.3
UHW	5.3	4.2
Royal Gwent	3.0	1.4

The following figures 1-4, 7-9 and Table 2 are extracts from the All Wales Perinatal Survey 2010. With grateful acknowledgements to Dr. Adappa, Dr. Paranjothy, Mrs. Rolfe, Dr. Watkins, Professor Kotecha, Mrs. Hopkins and Professor Dunstan.

In the following figures 'by Local Authority' refers to mother's post code residence.
Dotted lines = 5%, 95%

Figure 1

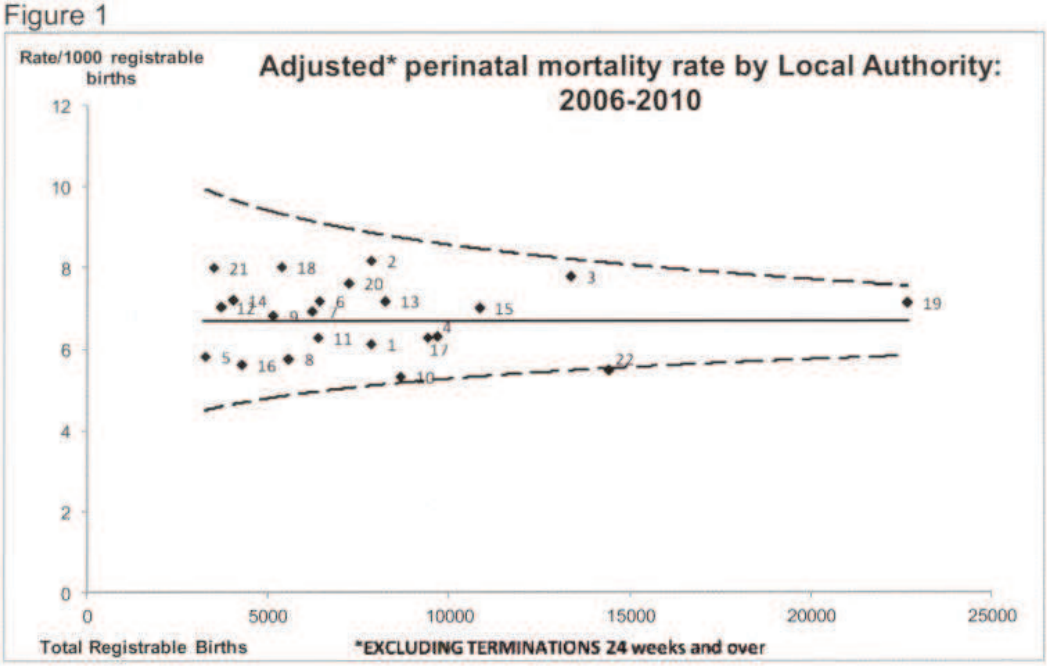
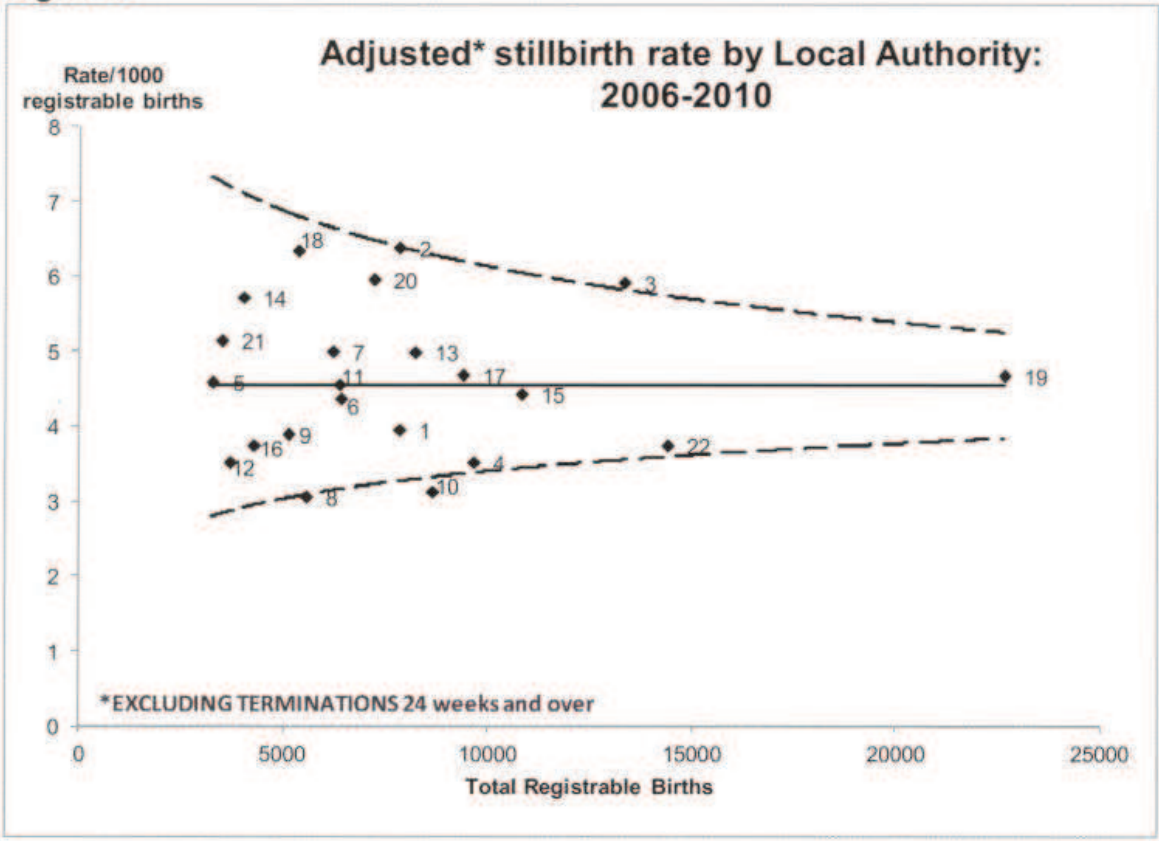


Figure 2



1	Bridgend	Abertawe Bro Morganwg University Health Board
2	Neath Port Talbot	Abertawe Bro Morganwg University Health Board
3	Swansea	Abertawe Bro Morganwg University Health Board
4	Carmarthenshire	Hywel Dda Health Board
5	Ceredigion	Hywel Dda Health Board
6	Pembrokeshire	Hywel Dda Health Board
7	Powys	Powys Teaching Health Board
8	Conwy	Betsi Cadwaladr University Health Board
9	Denbighshire	Betsi Cadwaladr University Health Board
10	Flintshire	Betsi Cadwaladr University Health Board
11	Gwynedd	Betsi Cadwaladr University Health Board
12	Isle of Anglesey	Betsi Cadwaladr University Health Board
13	Wrexham	Betsi Cadwaladr University Health Board
14	Blaenau Gwent	Aneurin Bevan Health Board
15	Caerphilly	Aneurin Bevan Health Board
16	Monmouthshire	Aneurin Bevan Health Board
17	Newport	Aneurin Bevan Health Board
18	Torfaen	Aneurin Bevan Health Board
19	Cardiff	Cardiff and Vale University Health Board
20	The Vale of Glamorgan	Cardiff and Vale University Health Board
21	Merthyr Tydfil	Cwm Taf Health Board
22	Rhondda Cynon Taff	Cwm Taf Health Board

Figure 3

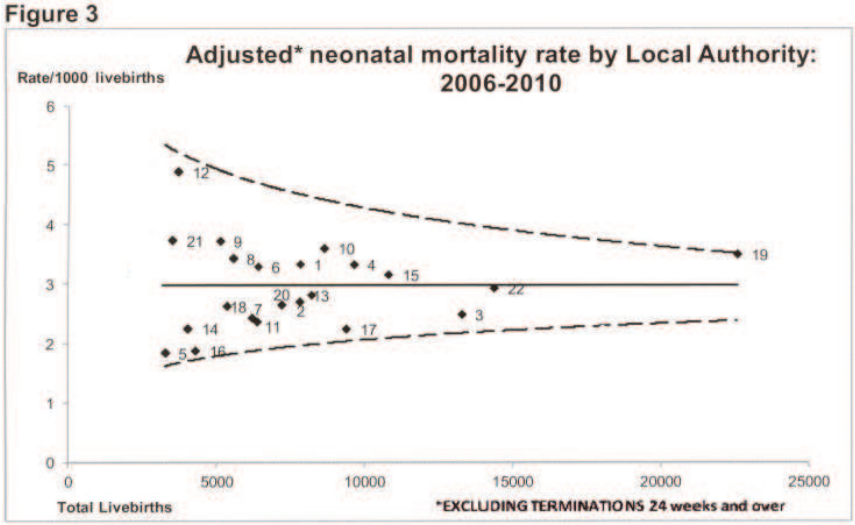
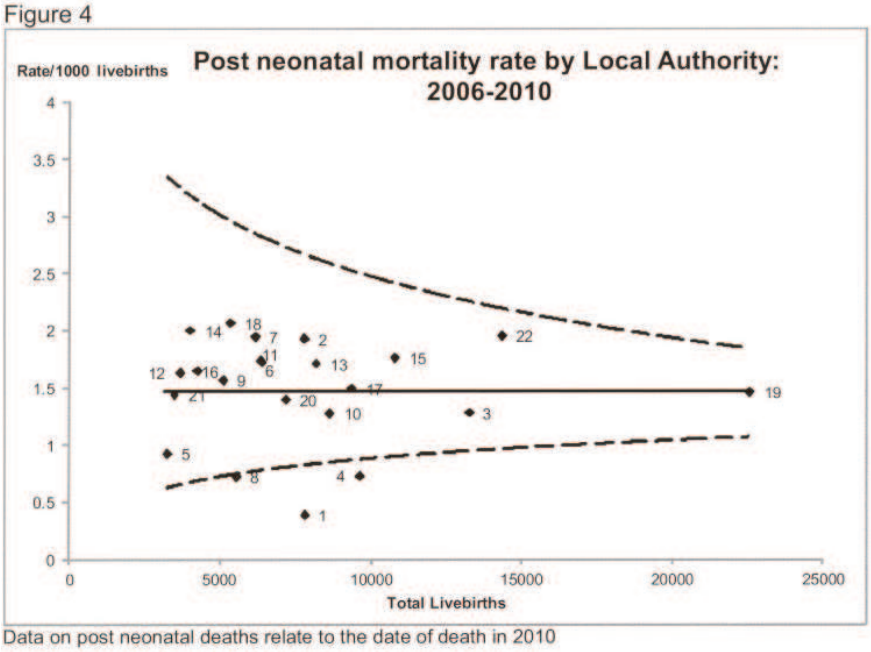


Figure 4



Data on post neonatal deaths relate to the date of death in 2010

1	Bridgend	Abertawe Bro Morganwg University Health Board
2	Neath Port Talbot	Abertawe Bro Morganwg University Health Board
3	Swansea	Abertawe Bro Morganwg University Health Board
4	Carmarthenshire	Hywel Dda Health Board
5	Ceredigion	Hywel Dda Health Board
6	Pembrokeshire	Hywel Dda Health Board
7	Powys	Powys Teaching Health Board
8	Conwy	Betsi Cadwaladr University Health Board
9	Denbighshire	Betsi Cadwaladr University Health Board
10	Flintshire	Betsi Cadwaladr University Health Board
11	Gwynedd	Betsi Cadwaladr University Health Board
12	Isle of Anglesey	Betsi Cadwaladr University Health Board
13	Wrexham	Betsi Cadwaladr University Health Board
14	Blaenau Gwent	Aneurin Bevan Health Board
15	Caerphilly	Aneurin Bevan Health Board
16	Monmouthshire	Aneurin Bevan Health Board
17	Newport	Aneurin Bevan Health Board
18	Torfaen	Aneurin Bevan Health Board
19	Cardiff	Cardiff and Vale University Health Board
20	The Vale of Glamorgan	Cardiff and Vale University Health Board
21	Merthyr Tydfil	Cwm Taf Health Board
22	Rhondda Cynon Taff	Cwm Taf Health Board

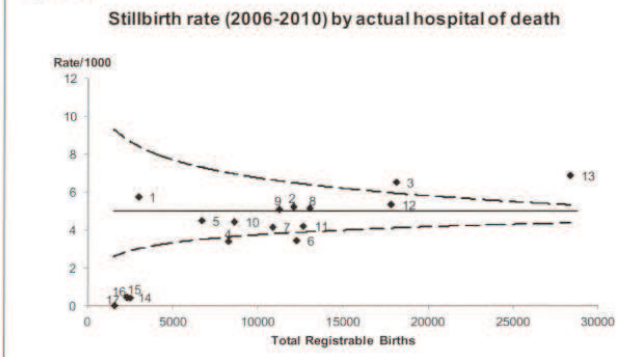
Table 2 Adjusted* mortality rates by Health Board and Welsh NHS Regions in 2010 – RATES per 1,000 with 95% confidence intervals

Health Board and NHS Region	Registrable Births	Livebirths	Therapeutic abortion rate [20-23 wks]	Spontaneous miscarriage rate [20-23 wks]	Stillbirth rate*	Perinatal mortality rate*	Early neonatal mortality rate*	Late neonatal mortality rate	Neonatal mortality rate	Post neonatal mortality rate	Infant mortality rate
Abertawe Bro Morgannwg University Health Board	6104	6058	1.0 (0.5, 2.1)	1.8 (1.0, 3.2)	6.9 (5.1, 9.3)	9.3 (7.2, 12.1)	2.5 (1.5, 4.1)	0.5 (0.2, 1.5)	3.0 (1.9, 4.7)	1.5 (0.8, 2.8)	4.5 (3.1, 6.5)
Hywel Dda Health Board	3994	3978	1.7 (0.8, 3.6)	1.3 (0.5, 2.9)	2.3 (1.2, 4.3)	4.8 (3.0, 7.4)	2.5 (1.4, 4.6)	0.3 (0.0, 1.4)	2.8 (1.5, 4.9)	0.8 (0.3, 2.2)	3.5 (2.1, 5.9)
Powys Teaching Health Board	1192	1188	1.7 (0.5, 6.1)	0.0 (0.0, 3.2)	3.4 (1.3, 8.6)	5.9 (2.8, 12.1)	2.5 (0.9, 7.4)	0.8 (0.1, 4.8)	3.4 (1.3, 8.6)	0.8 (0.1, 4.8)	4.2 (1.8, 9.8)
Mid and West Wales	11290	11224	1.3 (0.8, 2.2)	1.4 (0.9, 2.3)	4.9 (3.7, 6.3)	7.4 (5.9, 9.1)	2.5 (1.7, 3.6)	0.4 (0.2, 1.0)	2.9 (2.1, 4.1)	1.2 (0.7, 2.0)	4.1 (3.1, 5.5)
Betsi Cadwaladr University Health Board	7665	7635	1.8 (1.1, 3.1)	1.7 (1.0, 2.9)	3.7 (2.5, 5.3)	6.0 (4.5, 8.0)	2.4 (1.5, 3.7)	0.8 (0.4, 1.7)	3.1 (2.1, 4.7)	1.7 (1.0, 2.9)	4.8 (3.5, 6.7)
North Wales	7665	7635	1.8 (1.1, 3.1)	1.7 (1.0, 2.9)	3.7 (2.5, 5.3)	6.0 (4.5, 8.0)	2.4 (1.5, 3.7)	0.8 (0.4, 1.7)	3.1 (2.1, 4.7)	1.7 (1.0, 2.9)	4.8 (3.5, 6.7)
Aneurin Bevan Health Board	7027	6987	1.4 (0.8, 2.6)	1.8 (1.1, 3.2)	5.3 (3.8, 7.2)	6.7 (5.0, 8.9)	1.4 (0.8, 2.6)	0.0 (0.0, 0.5)	1.4 (0.8, 2.6)	1.0 (0.5, 2.1)	2.4 (1.5, 3.9)
Cardiff and Vale University Health Board	6233	6197	2.4 (1.5, 4.0)	1.9 (1.1, 3.4)	4.8 (3.4, 6.9)	7.7 (5.8, 10.2)	2.9 (1.8, 4.6)	0.8 (0.3, 1.9)	3.7 (2.5, 5.6)	1.3 (0.7, 2.5)	5.0 (3.5, 7.1)
Cwm Taf Health Board	3705	3688	2.4 (1.3, 4.6)	2.2 (1.1, 4.3)	4.6 (2.9, 7.3)	5.7 (3.7, 8.6)	1.1 (0.4, 2.8)	0.8 (0.3, 2.4)	1.9 (0.9, 3.9)	1.9 (0.9, 3.9)	3.8 (2.3, 6.4)
South East Wales	16965	16872	2.0 (1.4, 2.8)	1.9 (1.4, 2.7)	5.0 (4.0, 6.1)	6.8 (5.7, 8.2)	1.9 (1.3, 2.7)	0.5 (0.2, 0.9)	2.4 (1.7, 3.2)	1.3 (0.9, 2.0)	3.7 (2.9, 4.7)
Unknown	297	297									
Wales	36217	36028	1.7 (1.4, 2.2)	1.7 (1.3, 2.2)	4.6 (4.0, 5.4)	6.8 (6.0, 7.7)	2.2 (1.7, 2.7)	0.5 (0.3, 0.8)	2.7 (2.2, 3.3)	1.3 (1.0, 1.8)	4.0 (3.4, 4.7)

Source: NCCHD & AWPS. Data on late fetal losses, stillbirths and neonatal deaths relate to the date of birth, while data on post neonatal deaths relate to the date of death in 2010.
* excludes 26 terminations of pregnancy from 24 weeks gestation (22 stillbirths, 4 early neonatal deaths)

Mortality RATES per 1,000 by hospital (2006 – 2010)

Figure 7



1 Bronglais Hospital
2 Princess of Wales Hospital
3 Singleton Hospital*
4 West Wales General Hospital
5 Withybush Hospital
6 Ysbyty Glan Clwyd
7 Ysbyty Gwynedd**
8 Ysbyty Wrexham Maelor

9 Nevill Hall Hospital
10 Prince Charles and Aberdare Hospitals
11 Royal Glamorgan Hospital
12 Royal Gwent Hospital*
13 University Hospital Of Wales*
14 Caerphilly Birth Centre
15 Llandough Hospital Midwifery Led Unit
16 Neath and Port Talbot Birth Centre
17 Powys Units

* includes data from alongside midwifery-led units
** includes data from Bryn Beryl, Dolgellau and Towyn midwifery-led units

Figure 8

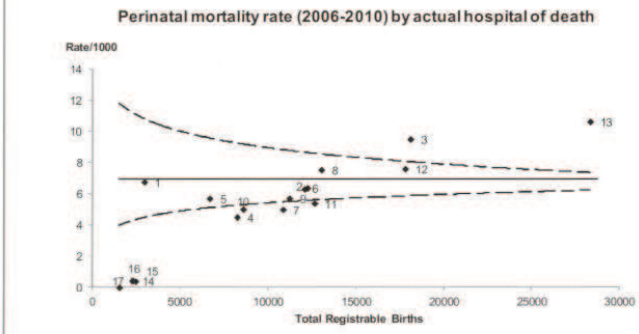


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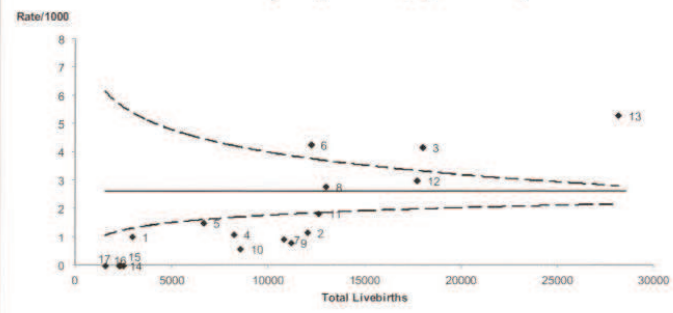
Figure 9



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* includes data from alongside midwifery-led units
** includes data from Bryn Beryl, Dolgellau and Towyn midwifery-led units

Table 24. Singleton Stillbirths 2010

Survey Number	Intended place of delivery	Place of delivery	Calculated gestation (weeks)	Birth weight	CP Classification Name	icd10 diagnosis 1	icd10_2	Aberdeen Classification Name	Autopsy Description
W/10/0008/0	Singleton Hospital	Singleton Hospital	37	2000	Unexplained death prior to onset of labour	None	None	Unexplained	Yes
W/10/0001/0	Singleton Hospital	Singleton Hospital	25	240	Unexplained death prior to onset of labour	None	None	Unexplained	Yes
W/10/0026/0	Singleton Hospital	Singleton Hospital	39	2860	Death prior to onset of labour associated with placental abruption	Placental abruption	None	Antepartum haemorrhage (APH)	Not permitted
W/10/0027/0	Singleton Hospital	Singleton Hospital	28	1140	Congenital anomaly	Termination of pregnancy	Congenital anomaly, multiple	Congenital anomaly	Not permitted
W/10/0052/0	Singleton Hospital	Singleton Hospital	34	2240	Death prior to onset of labour associated with placental abruption	Placental abruption	None	Antepartum haemorrhage (APH)	Not permitted
W/10/0053/0	Singleton Hospital	Singleton Hospital	35	2100	Death prior to onset of labour associated with placental abruption	Placental abruption	None	Antepartum haemorrhage (APH)	Not permitted
W/10/0081/0	Singleton Hospital	Singleton Hospital	39	2640	Unexplained death prior to onset of labour	None	None	Unexplained	Yes
W/10/0102/0	Singleton Hospital	Singleton Hospital	37	4020	Death prior to onset of labour associated with placental abruption	Placental abruption	None	Antepartum haemorrhage (APH)	Not permitted
W/10/0100/0	Singleton Hospital	Singleton Hospital	24	640	Infection	Bronchopneumonia, organism unspecified	None	Maternal Disorder	Yes
W/10/0101/0	Neath Port Talbot Hospital	Singleton Hospital	25	620	Unexplained death prior to onset of labour	Premature rupture of membranes	None	Unexplained	Not permitted

Survey Number	Intended place of delivery	Place of delivery	Calculated gestation (weeks)	Birth weight	CP Classification Name	icd10 diagnosis 1	icd10_2	Aberdeen Classification Name	Autopsy Description
W/10/0147/0	Neath Port Talbot Hospital	Singleton Hospital	26	380	Unexplained death prior to onset of labour	None	None	Unexplained	Yes
W/10/0148/0	Singleton Hospital	Singleton Hospital	27	1480	Congenital anomaly	Termination of pregnancy	Trisomy21 Down's Syndrome	Congenital anomaly	Not permitted
W/10/0172/0	Singleton Hospital	Singleton Hospital	38	2200	Unexplained death prior to onset of labour	None	None	Unexplained	Yes
W/10/0187/0	Singleton Hospital	Singleton Hospital	33	2700	Death prior to onset of labour associated with placental abruption	Placental abruption	None	Mechanical	Not permitted
W/10/0167/0	Neath Port Talbot Hospital	Singleton Hospital	41	3120	Unexplained death prior to onset of labour	None	None	Unexplained	Yes
W/10/0190/0	Singleton Hospital	Singleton Hospital	32	1900	Death prior to onset of labour associated with placental abruption	Placental abruption	None	Mechanical	Not permitted
W/10/0189/0	Neath Port Talbot Hospital	Singleton Hospital	24	680	Congenital anomaly	Termination of pregnancy	Trisomy21 Down's Syndrome	Congenital anomaly	Yes
W/10/0217/0	Singleton Hospital	Singleton Hospital	30	2780	Unexplained death prior to onset of labour	None	None	Maternal disorder	Not permitted
W/10/0238/0	Singleton Hospital	Singleton Hospital	35	1630	Unexplained death prior to onset of labour	Fetal death of unspecified cause	None	Unexplained	Yes
W/10/0240/0	Singleton Hospital	Singleton Hospital	39	3370	Intrapartum events	Placental abruption	None	Antepartum haemorrhage (APH)	Not permitted
W/10/0284/0	Singleton Hospital	Singleton Hospital	29	800	Unexplained death prior to onset of labour	Fetal death of unspecified cause	None	Unexplained	Not permitted

Survey Number	Intended place of delivery	Place of delivery	Calculated gestation (weeks)	Birth weight	CP Classification Name	icd10 diagnosis 1	icd10_2	Aberdeen Classification Name	Autopsy Description
W/10/0286/0	Singleton Hospital	Singleton Hospital	30	1310	Congenital anomaly	Congenital heart disease NOS	None	Congenital anomaly	Yes
W/10/0287/0	Singleton Hospital	Singleton Hospital	41	4040	Unexplained death prior to onset of labour	Fetal death of unspecified cause	None	Unexplained	Not permitted
W/10/0326/0	Singleton Hospital	Singleton Hospital	31	1200	Unexplained death prior to onset of labour	Fetal death of unspecified cause	None	Unexplained	Not permitted
W/10/0325/0	Singleton Hospital	Singleton Hospital	25	600	Unexplained death prior to onset of labour	Fetal death of unspecified cause	None	Unexplained	Yes

Table 25, Summary of Deaths - Singleton Hospital, Swansea

Neonatal Deaths on Labour Ward (<7days) - Singleton Hospital		
Birth weight	**Gestation**	**Cause of Death**
540g	22^{+6}	Extreme prematurity Retroplacental clot Postmortem - No
1160g	27^{+6}	Severe Hypoxic Ischaemic Encephalopathy Prematurity Left Pneumothorax Prolonged rupture of membranes Postmortem - No
400g	25	Extreme prematurity Extreme IUGR Maternal PET Severe oligohydramnios Postmortem - Yes
2260g	31^{+5}	Pulmonary hypoplasia Hydrops Fetalis Postmortem - No

Early Neonatal Deaths (<7days) Singleton Neonatal Unit		
Birth weight	**Gestation**	**Cause of Death**
1940g	38^{+2}	Inborn error of metabolism Severe congenital lactic acidosis due to a mitochondrial cytopathy (complex 4 deficiency) leading to multi-organ failure Postmortem - No
2670g	39^{+6}	Early neonatal death, cause undetermined Postmortem - Yes
3310g	39^{+2}	Severe Hypoxic Ischaemic Encephalopathy (Grade 3) Multi-organ failure Underlying maternal condition: Placental Abruption Postmortem - No
1030g	28^{+6}	Severe respiratory distress syndrome secondary to pulmonary hypoplasia Poor cardiac function Bilateral pneumothorax PPROM with anhydramnios Postmortem - No
3785g	40^{+1}	Neonatal septicaemia (Streptococcal species) Hypoxic Ischemic Encephalopathy Multi-organ failure Postmortem - No
680g	24^{+3}	Severe respiratory distress syndrome Extreme prematurity Bilateral pneumothorax Postmortem - No
3250g	40^{+1}	Severe Hypoxic Ischaemic Encephalopathy (Grade 3) Cord prolapse Postmortem - No
1200g	27	Pulmonary hypoplasis Severe persistent pulmonary hypertension of the newborn Severe oligohydramnios Postmortem - No
420g	23^{+2}	Extreme prematurity Twin Chorioamnionitis Postmortem - Yes
2590g	36	Hypoxic Ischaemic Encephalopathy Placental abruption Postmortem - No

Early Neonatal Deaths (<7days) Singleton Neonatal Unit (Con't)		
Birth weight	**Gestation**	**Cause of Death**
310g	27^{+3}	Extremely low birth weight IUGR Prematurity Multiple pregnancy Quadruplets Postmortem - No
655g	24^{+2}	Extreme prematurity Respiratory distress syndrome with bilateral pneumothoraces Pulmonary hypertension of the newborn Postmortem - No
515g	23^{+3}	Extreme prematurity Severe respiratory distress syndrome Pulmonary haemorrhage Postmortem - No
590g	23^{+3}	Extreme prematurity Respiratory distress syndrome Pneumothorax Postmortem - No

Late Neonatal Deaths (7-28 days) - Singleton Neonatal Unit		
Birth weight	**Gestation**	**Cause of Death**
590g	23^{+1}	Neonatal CLD Respiratory distress syndrome Extreme prematurity Postmortem - No
650g	24^{+2}	Extreme prematurity Severe respiratory distress syndrome Bilateral pneumothoras Coagulase negative Staphylococci septicaemia Postmortem - No

Post-Neonatal Deaths (>28 days prior to discharge) - Singleton Neonatal Unit		
Birth weight	**Gestation**	**Cause of Death**
590g	23^{+2}	Extreme prematurity Necrotizing Enterocolitis Septicaemia (CONS) Postmortem - No

PART II

DATA VERMONT OXFORD DATASET BENCHMARKING

VON Data 2010
For Singleton Hospital Neonatal Unit VLBW Dataset

VON is a world-wide network which consists of 850 neonatal units including most neonatal units in USA and Canada and many in Europe. Babies eligible for the VLBW database are those born alive and whose birth weight is between 401 and 1500g or whose gestational age is between 22 weeks 0 days and 29 weeks 6 days.

A live born infant is one who breathes or has any evidence of life, such as a beating of the heart, pulsation of the umbilical cord, a definite movement of the voluntary muscle, regardless of whether the umbilical cord has been cut. Heartbeats are to be distinguished from fleeting respiratory efforts or gasps. Stillborn infants (those who are not live born) are not eligible for the VLBW.

Out born infants of similar birth weights and gestations who are admitted to Singleton within the first 28 days of life are also included in the data.

When interpreting the data included in this report, it is important to keep in mind that the rates, percentiles and other statistics presented can vary from those at other centres for a number of reasons, even when there are no true differences in the quality or appropriateness of care. First, the total number of infants at individual centres may be relatively small, and random variation due to small numbers may cause large differences in estimated rates, even when no true differences exist. Second, there may be differences among centres in the types of cases they treat, and these differences in case mix may account for differences in patient outcomes among centres. VON attempts to account for case mix in several ways:

(1) Outcomes and interventions are reported by birth weight and gestational age categories. For VLBW infants these variables are highly associated with risks for morbidity and mortality.

(2) Some outcomes and length of stay are reported by disposition status (Home, Transfer, Died, etc.), since the disposition of the infants is predictive of the result.

(3) Standardised morbidity and mortality ratios (SMRs) and their 95% confidence intervals are reported for key outcomes. The SMR is the ratio of the number of observed cases (O) to the number of expected cases (E), where the number of expected cases is based on a multivariable risk adjustment model. In addition, the SMRs and confidence intervals have been corrected or “shrunken” using methods which recognise that some of the observed variation is random “noise”, particularly for small hospitals. The shrunken values are more stable estimates because they are adjusted for imprecise estimates and account for random variation.

(4) Measures of the number of observed cases minus the number of expected cased (O-E) for infants 501 to 1500 grams are also reported. The number of expected cases is based on a multivariable risk adjustment model, and the O-E values have been shrunken to account for random variation.

(5) For total hospital stay in surviving infants with birth weights between 501 and 1500 grams (see the section on Length of Stay), a multivariable risk adjustment model is used to adjust the case mix differences among units.

It is important to realise that these adjustment methods are imperfect - even the best statistical risk models cannot adjust for all the differences in case mix among centres, nor can they account for all of the random variation. Given these caveats, however, it is appropriate to use the data in this report to target specific clinical practices and patient outcomes for further in-depth analysis with the goal of identifying potential quality improvement opportunities. The infant lists can be used to identify individual cases for audit and review.

This annual report is intended for use as one component of a continuous quality improvement program. The goal is to identify potential opportunities where we can do a better job for our patients and their families.

Singleton Hospital is centre 763.

Table 1. Number of Infants and Centres in the VLBW Database

Infants 501-1500 grams born 1990 to 2010

Vermont Oxford Network 2010 VLBW QMR for Center 763

TABLE 1.1, NUMBER OF INFANTS AND CENTERS IN THE VLBW DATABASE
Infants 501-1500 Grams Born 1990 to 2010

Year	Number of Centers	Number of Infants Center	Number of Infants Network
1990	36	0	2,956
1991	51	0	3,868
1992	68	0	5,033
1993	84	0	6,629
1994	114	0	8,364
1995	138	0	10,892
1996	192	0	14,715
1997	250	0	19,672
1998	295	0	23,725
1999	326	0	26,414
2000	351	0	29,333
2001	374	0	30,275
2002	408	0	32,328
2003	443	0	35,234
2004	504	0	39,304
2005	557	0	43,394
2006	635	0	47,160
2007	683	78	50,867
2008	751	69	53,735
2009	815	86	55,193
2010	850	86	53,862
Total		319	592,953

Table 2. Singleton Neonatal Unit Observed Rates for Key Outcomes

Infants 501-1500 grams born 2008 to 2010

Vermont Oxford Network 2010 VLBW QMR for Center 763

TABLE 1.2, OBSERVED RATES FOR KEY OUTCOMES
Infants 501-1500 Grams Born 2008 to 2010

	2008		2009		2010		2008 to 2010				
	N	Ctr 763 Percent	N	Ctr 763 Percent	N	Ctr 763 Percent	N	Ctr 763 Percent	Network Percent	25th %tile	75th %tile
Pneumothorax											
Your Center	0		84	2.4	85	8.2	169	5.3	4.0	1.5	5.3
Any Location	68	8.8	84	2.4	85	9.4	237	6.8	4.4	1.9	5.4
PVL	67	3.0	84	3.6	82	0.0	233	2.1	3.1	1.1	4.0
CLD	48	39.6	64	18.8	71	19.7	183	24.6	24.9	12.5	29.0
CLD < 33 Weeks GA	47	40.4	60	20.0	61	23.0	168	26.8	26.5	13.1	30.9
NEC											
Your Center	0		84	7.1	85	4.7	169	5.9	5.8	2.4	7.5
Any Location	68	4.4	84	8.3	85	4.7	237	5.9	6.6	2.9	8.3
Any IVH											
Your Center	0		81	16.0	81	6.2	162	11.1	24.2	14.5	28.1
Any Location	66	19.7	82	24.4	81	8.6	229	17.5	25.8	16.7	29.6
Severe IVH											
Any Location	66	6.1	82	6.1	81	2.5	229	4.8	8.8	5.0	10.6
ROP	53	35.8	63	41.3	68	26.5	184	34.2	33.5	18.9	41.2
Severe ROP	53	7.5	63	9.5	68	4.4	184	7.1	6.8	1.9	8.7
Late Infections											
Late Bacterial											
Your Center	0		80	5.0	78	3.8	158	4.4	9.0	4.0	11.2
Any Location	63	12.7	80	6.3	78	3.8	221	7.2	9.8	4.7	12.1
Coag Neg Staph											
Your Center	0		80	8.8	78	6.4	158	7.6	8.8	2.3	10.3
Any Location	63	17.5	80	11.3	78	6.4	221	11.3	9.7	3.2	11.2
Nosocomial											
Your Center	0		80	12.5	78	10.3	158	11.4	15.4	7.3	18.5
Any Location	63	27.0	80	16.3	78	10.3	221	17.2	16.7	8.3	20.4
Fungal											
Your Center	0		80	0.0	78	0.0	158	0.0	1.3	0.0	1.7
Any Location	63	3.2	80	0.0	78	0.0	221	0.9	1.6	0.0	2.1
Any Late Inf.											
Your Center	0		80	12.5	78	10.3	158	11.4	15.9	7.7	19.2
Any Location	63	27.0	80	16.3	78	10.3	221	17.2	17.3	8.9	21.2
Mortality											
Excl. Early Deaths	65	10.8	83	14.5	84	9.5	232	11.6	9.8	6.5	12.2
Overall	69	15.9	86	17.4	86	11.6	241	14.9	13.0	9.2	16.0
Death or Morbidity	69	50.7	86	47.7	86	38.4	241	45.2	46.9	35.6	52.2

Variables labeled 'Your Center' are only available since 2009.

Table 3. Singleton Unit Observed Rates for Procedures and Length of Stay

Infants 501-1500 grams born 2008 to 2010

Vermont Oxford Network 2010 VLBW QMR for Center 763

TABLE 1.3, PROCEDURES AND LENGTH OF STAY
Infants 501-1500 Grams Born 2008 to 2010

	2008		2009		2010		2008 to 2010				
	N	Ctr 763 Value	N	Ctr 763 Value	N	Ctr 763 Value	N	Ctr 763 Value	Network Value	25th %tile	75th %tile
Antenatal Steroids											
GA 24/0 to 33/6 wk (%)	68	85.3	82	91.5	72	88.9	222	88.7	80.3	71.4	86.8
501-1500 g (%)	69	85.5	86	90.7	85	88.2	240	88.3	77.2	68.6	83.6
Eye Exam (%)	68	77.9	84	75.0	85	80.0	237	77.6	73.9	60.0	79.5
Cranial Imaging (%)	68	97.1	84	97.6	85	95.3	237	96.6	90.7	83.1	95.1
Surfactant after 2 hrs											
501-1250 g (%)	49	6.1	51	5.9	46	13.0	146	8.2	13.7	4.7	20.2
501-1500 g (%)	58	6.9	65	10.8	63	22.2	186	13.4	17.0	7.5	25.6
Length of Stay*											
Center LOS (Days)	58	46.7	71	39.4	76	40.4	205	41.9	60.3	45.8	62.7
Total LOS (Days)	58	69.7	71	61.6	75	58.5	204	62.8	67.7	59.2	71.8

* Length of stay in days for surviving infants only.

Table 4. Singleton Hospital Risk Adjusted Outcome Measures

Infants 501-1500 grams born 2008 to 2010

Vermont Oxford Network 2010 VLBW QMR for Center 763

TABLE 1.4, RISK-ADJUSTED OUTCOME MEASURES
Infants 501 TO 1500 Grams Born 2008 to 2010

	2008 to 2010					
	N	SMR (Shrunken)	SMR 95% Lower	SMR 95% Upper	O-E (Shrunken)	O-E vs. Control Limit
Pneumothorax						
Any Location	237	1.22	0.79	1.66	3	Within
PVL	233	0.73	0.16	1.29	-2	Within
CLD	183	1.00	0.73	1.27	0	Within
CLD < 33 Weeks GA	168	1.01	0.74	1.29	1	Within
NEC						
Any Location	237	0.90	0.49	1.32	-2	Within
Any IVH						
Any Location	229	0.69	0.46	0.91	-20	Below
Severe IVH						
Any Location	229	0.67	0.32	1.02	-7	Within
ROP	184	1.08	0.83	1.33	5	Within
Severe ROP	184	1.15	0.64	1.67	2	Within
Infections						
Late Bacterial						
Any Location	221	0.81	0.41	1.22	-4	Within
Coag Neg Staph						
Any Location	221	1.13	0.73	1.53	3	Within
Nosocomial						
Any Location	221	1.02	0.72	1.33	1	Within
Fungal						
Any Location	221	0.69	0.00	1.63	-1	Within
Any Late Inf.						
Any Location	221	0.99	0.69	1.28	-1	Within
Mortality						
Excl. Early Deaths	232	1.11	0.75	1.46	3	Within
Overall	241	1.09	0.79	1.40	3	Within
Death or Morbidity	241	0.93	0.77	1.09	-9	Within

Figure 1 - Shrunken Standardised Morbidity and Mortality Ratios (SMR)

Infants 501-1500 grams born 2008 to 2010

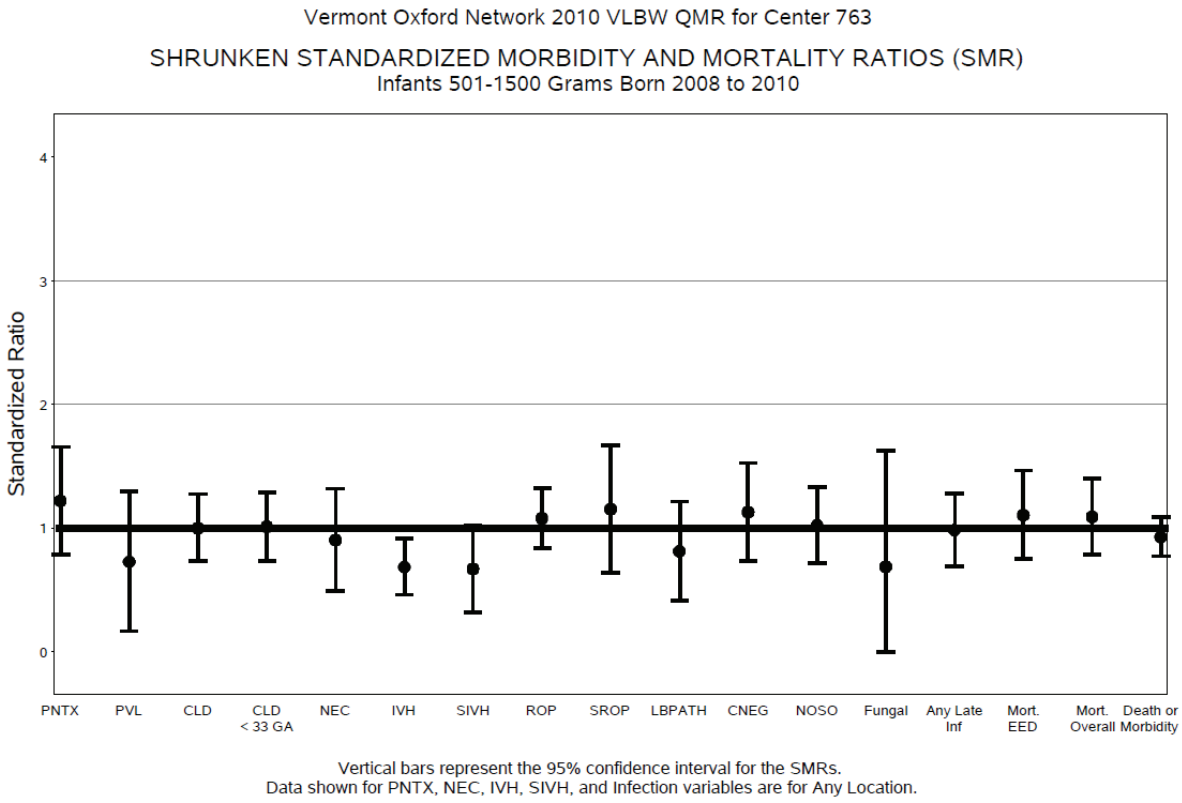


Figure 1.1

KEY			
	PNTX	=	Pneumothorax
	PVL	=	Periventricular
	CLD	=	Chronic lung disease
	NEC	=	Necrotizing enterocolitis
	IVH	=	Intraventricular haemorrhage
	SIVH	=	Severe intraventricular haemorrhage
	ROP	=	Retinopathy of prematurity
	SROP	=	Severe retinopathy of prematurity
	LBPATH	=	Sepsis or meningitis after day 3 of life
	CNEG	=	Coagulase negative staph infection after day 3 of life
	NOSO	=	Nosocomial infection after day 3 of life
	Fungal	=	Fungal infection after day 3 of life

Figure 2. Observed Minus Expected Values
Pneumothorax - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

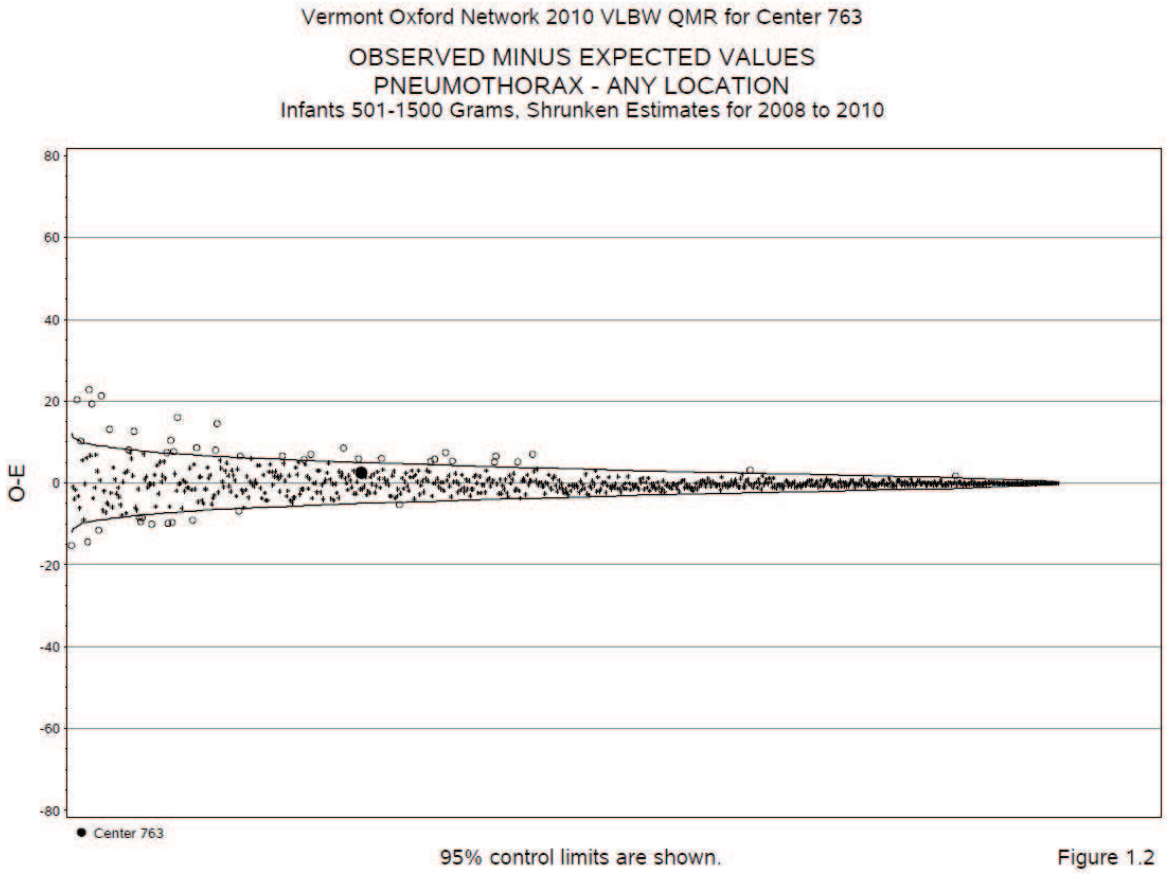


Figure 3. Observed Minus Expected Values
Chronic Lung Disease Less than 33 weeks GA
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

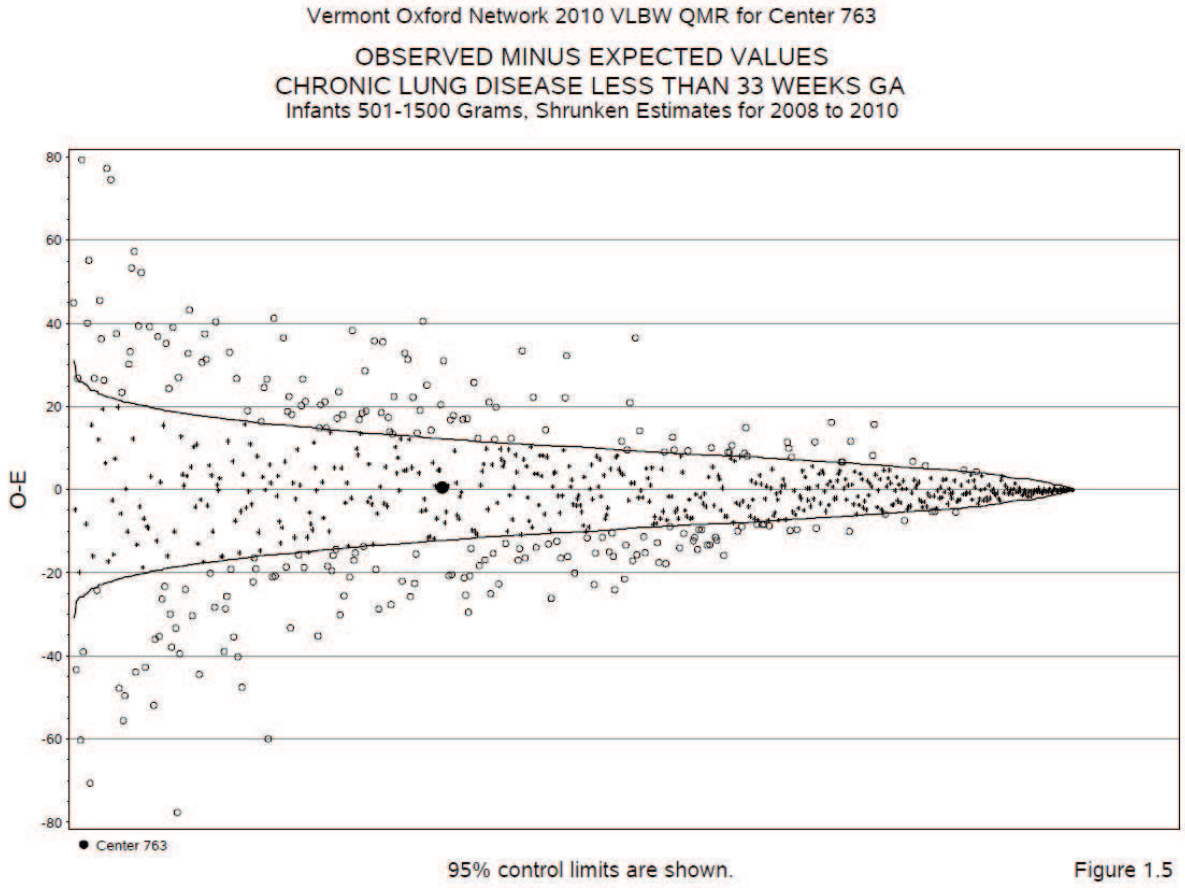


Figure 4. Observed Minus Expected Values Intraventricular Haemorrhage - Any Location

Infants 501-1500 grams, Shrunken Estimates for 2007 - 2009

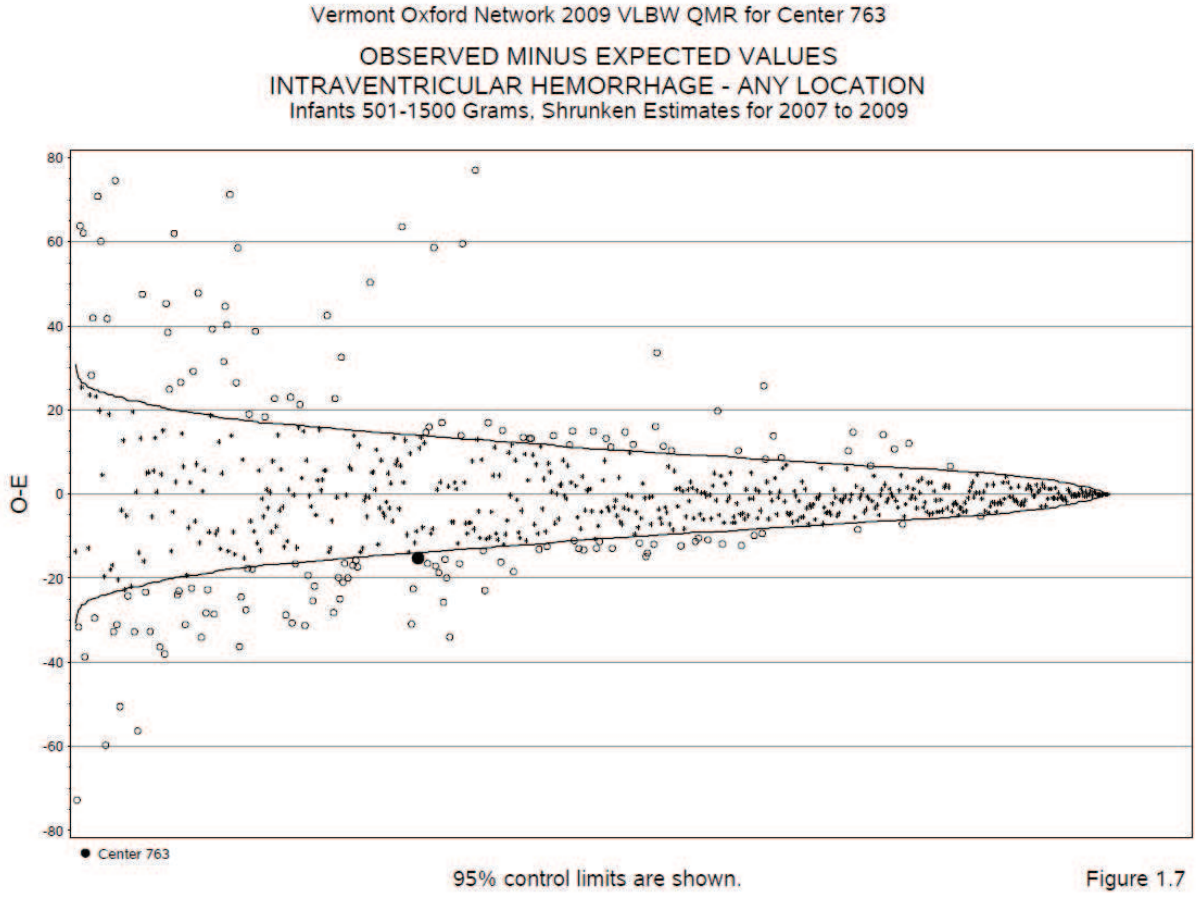


Figure 5. Observed Minus Expected Values
Severe IVH - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

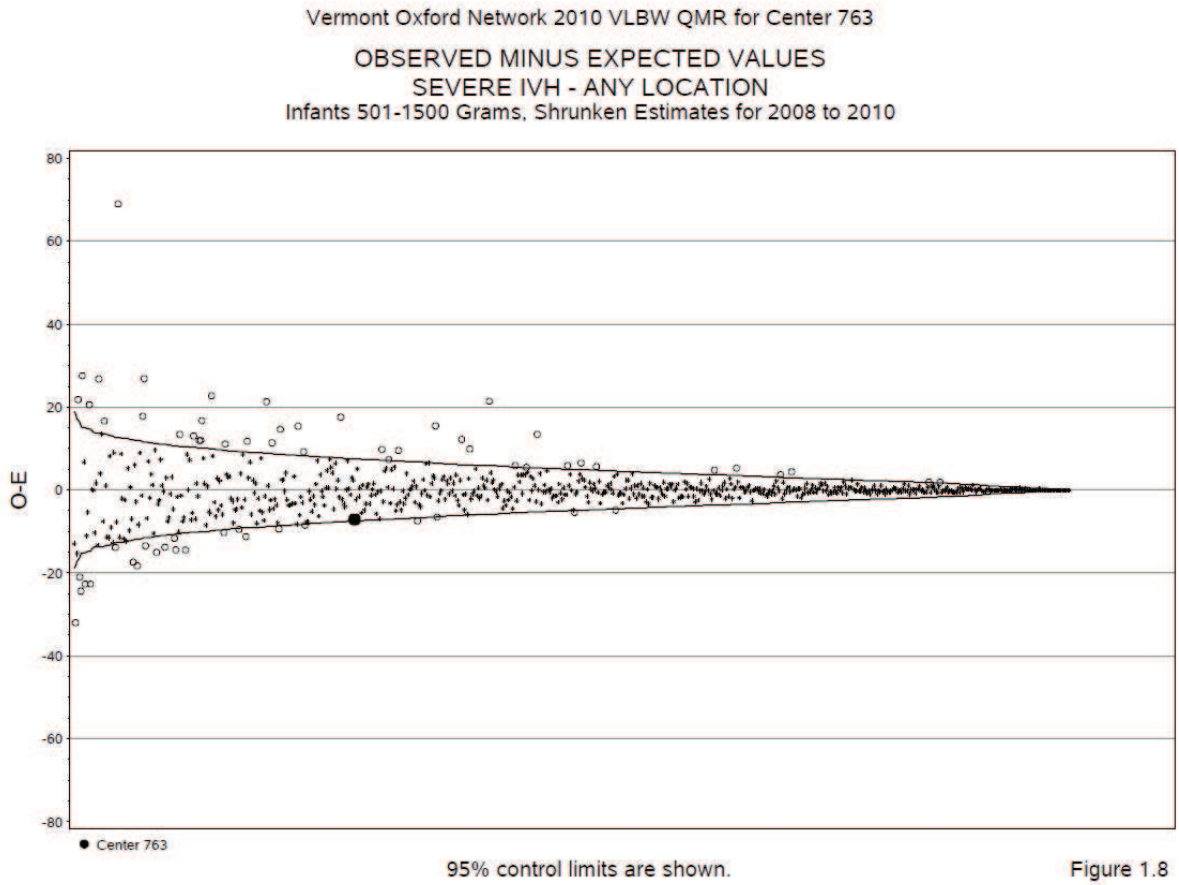


Figure 6. Observed Minus Expected Values
Late Bacterial Infection - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

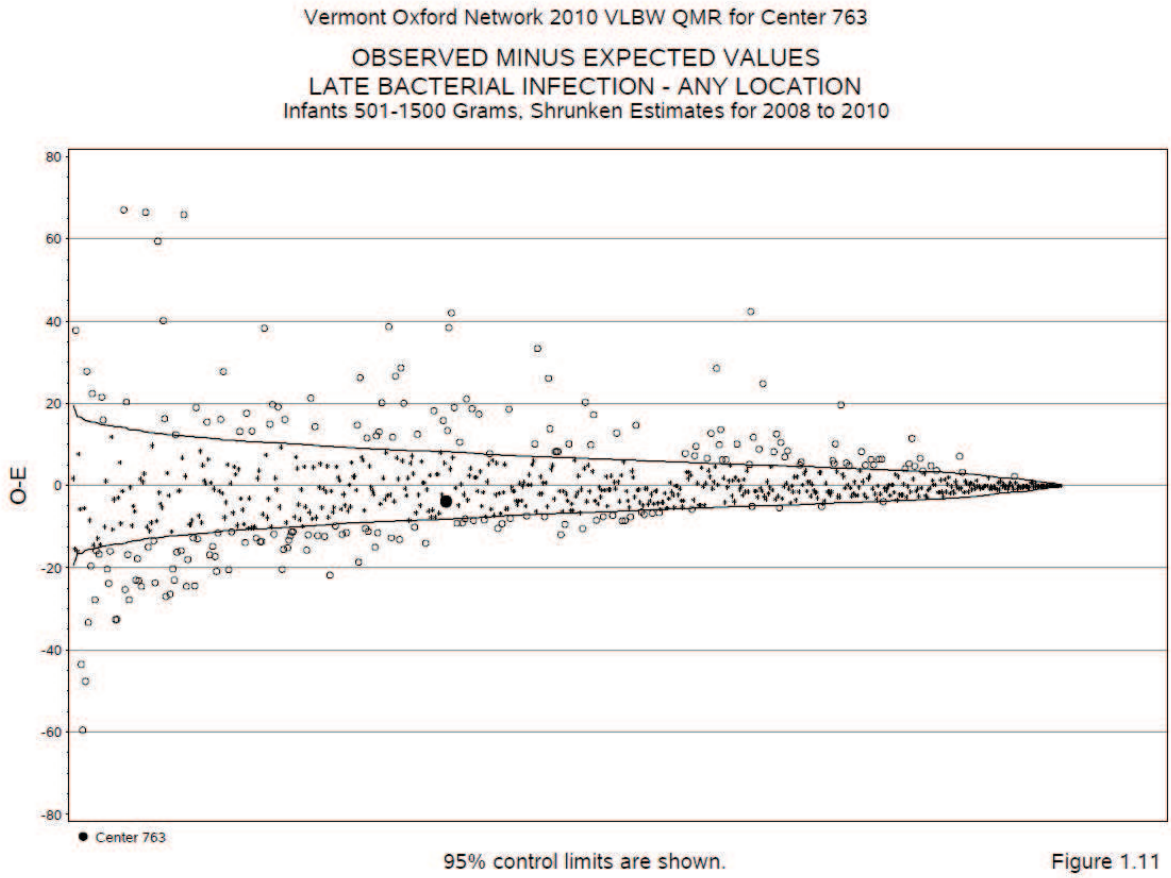


Figure 7. Observed Minus Expected Values
Coagulase Negative Staph Infection - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

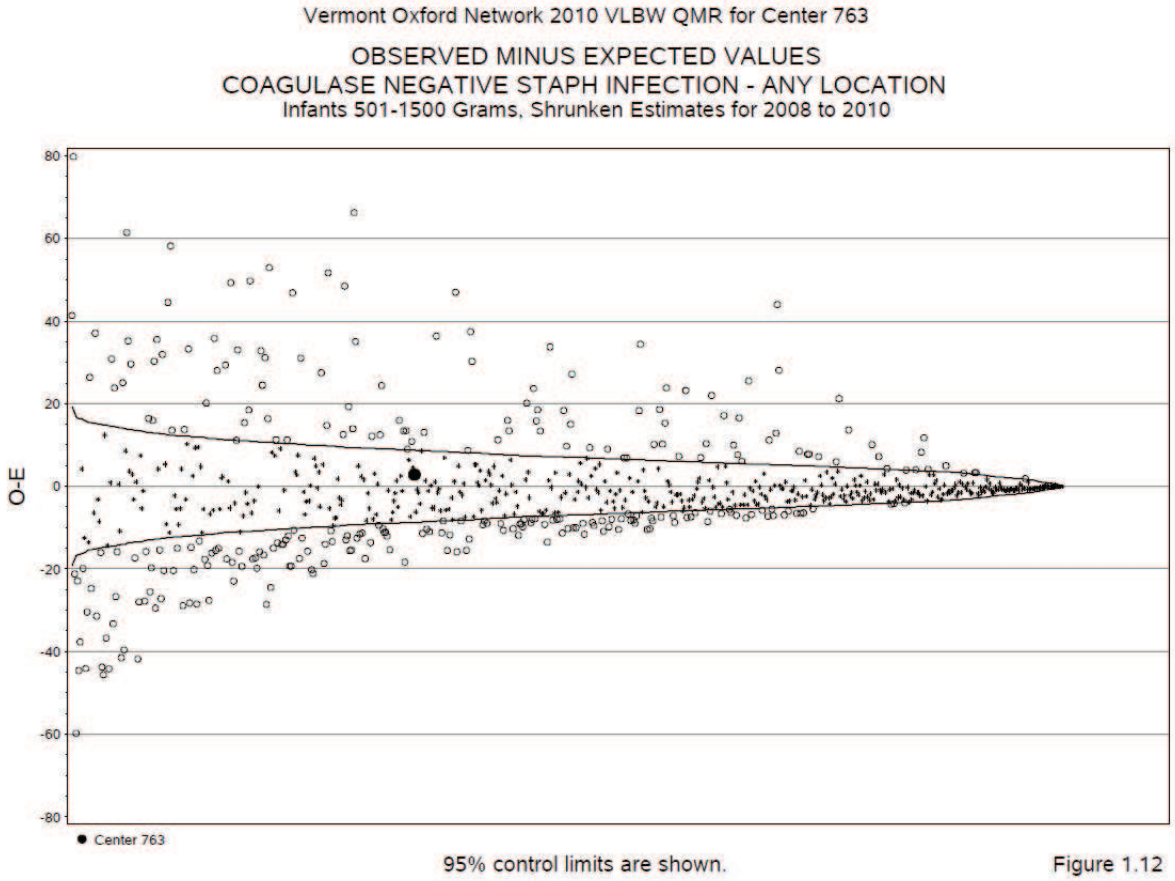


Figure 8. Observed Minus Expected Values
Nosocomial Infection - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

Figure 9. Observed Minus Expected Values
Fungal Infection - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

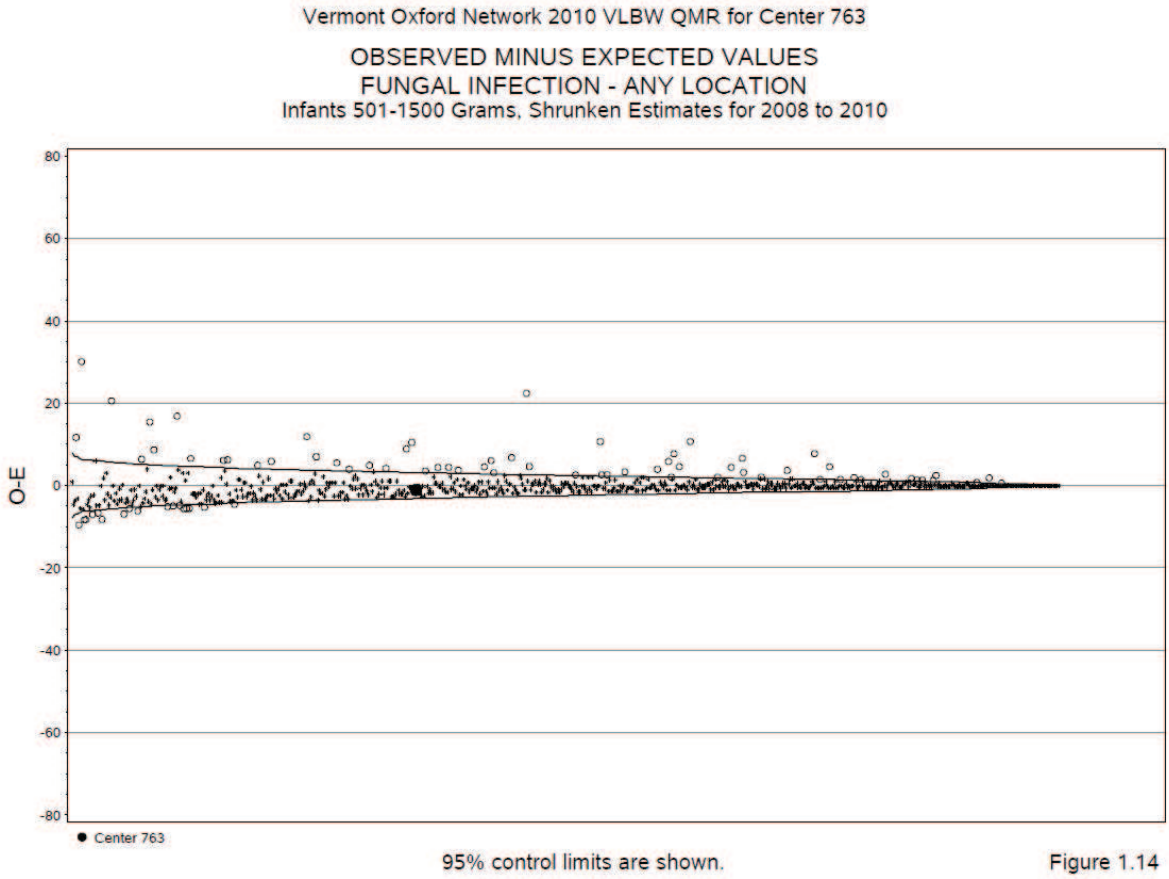


Figure 10. Observed Minus Expected Values
Any Late Infection - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

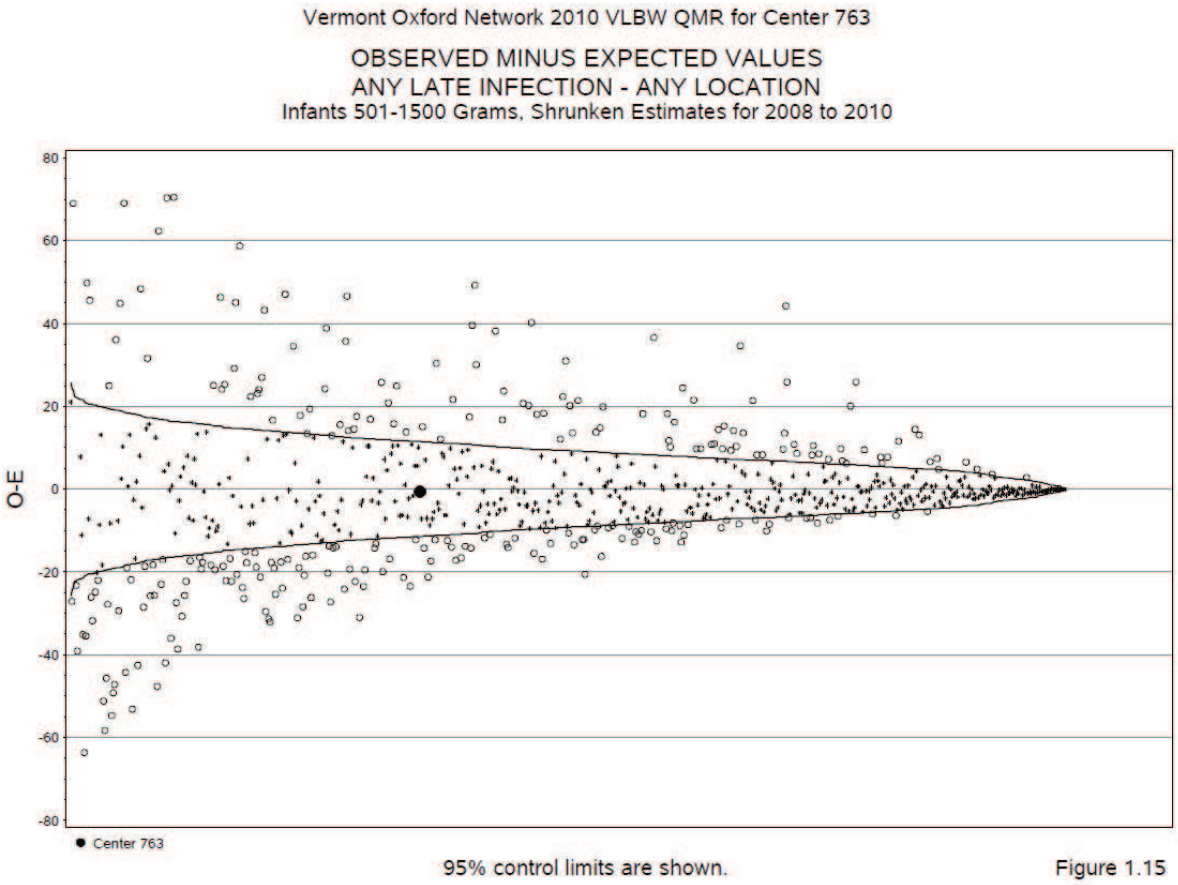


Figure 11. Observed Minus Expected Values
Mortality Excluding Early Deaths - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

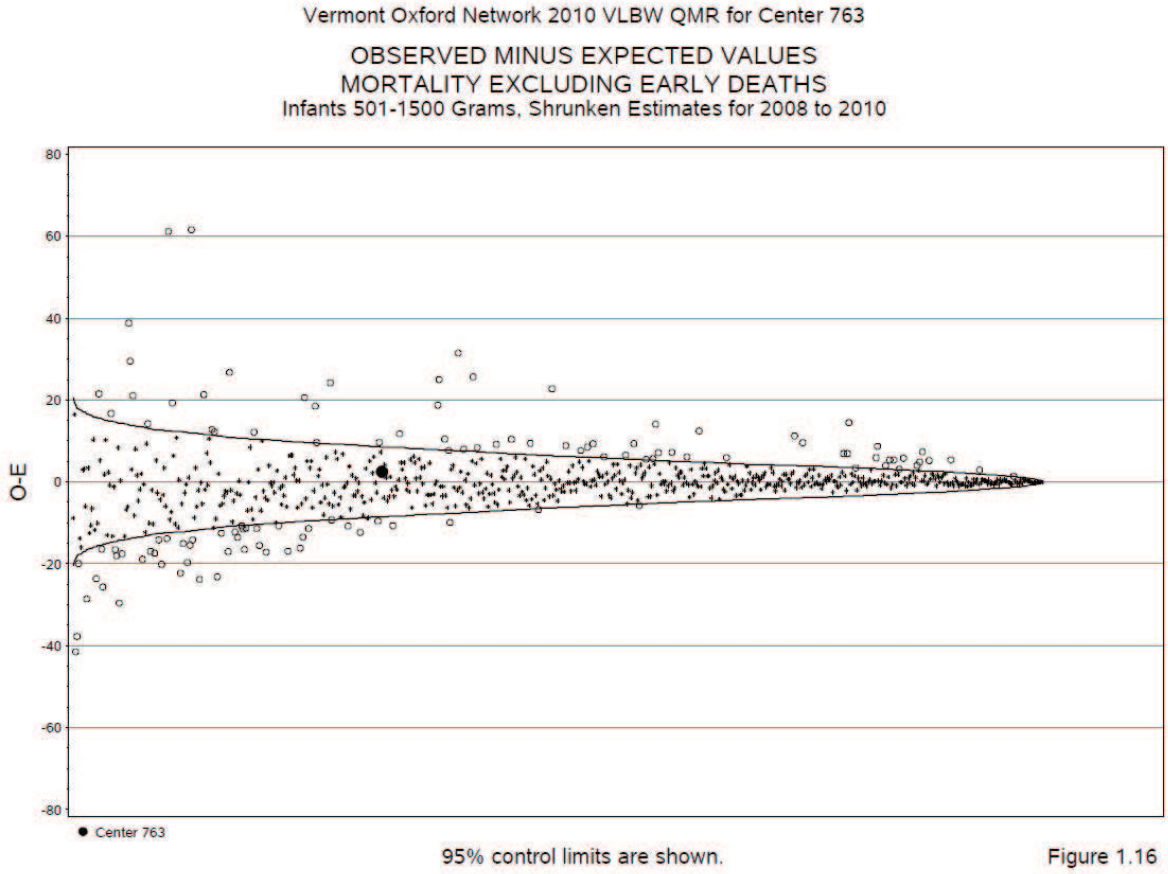


Figure 12. Observed Minus Expected Values
Mortality Overall - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010

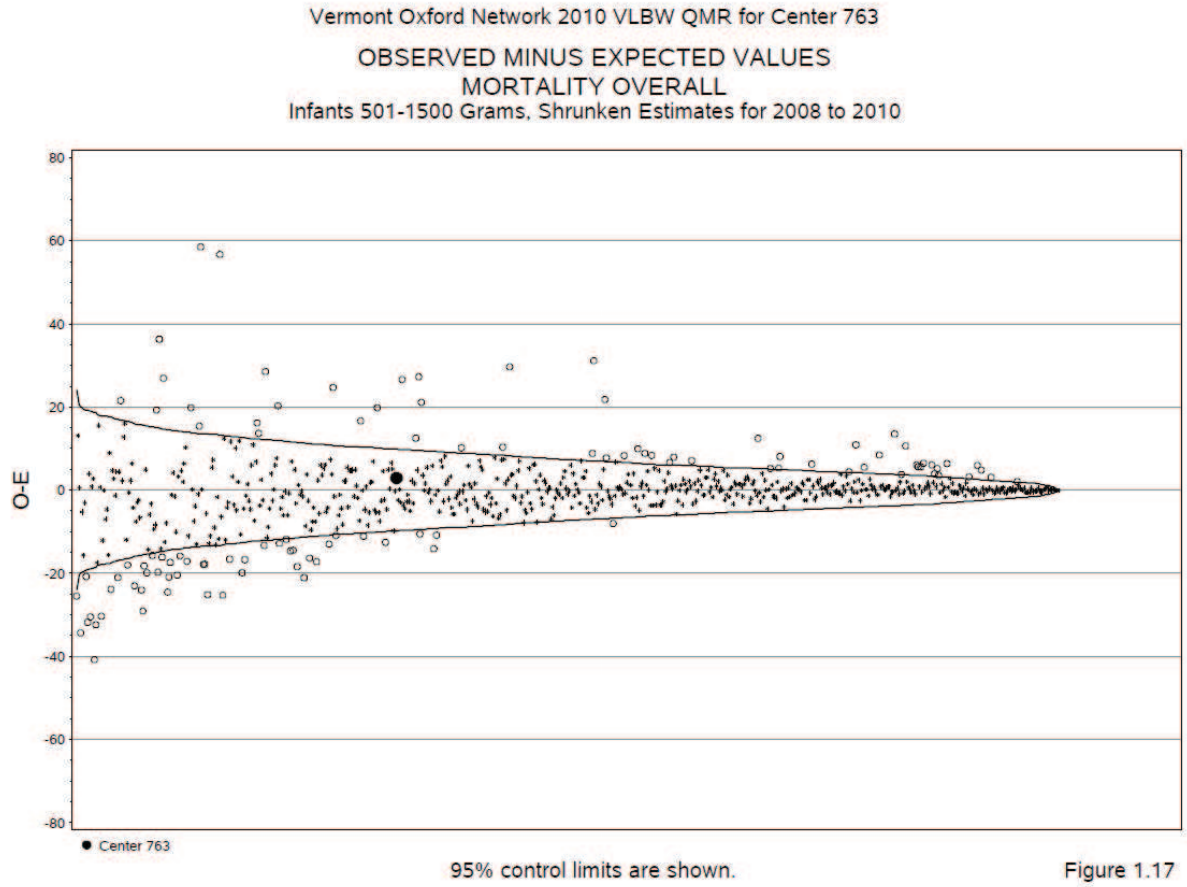
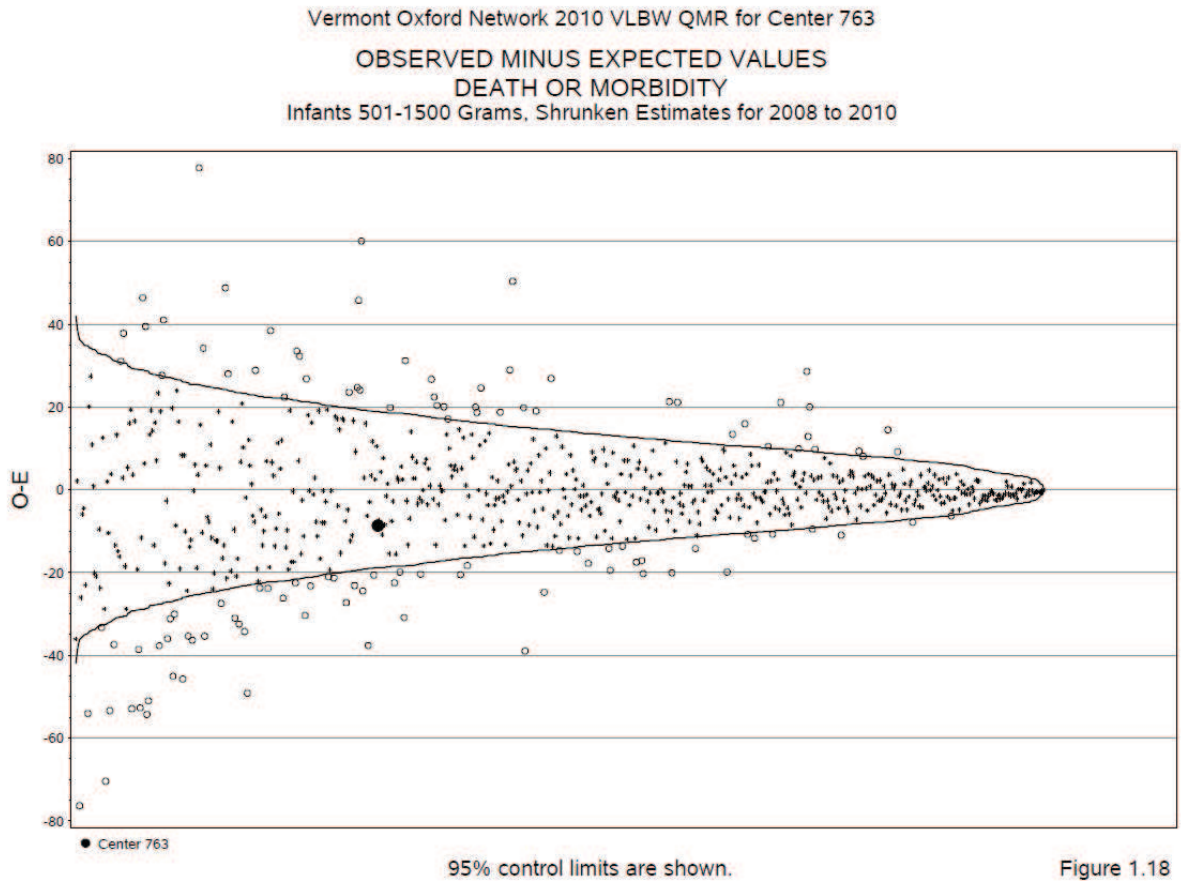


Figure 13. Observed Minus Expected Values
Death or Morbidity - Any Location
Infants 501-1500 grams, Shrunken Estimates for 2008 - 2010



UK VON REPORT

In addition to enabling the data from Singleton Hospital Neonatal Unit to be compared with other units world-wide, VON also enables comparison of the combined data in the VON UK centres within the network as a whole, and also allows internal comparisons of the UK centres.

There are for 2010 twenty-five centres in the UK who participate in VON.

These are shown below.

Hospital	**City**
Altnagelvein Area Hospital	Londonderry, N. Ireland
Antrim Area Hospital	Antrim, N. Ireland
Craigavon Area Hospital	Craigavon, N. Ireland
Derriford Hospital	Plymouth
Gloucestershire Royal Hospital	Gloucester
Great Western Hospital NHS Trust	Swindon
John Radcliffe Hospital	Oxford
Liverpool Women's Hospital	Liverpool
North Devon District Hospital	Barnstaple
Queen Charlotte's and Chelsea Hospital	London
Royal Cornwall Hospitals NHS Trust	Truro
Royal Devon and Exeter NHS Foundation Trust	Exeter
Royal Gwent Hospital	Newport
Royal Maternity Service	Belfast, N. Ireland
Royal United Hospital Bath NHS Trust	Bath
Singleton Hospital Neonatal Unit, Swansea	Swansea, Wales
Somerset Neonatal Intensive Care Unit	Taunton, Somerset
Southmead Hospital	Bristol
St. Mary's Hospital, Imperial College NHS	London
St. Michael's Hospital	Bristol
Torbay Hospital	Torquay
Ulster Hospital	Belfast, N. Ireland
University Hospital of Wales	Cardiff
Wishaw General Hospital	Wishaw, Scotland
Yeovil District Hospital	Yeovil, Somerset

Table 1. Number of Infants

This shows the number of UK infants entered onto VON since 2004, and the number of participating centres

Vermont Oxford Network 2010 UK Group Report

TABLE 1.1, NUMBER OF INFANTS
Infants 501-1500 Grams, Group Start Year to 2010

Year	Number of Centers in Group	Number of Infants in Group	Number of Infants in Network
2004	10	596	39,304
2005	10	638	43,394
2006	15	893	47,160
2007	19	1,168	50,867
2008	21	1,457	53,735
2009	23	1,538	55,193
2010	25	1,616	53,862
Total		7,906	343,515

Table 2. Key Statistics for Group and Network

This shows the data for the combined 25 units in the UK compared with the whole VON network

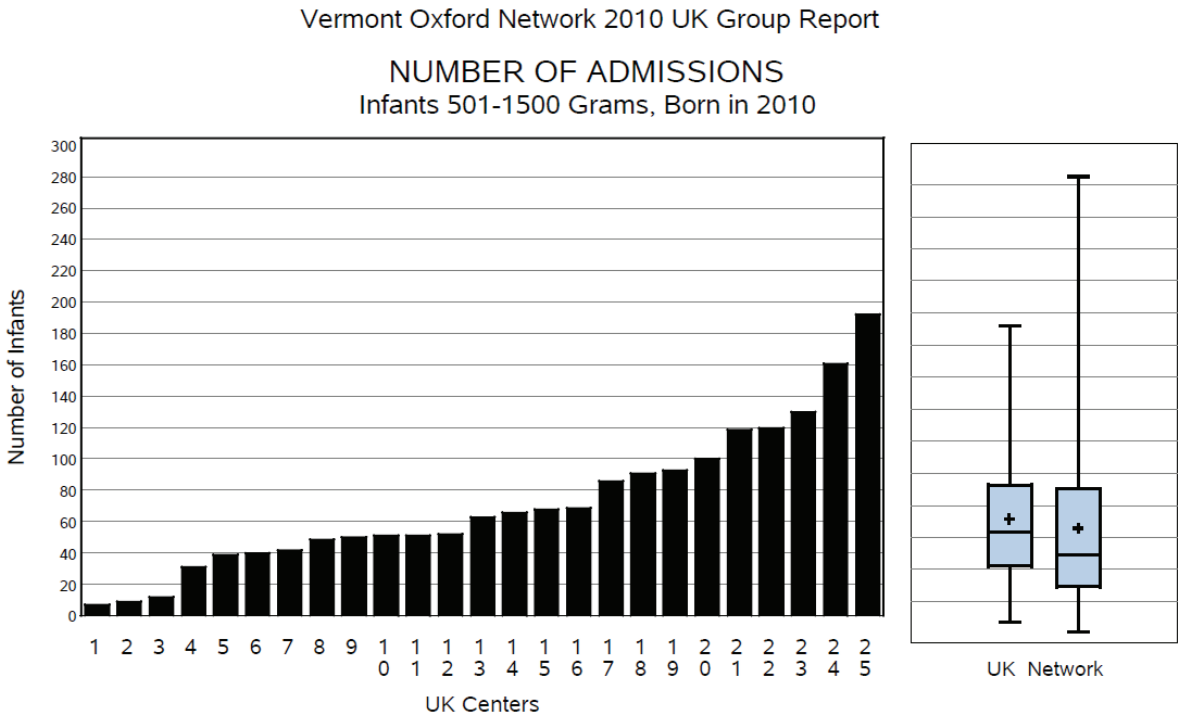
Vermont Oxford Network 2010 UK Group Report

TABLE 3.1, Key Statistics for Group and Network
Infants 501-1500 Grams, Born in 2010
N for Admissions, Minimums, 1st Quartiles, Means, Medians, 3rd Quartiles, Maximums

	Group						Network					
	N or Min	Q1	Mn	Med	Q3	Max	N or Min	Q1	Mn	Med	Q3	Max
Admissions (N)	1,616						53,862					
Antenatal Steroids												
Overall	44	81	85	84	90	94	0	69	78	79	86	100
24/0 to 33/6	50	84	88	87	92	97	0	72	81	82	89	100
Chorioamnionitis	0	6	14	11	17	30	0	3	13	9	17	100
Maternal Hypertension	6	16	20	22	24	42	0	21	28	28	35	100
Cesarean Section	0	51	59	59	69	81	0	67	73	74	81	100
Adm Temp LT 36°C	0	8	14	13	20	32	0	9	24	19	37	100
RDS	28	68	73	77	82	93	0	66	73	76	85	100
Conventional Vent	30	50	66	63	71	83	0	50	62	63	73	100
Inhaled NO	0	0	3	2	3	6	0	0	5	2	5	35
High Frequency Vent	0	5	11	8	13	27	0	7	21	17	27	89
HFNC	0	0	19	3	25	78	0	10	50	54	73	100
NIMV	0	0	11	0	20	51	0	0	19	7	29	84
Nasal CPAP	9	74	73	78	83	92	0	55	69	70	80	100
Surfactant	39	48	68	62	71	84	0	52	64	64	75	100
Surf after 2 Hrs	0	4	10	11	22	40	0	6	17	14	26	93
Pneumothorax	0	2	5	4	6	9	0	0	4	3	6	29
Steroids for CLD	0	1	5	2	5	17	0	1	8	6	11	50
CLD at 36 Wks	0	14	26	18	27	47	0	11	25	19	30	100
CLD for LT 33 Wks GA	0	16	29	21	32	49	0	12	26	21	32	100
Oxygen at 28 Days	13	32	50	38	58	80	0	31	47	43	55	100
Infection												
Early Bacterial	0	0	3	2	4	20	0	0	2	1	3	73
Late Bacterial	0	6	12	12	15	50	0	3	9	7	12	50
Coag Neg Staph	0	11	20	16	26	38	0	1	8	5	10	52
Nosocomial	2	15	27	24	32	50	0	6	15	12	19	58
Fungal	0	0	1	0	2	3	0	0	1	0	2	43
NEC	0	5	8	7	11	20	0	2	6	5	8	54
GI Perf	0	0	2	2	3	20	0	0	3	2	4	20
PDA	8	19	28	24	31	60	0	23	37	33	44	100
Indomethacin	0	1	11	3	13	37	0	3	19	14	27	78
Ibuprofen for PDA	0	3	8	7	10	40	0	0	11	7	15	73
PDA Ligation	0	0	4	2	4	15	0	0	7	4	9	54
Cranial Imaging	63	86	91	90	95	100	0	82	90	92	96	100
IVH	0	19	30	28	37	60	0	15	26	22	31	100
Severe IVH	0	3	9	5	11	21	0	4	9	7	11	73
PVL	0	0	3	2	5	9	0	0	3	2	5	21
Eye Exam	29	61	64	69	80	100	0	60	75	73	81	100
ROP	0	11	26	20	33	67	0	17	33	29	42	100
Severe ROP	0	0	6	4	6	17	0	0	6	4	9	59
Any Major Surgery	0	4	12	8	14	36	0	4	16	11	19	75
Any Breast Milk at Discharge	17	47	52	54	64	88	0	36	51	50	65	100
Mortality												
Excl. Early Deaths	0	5	12	9	13	24	0	5	10	8	13	38
Overall	6	9	16	14	18	29	0	8	13	12	16	43

Table 3. Number of Admissions

Singleton is 17

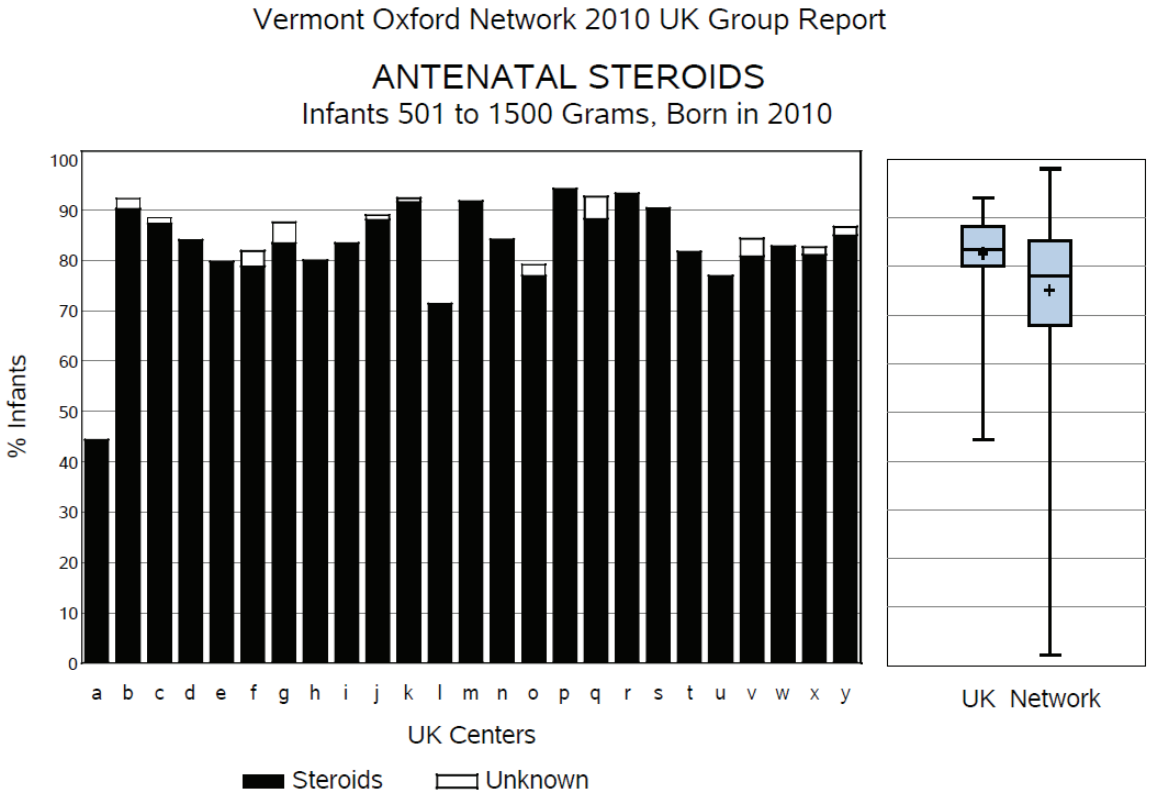


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.1

Table 4. Antenatal Steroids

Singleton is C

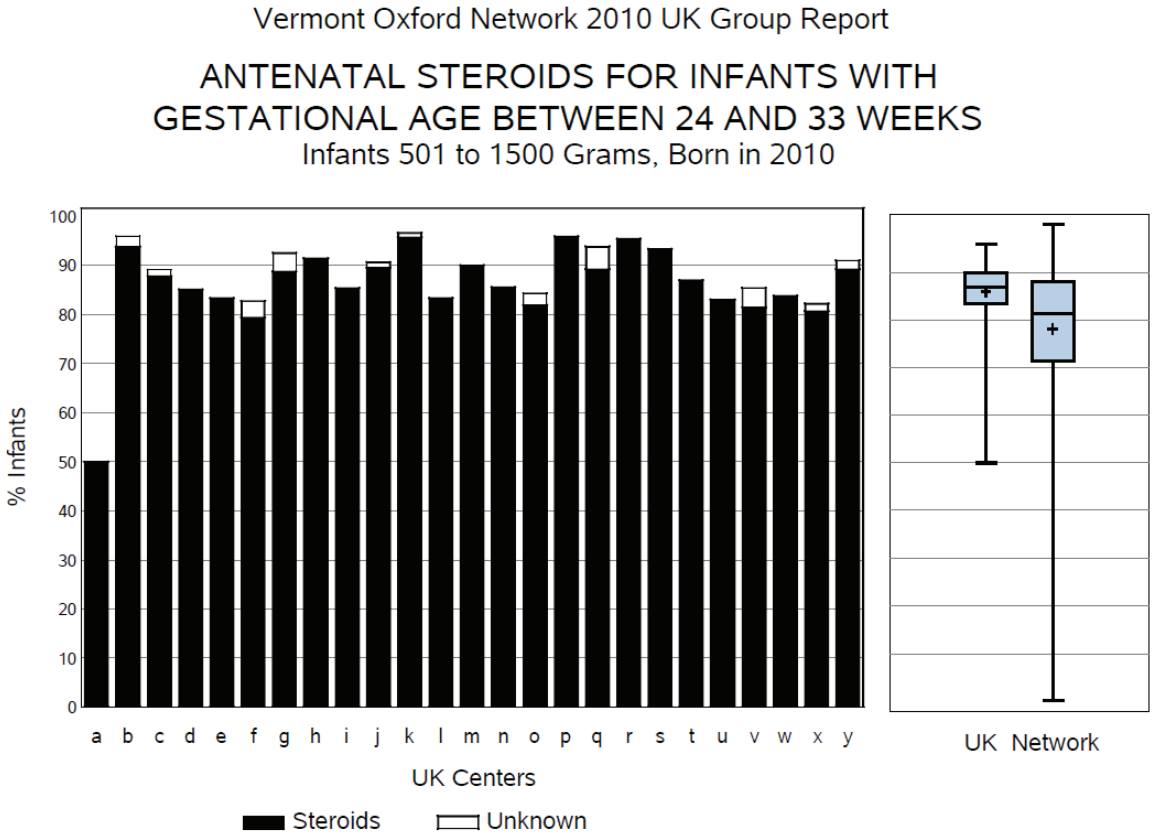


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.2

Table 4. Antenatal Steroids

Singleton is C

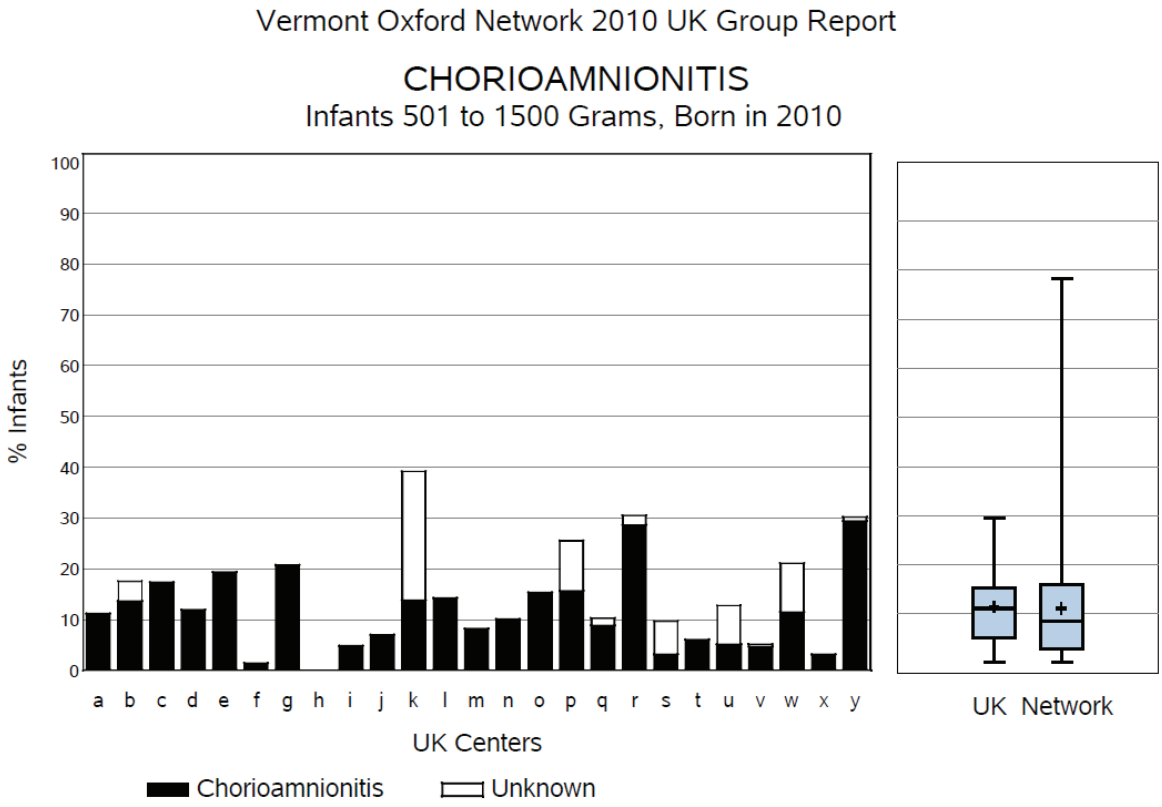


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.3

Table 5. Chorioamnionitis

Singleton is C

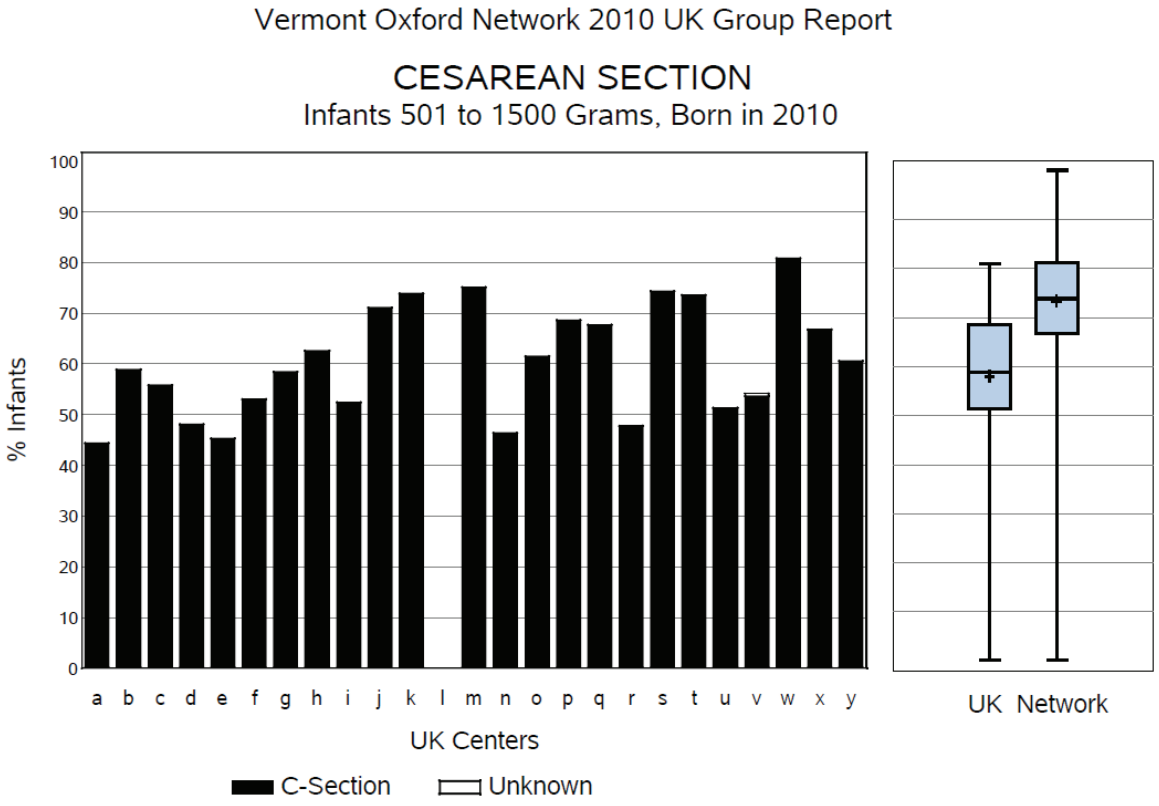


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.4

Table 6. Caesarean Section

Singleton is C

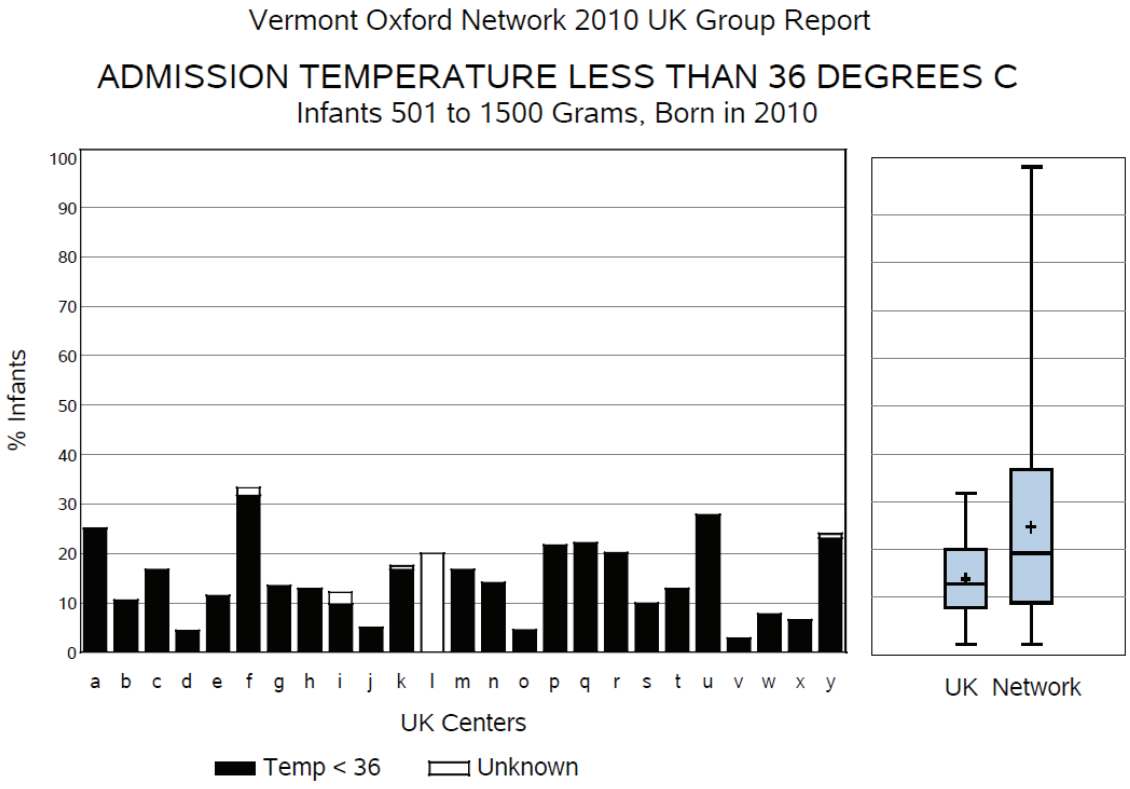


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.6

Table 7. Admission Temperature Less than 36 Degrees C

Singleton is C



There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.7

Table 8. Respiratory Distress Syndrome

Singleton is C

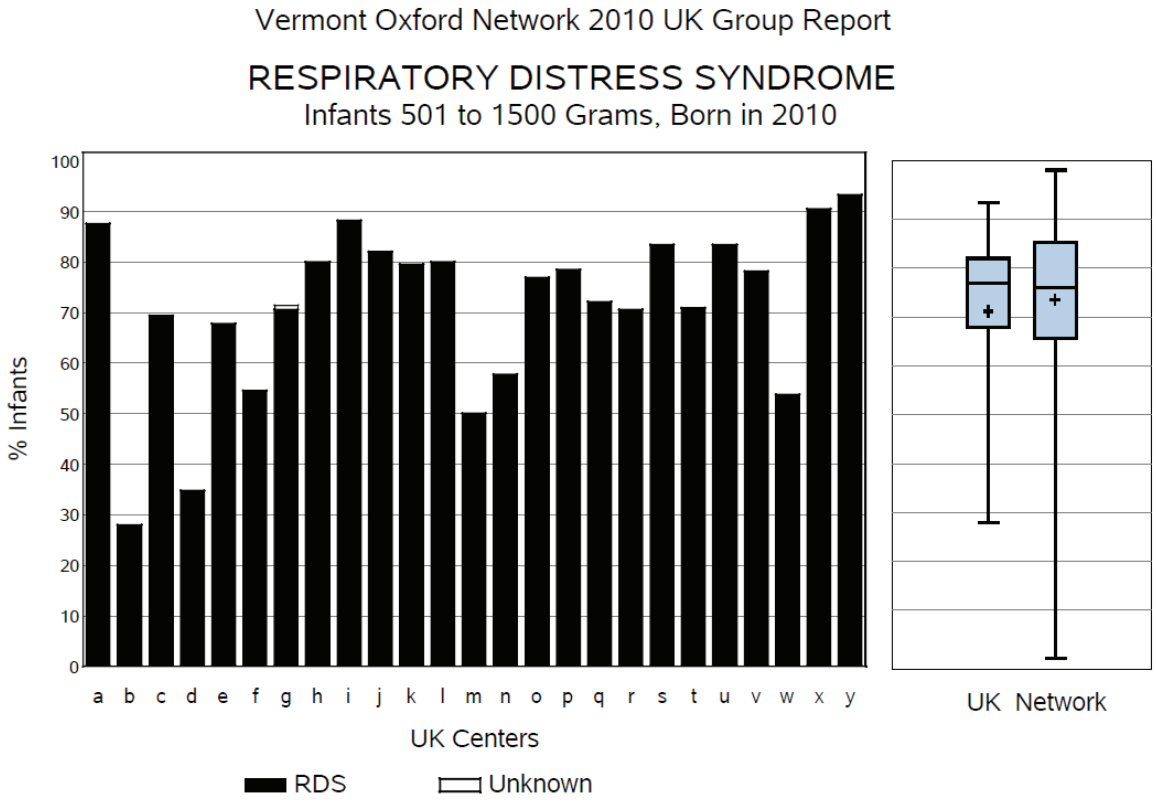


Figure 3.8

Table 9. Inhaled Nitric Oxide

Singleton is C

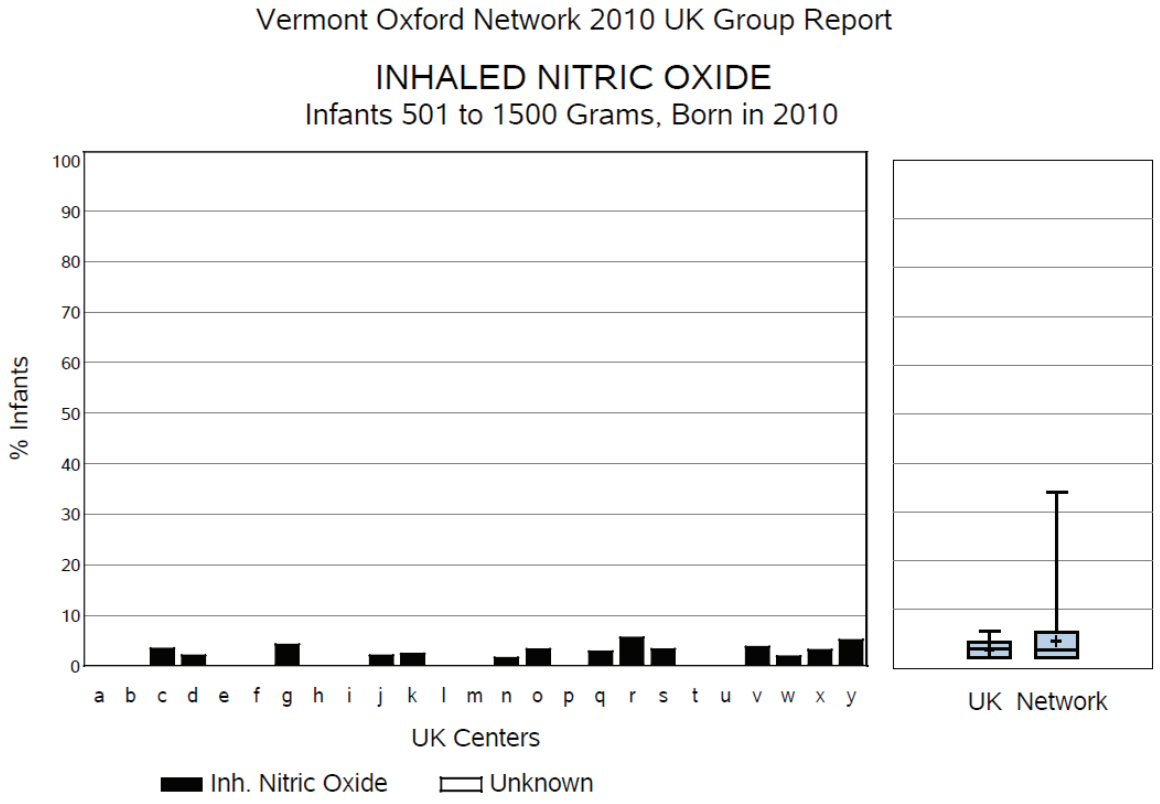
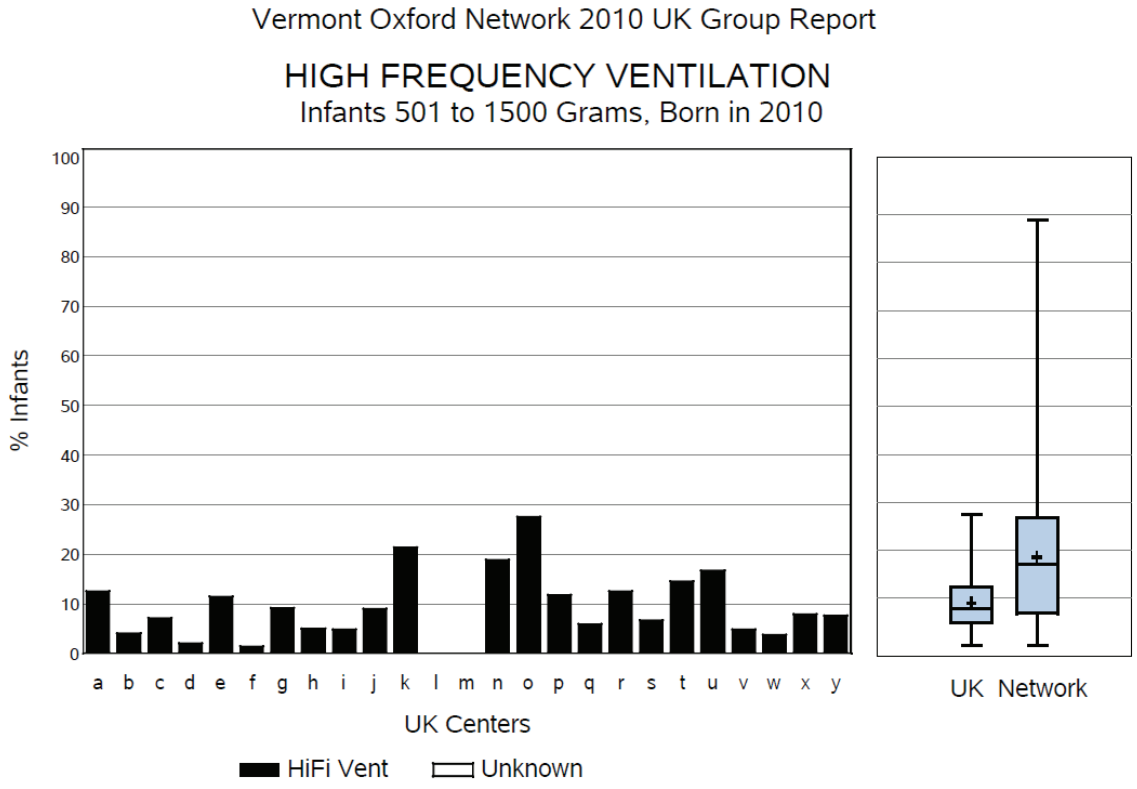


Figure 3.10

Table 10. High Frequency Ventilation

Singleton is C



There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.11

Table 11. High Flow Nasal Cannula

Singleton is C

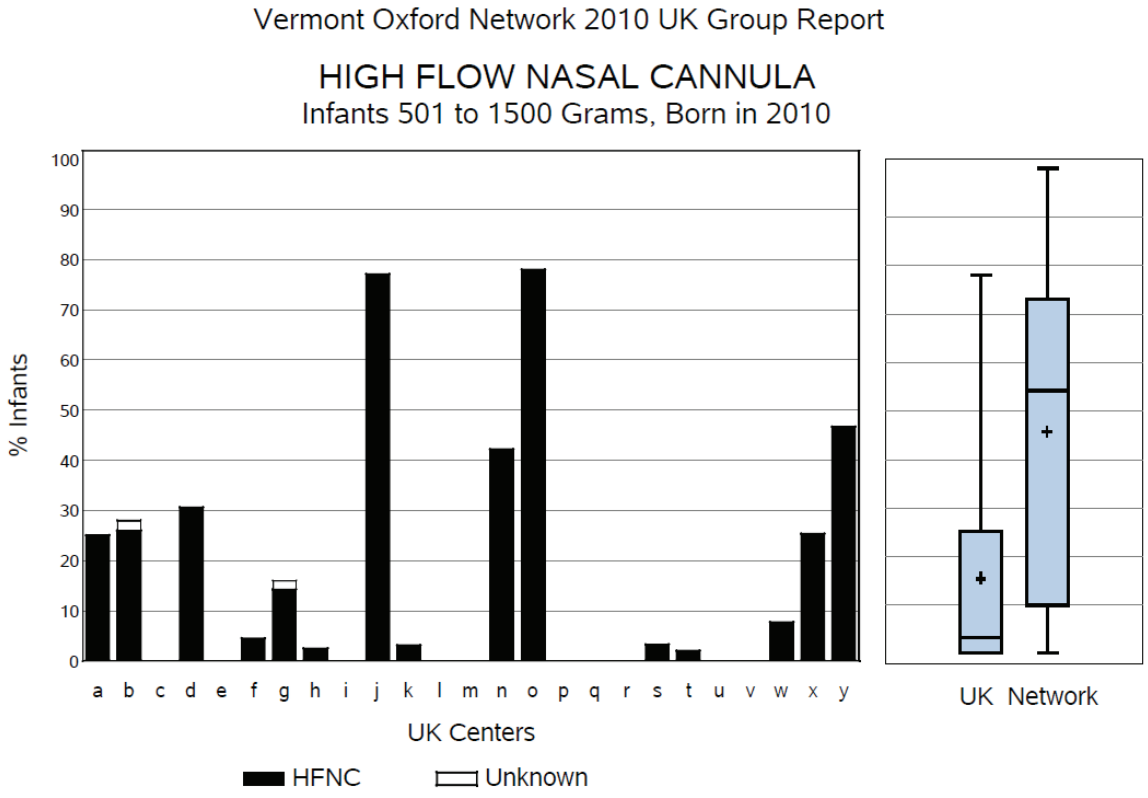


Figure 3.12

Table 12. Pneumothorax

Singleton is C

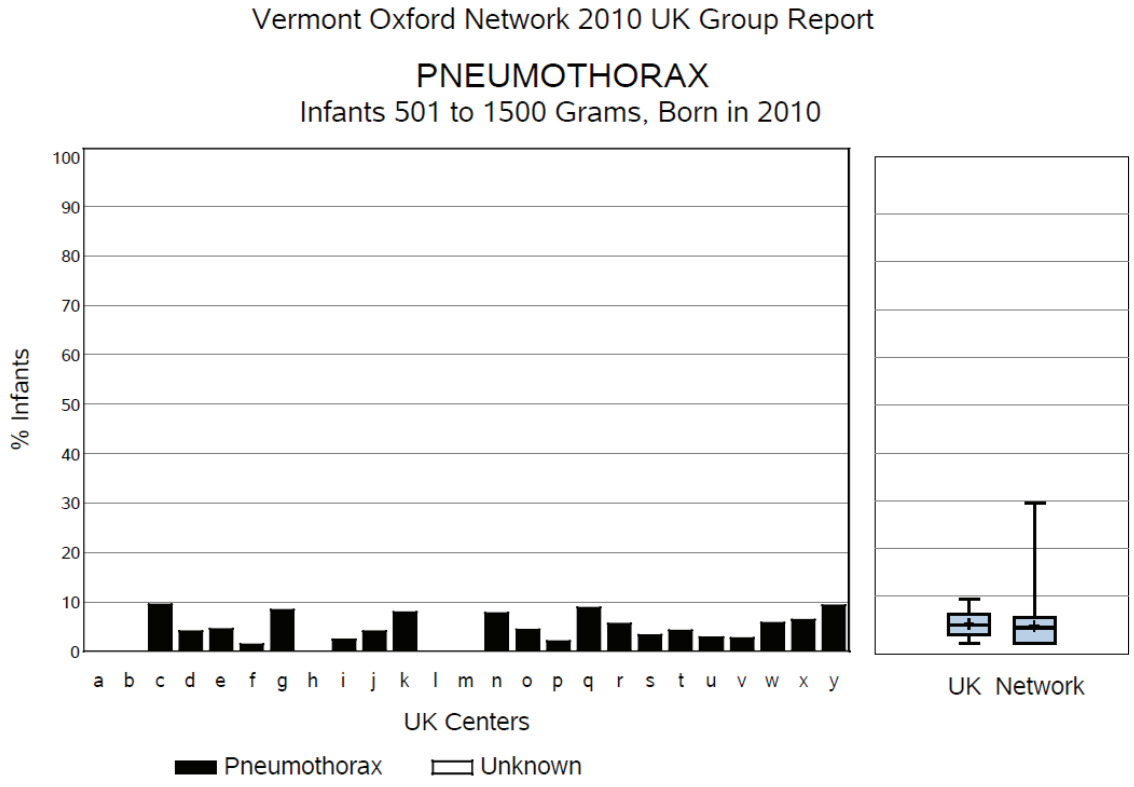
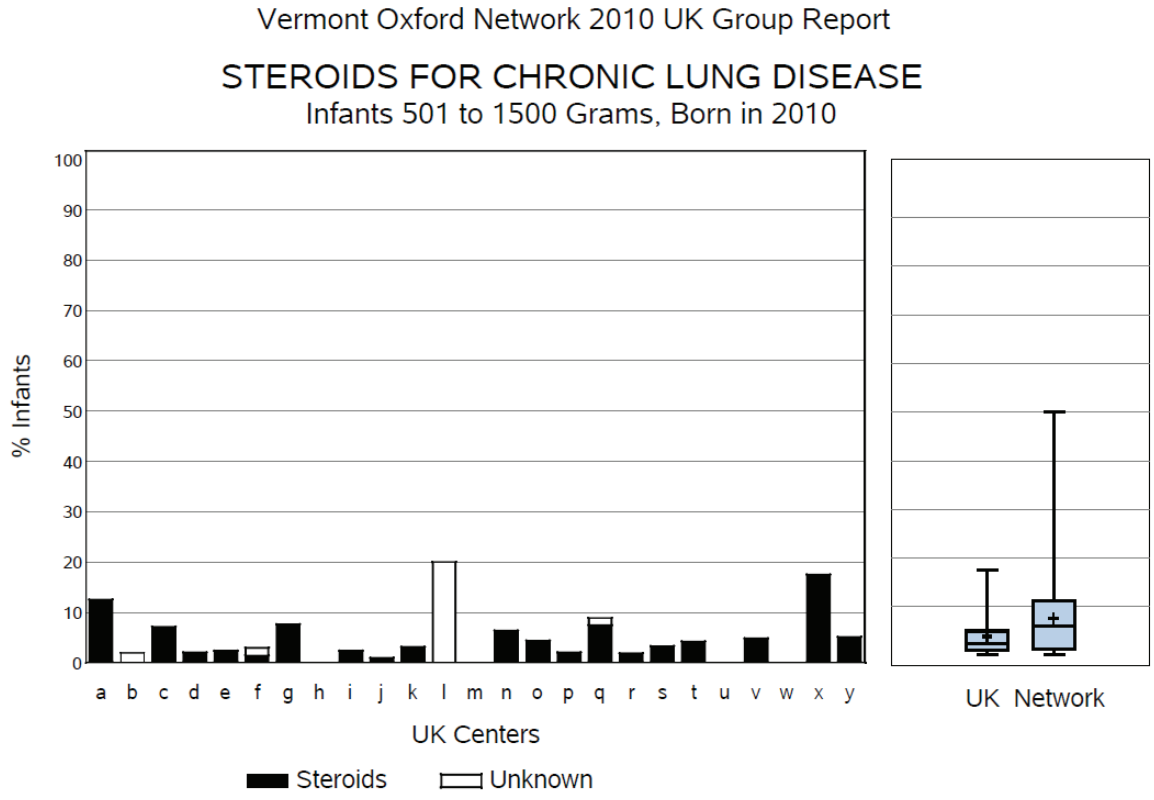


Figure 3.17

Table 13. Steroids for Chronic Lung Disease

Singleton is C

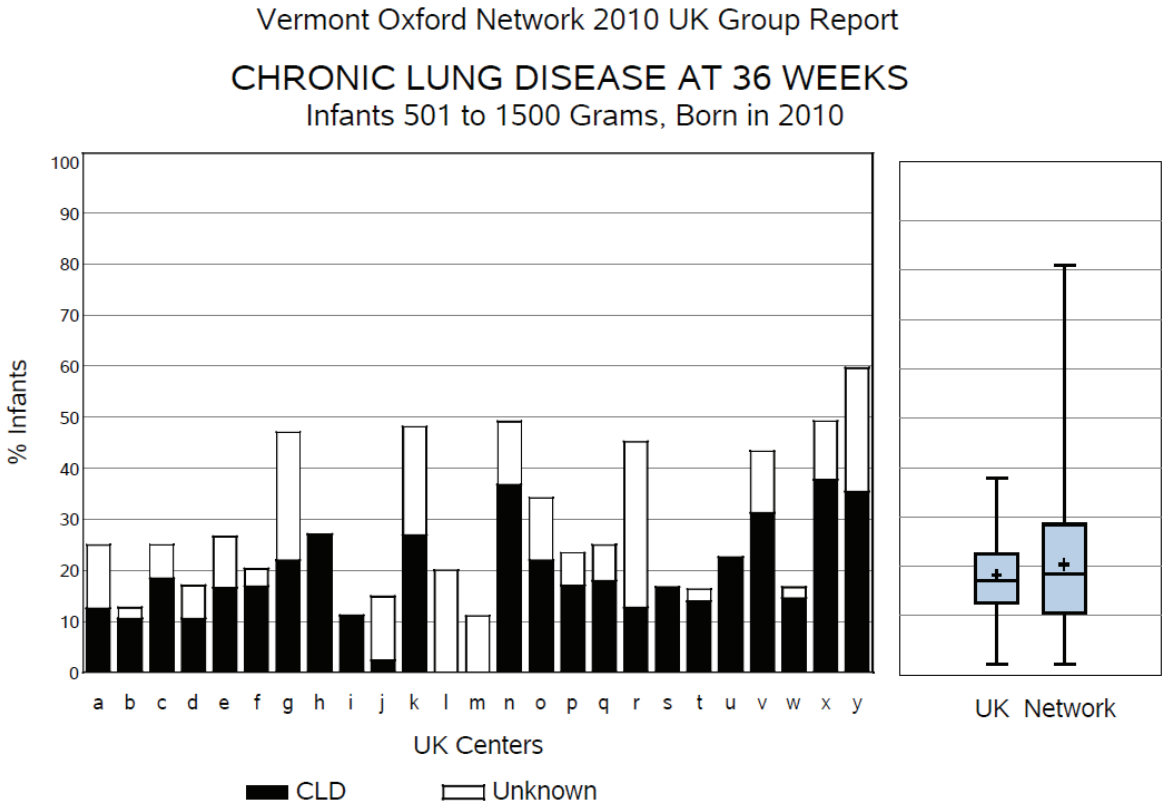


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.18

Table 14. Chronic Lung Disease at 36 weeks

Singleton is C

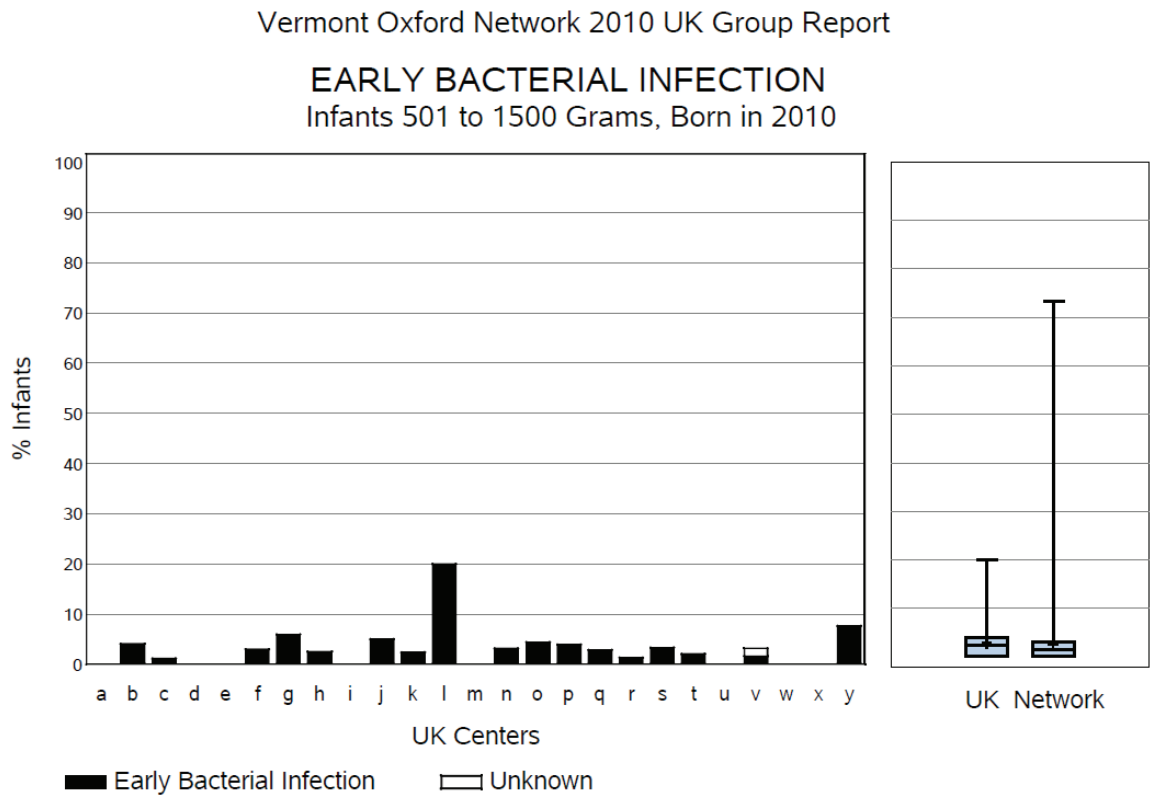


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.19

Table 15. Early Bacterial Infection

Singleton is C



There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.22

Table 16. Late Bacterial Infection

Singleton is C

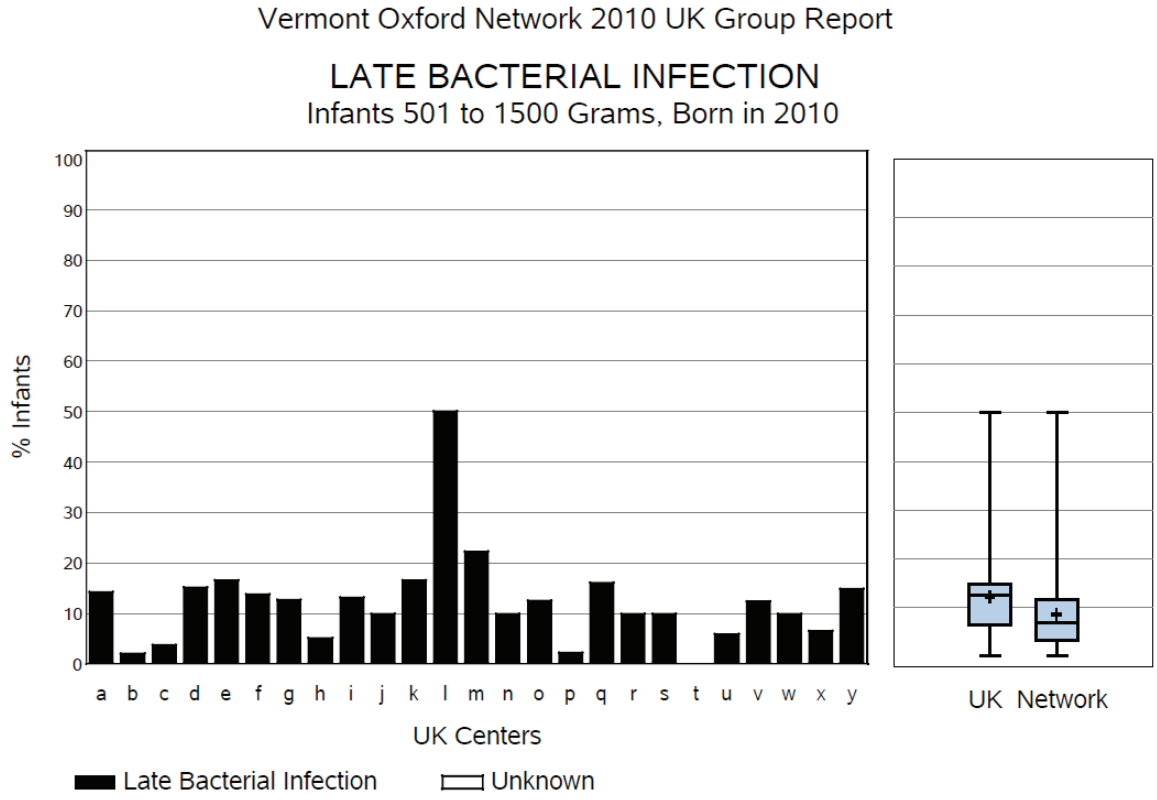
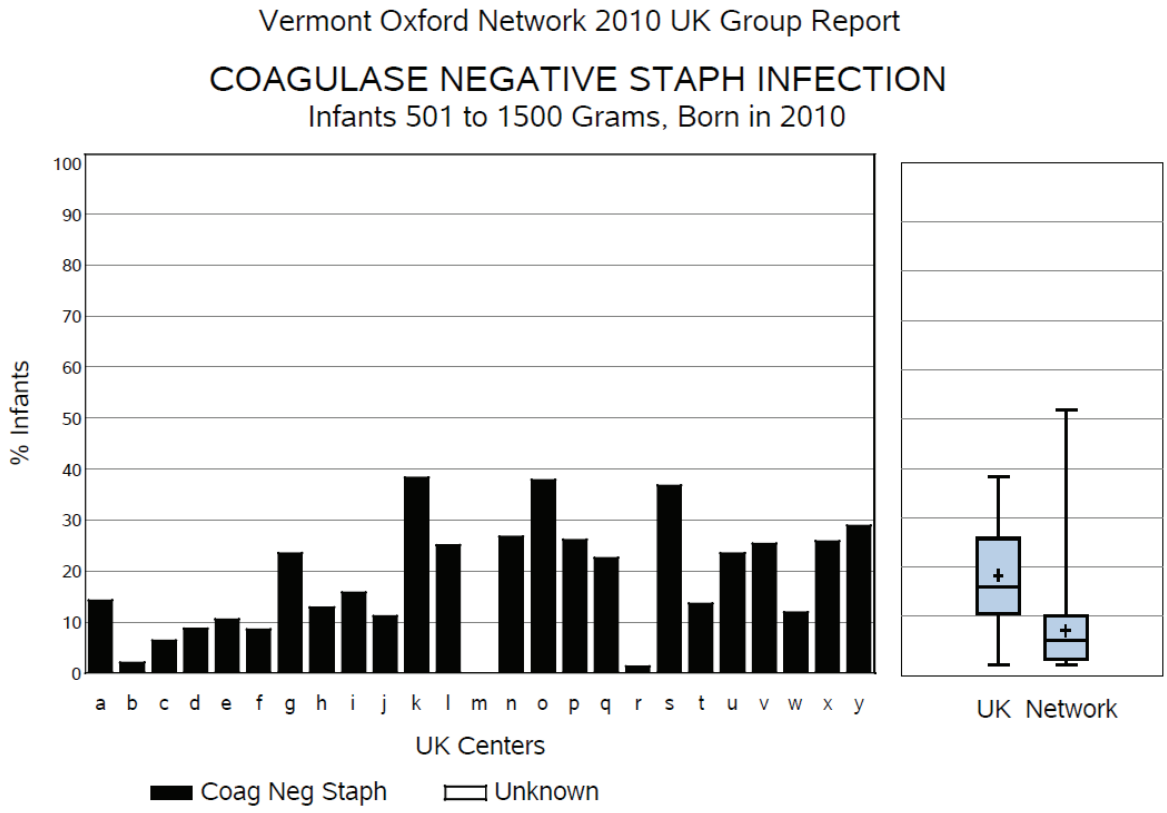


Figure 3.23

Table 17. Coagulase Negative Staph Infection

Singleton is C

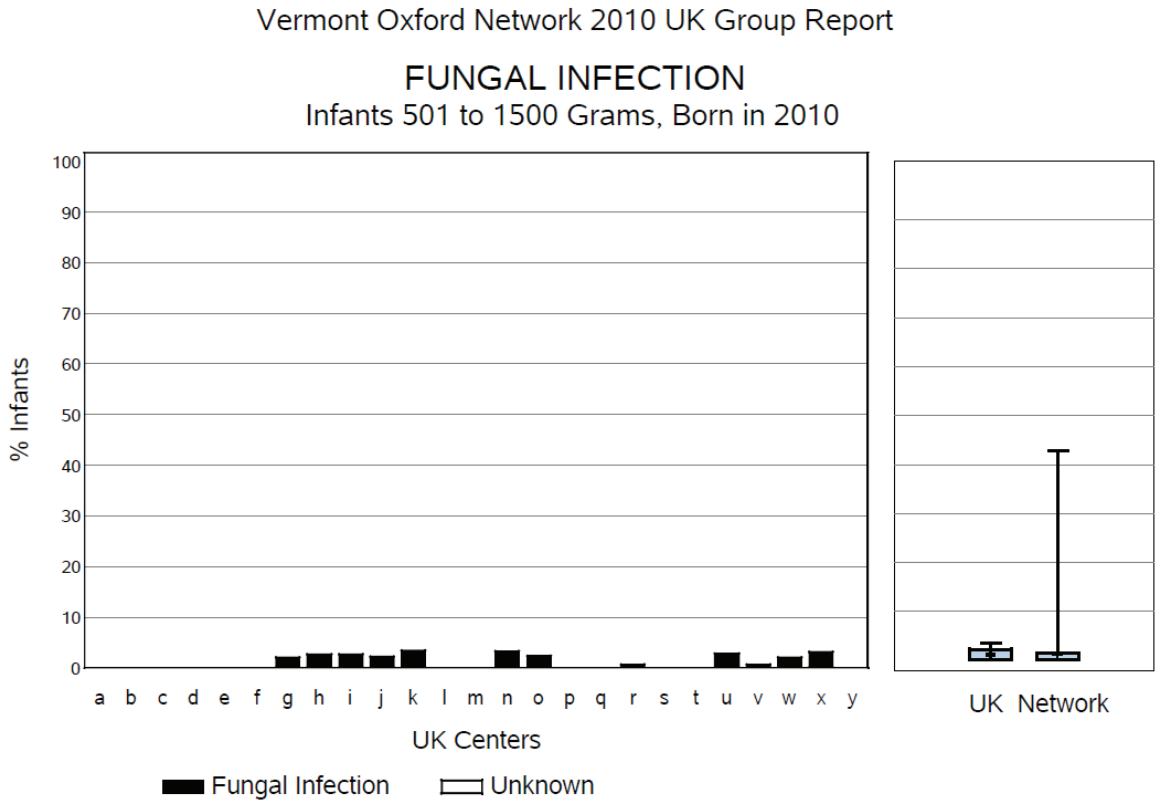


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.24

Table 18. Fungal Infection

Singleton is C

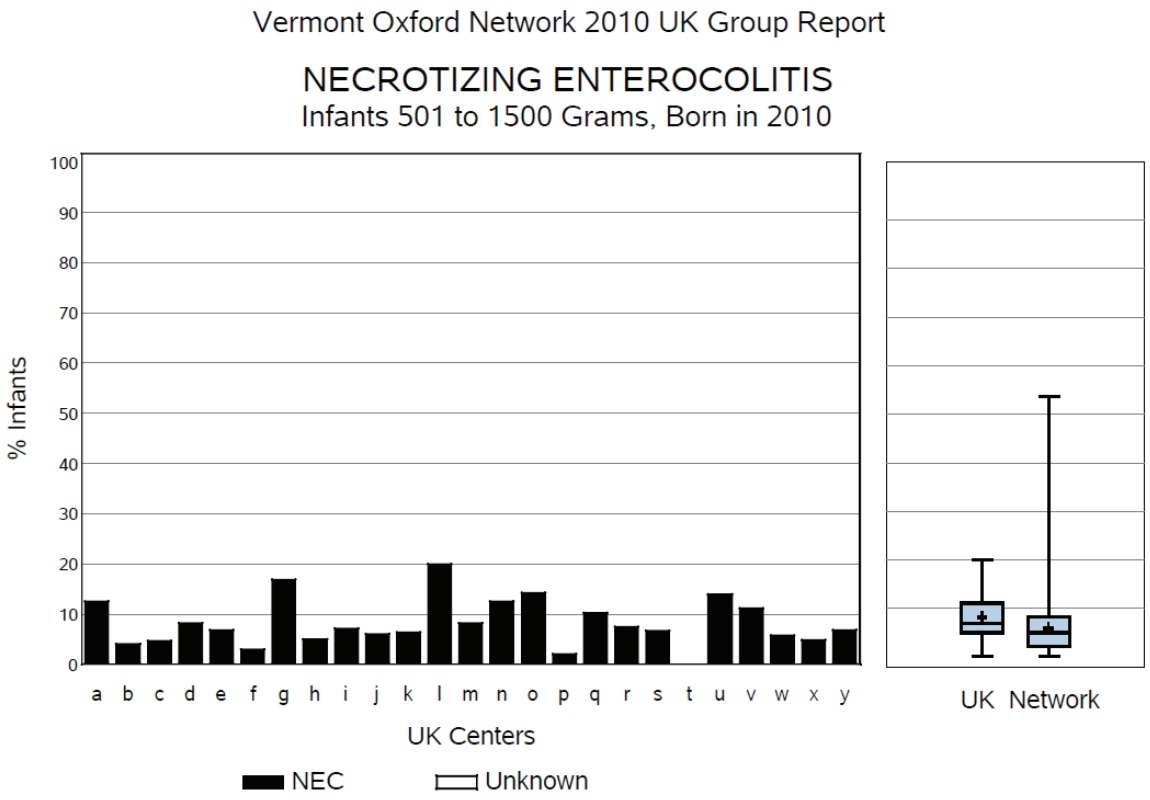


There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.26

Table 19. Necrotizing Enterocolitis

Singleton is C



There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.27

Table 20. Severe Intraventricular Haemorrhage

Singleton is C

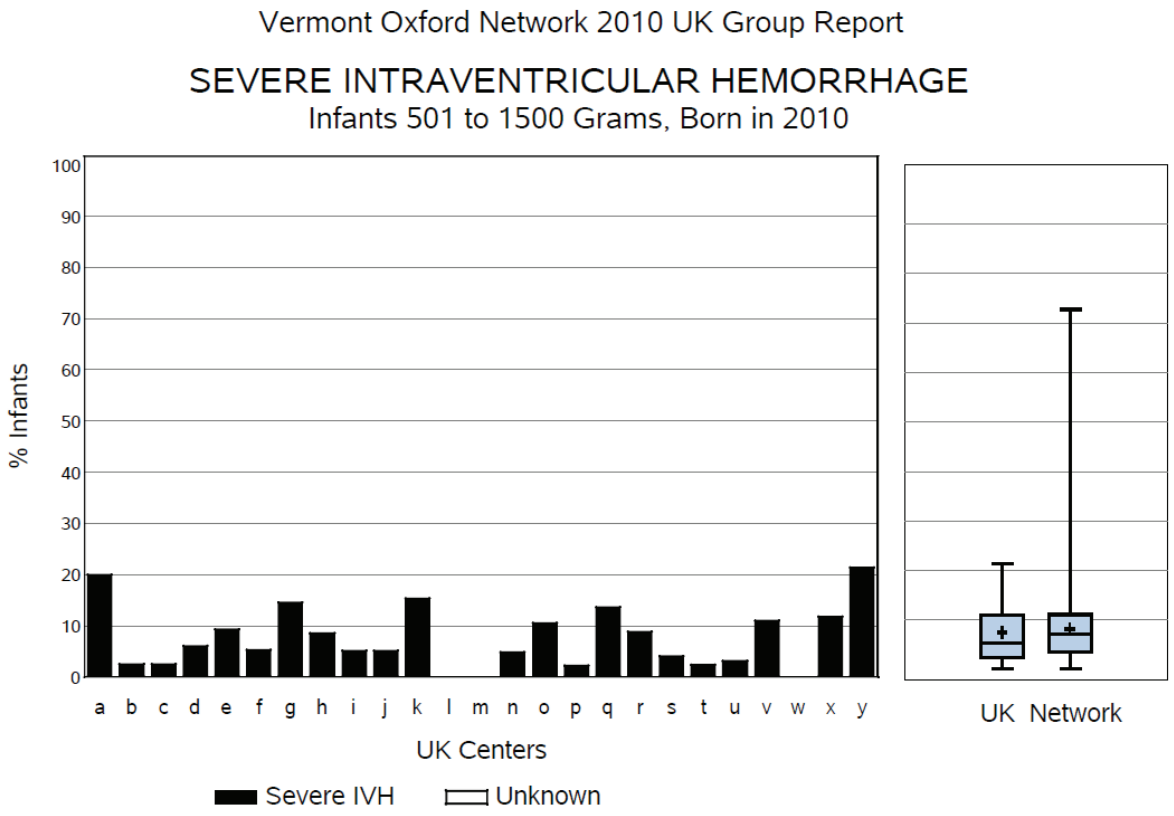
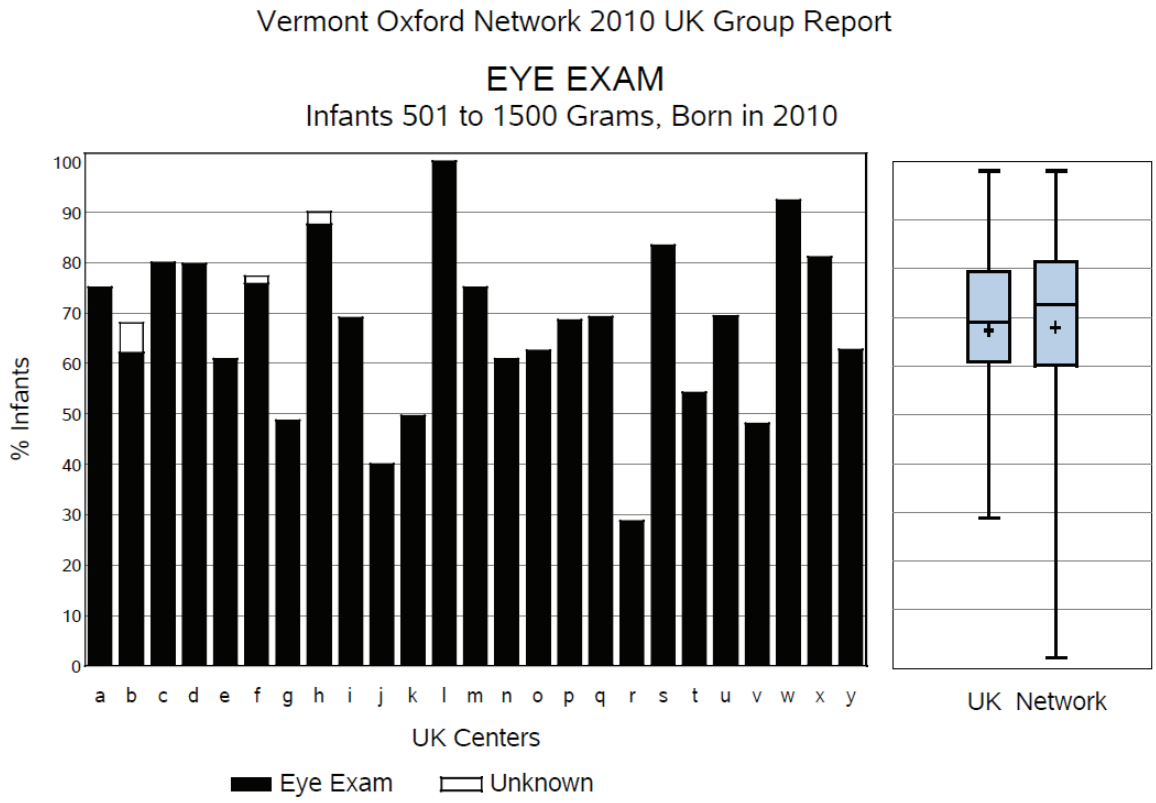


Figure 3.35

Table 21. Eye Exam

Singleton is C



There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.37

Table 22. Severe Retinopathy of Prematurity

Singleton is C

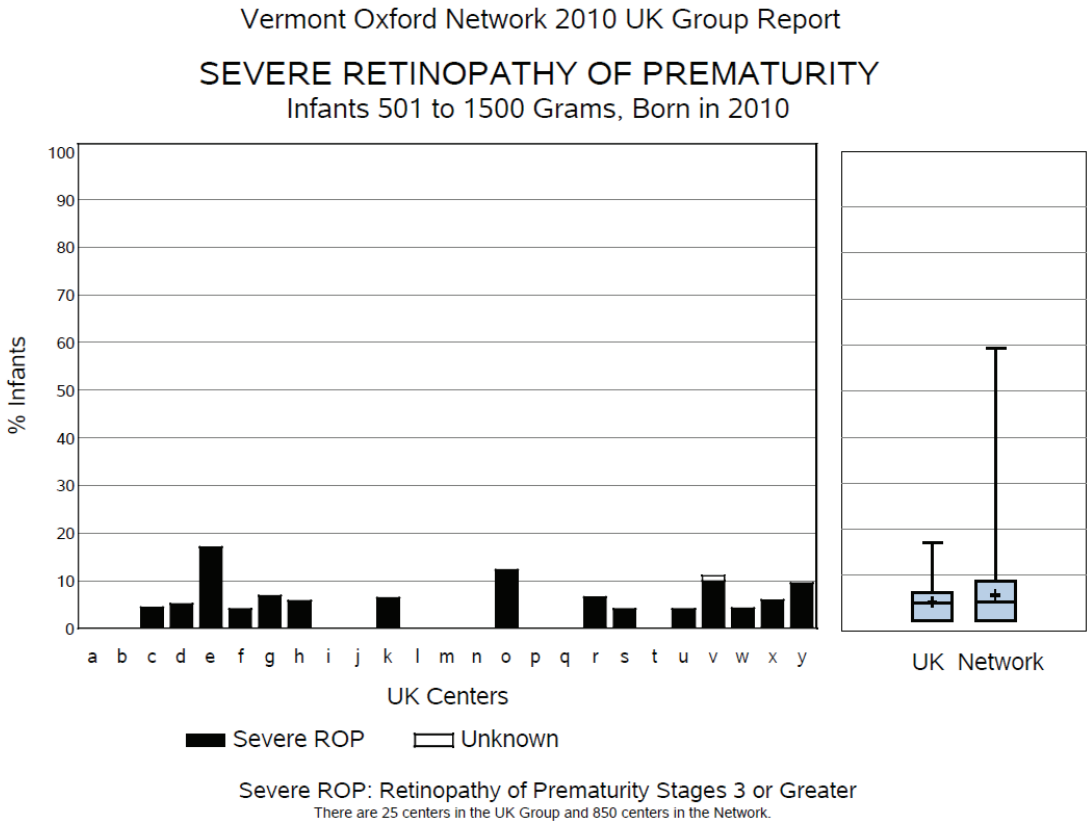
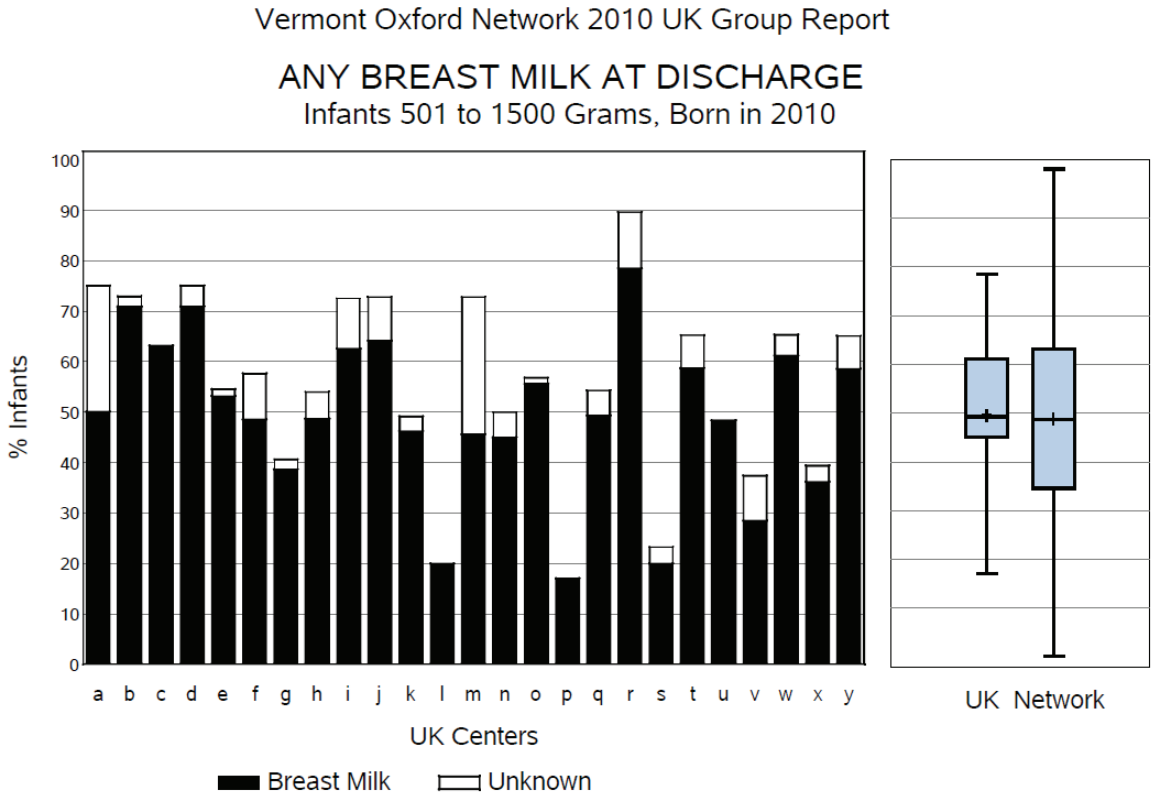


Figure 3.39

Table 23. Any Breast Milk at Discharge

Singleton is C



There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.41

Table 24. Mortality Overall

Singleton is C

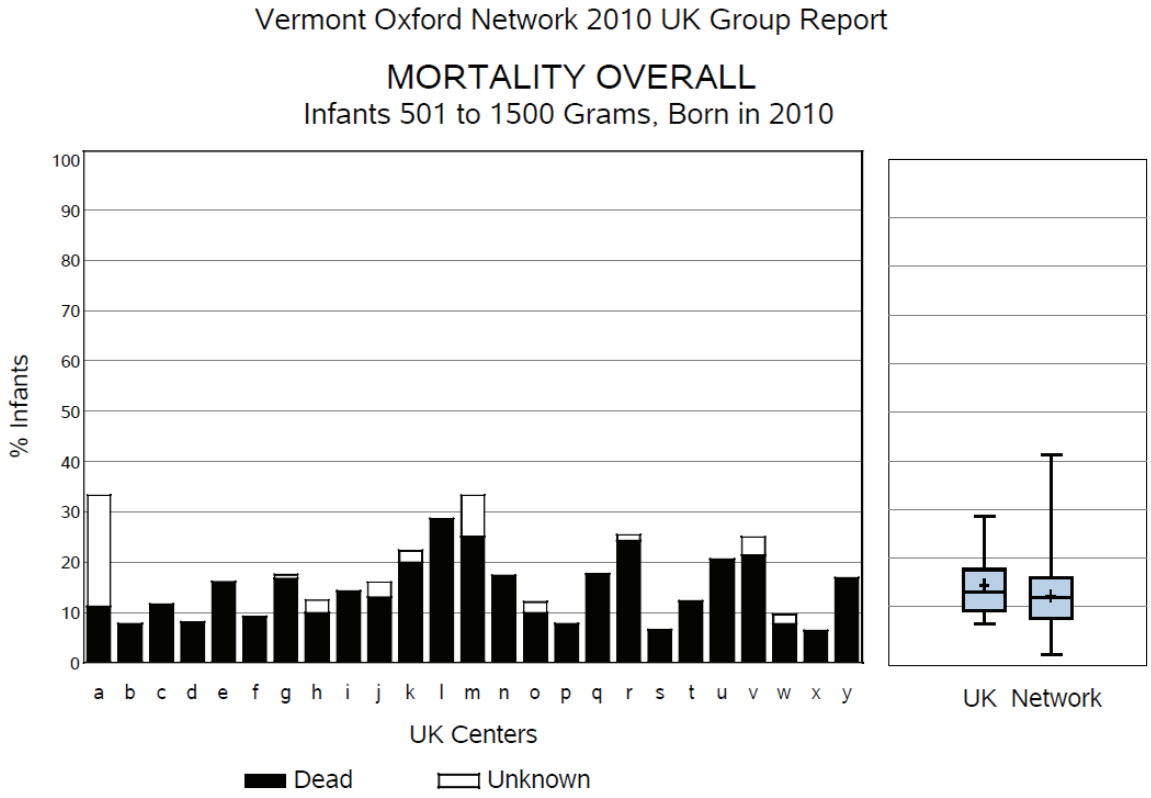
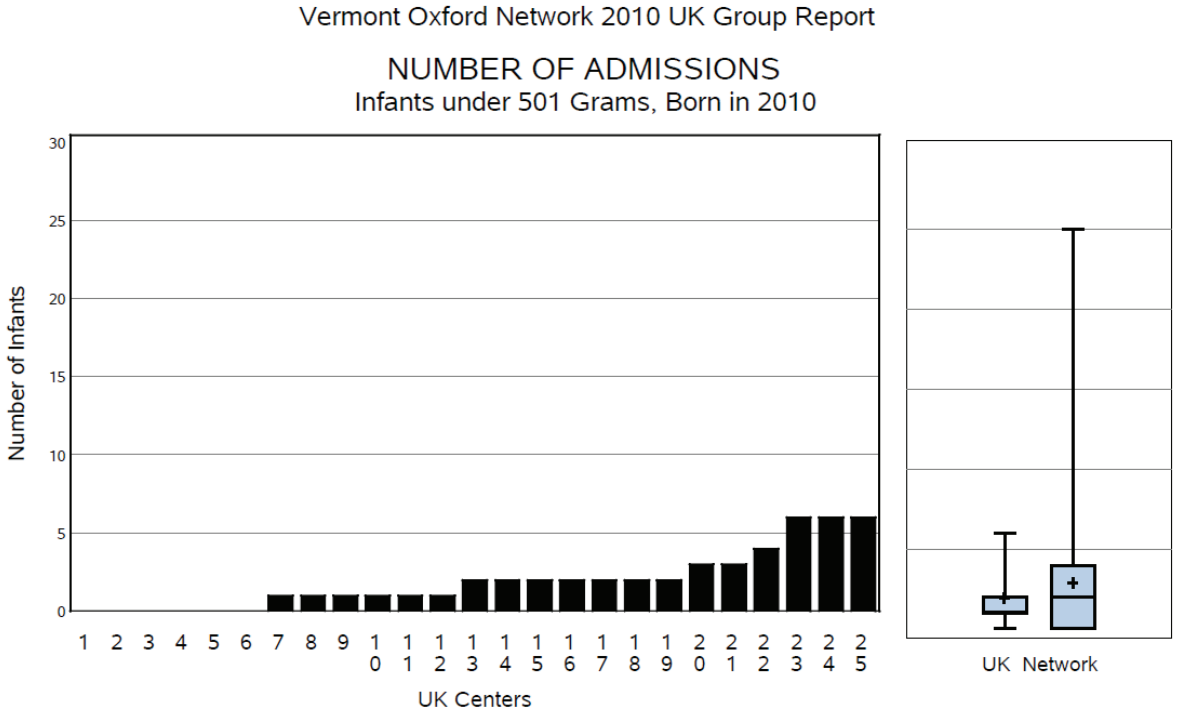


Figure 3.43

Table 25. Number of Admissions
Singleton is 25



There are 25 centers in the UK Group and 850 centers in the Network.

Figure 3.44

APPENDIX 1

SINGLETON HOSPITAL

Referring Unit	Date Referred	Gestation	Reason Refused	Accepting Unit	Outcome if known
Carmarthen	04/01/2010	26^{+1}	NICU on red alert	Bristol	Baby born in Bristol on 04/01/10 admitted to Singleton on 16/02/10
Carmarthen	05/01/2010	Not known	Accepted by NICU, LW unable to accept	Not known	Not known
Royal Glam	08/01/2010	Not known	Refused by CDS	Not known	Not known
Royal Gwent	11/01/2010	Not known	Unit on amber, insufficient staff	Not known	Not known
Carmarthen	11/01/2010	Not known	Referred to Bridgend - 23 babies, 1 emergency cot	Not known	Not known
Royal Gwent	12/01/2010	Not known	23 babies, 1 emergency cot	Not known	Not known
Singleton	17/01/2010	Not known	NICU closed	Bridgend	Not known
Singleton	18/01/2010	37/40	LW on black alert	Bridgend	Not known
Singleton	18/01/2010	Not known	LW on black alert	Bridgend	Not known
Singleton	18/01/2010	39^{+}/40	Breech, contracting	Bridgend	Not known
Singleton	18/01/2010	Not known	NICU closed	Bridgend	Not known
Singleton	18/01/2010	Not known	Unit on red alert (Methadone user)	Bridgend	Not known
Singleton	18/01/2010	33/40	NICU on red alert	Royal Glam	Not known
Singleton	20/01/2010	27/40	37/40 NICU on red alert	Bristol	Baby born in Bristol on 20/01/10 admitted to Singleton on 08/02/10
Bronglais	22/01/2010	32/40	P-Previa Insulin Dependent Diabetic	Not known	Not known

Merthyr	22/01/2010	Not known	Unit on amber, triplets delivering in 2 days	Not known	Not known
Royal Glam	26/01/2010	Not known	Unit on amber, 22 babies, 1x31/40 on LW tightening	Not known	Not known
Bridgend	28/01/2010	Not known	Unit on amber, 93% acuity, awaiting 25/40 wk gestation	Not known	Not known
UHW	28/01/2010	Not known	Unit on amber, 93% acuity, awaiting 25/40 wk gestation	Not known	Not known
Singleton	29/01/2010	32/40	NICU on red alert	Withybush	Not known
Singleton	03/02/2010	Not known	NICU on red alert	Royal Gwent	Not known
Royal Glam	05/02/2010	Not known	NICU on red alert, acuity 104.6%	Not known	Not known
Singleton	06/02/2010	Not known	LW on red alert	Bridgend	Not known
Singleton	06/02/2010	Not known	NICU on red alert	Bridgend	Not known
Royal Glam	09/02/2010	Not known	NICU on red alert, acuity 102.3%	Not known	Not known
Singleton	10/02/2010	Not known	NICU on red alert	Bridgend	Not known
Royal Glam	14/02/2010	Not known	NICU on red alert, acuity 109%	Not known	Not known
Royal Glam	15/02/2010	Not known	NICU on red alert, acuity 116%	Not known	Not known
Singleton	16/02/2010	Not known	NICU on red alert, acuity 116%	Shrewsbury?	Not known
Bronglais	17/02/2010	Not known	No space available	Not known	Not known
Bridgend	18/02/2010	Not known	LW staff shortage	Not known	Not known
UHW	27/02/2010	Not known	NICU on amber, 97% acuity, open to own	Not known	Not known
Newport	01/03/2010	Not known	Unit on amber	Not known	Not known
Singleton	01/03/2010	Not known	Black alert - NICU has no flat space	Bridgend	Not known
Singleton	10/03/2010	Not known	NICU black alert	Bridgend	Not known

Singleton	10/03/2010	36/40	NICU black alert	Withybush	Not known
Singleton	10/03/2010	Not known	NICU black alert	Newport	Not known
Bridgend	06/05/2010	34^{+}	Accepted by NICU but LW unable to accept	Not known	Not known
UHW	06/05/2010	23^{+3}	Cots available on NICU but LW unable to accept	Not known	Not known
Singleton	22/05/2010	Not known	NICU closed	Bridgend	Not known
Bronglais	23/05/2010	24/40	NICU on red alert, acuity 11, 18 babies - 7 x level 1, 5 x level 2	Glanclwyd	Not known
Singleton	23/05/2010	Not known	NICU closed	Southmead, Bristol	Not known
Singleton	25/05/2010	Not known	LW on red alert, home birth transfer from patient's home	Bridgend	Not known
Singleton	26/05/2010	Not known	NICU on red alert	Bridgend	Not known
Bronglais	04/06/2010	36^{+5} Twins	Accepted by NICU, LW unable to take	Not known	Not known
Carmarthen	05/06/2010	32/40	Cots available on NICU, LW unable to accept	Stayed in Carmarthen	Not known
Prince Charles	08/06/2010	24^{+4}	Suggested try Royal Glam or Cardiff (LW closed - had a cot) if difficulty to contact us again	Not known	Not known
Prince Charles	12/06/2010	29^{+2}	Accepted by NICU, LW unable to take	Not known	Not known
Withybush	08/08/2010	30/40	NICU red alert - 103% acuity, 8 x Level 1 (previously accepted from Withybush)	Royal Gwent	Baby born in Royal Gwent 08/08/10 baby transferred to Withybush on 25/08/10

Singleton	11/08/2010	30/40	Maternal clinical reasons	UHW, Cardiff	Mother resides in Neath - baby transferred to Bridgend on 23/08/10
Singleton	12/08/2010	40^{+3}	NICU red alert	Bridgend	Not known
Singleton	12/08/2010	30^{+3} twins	NICU red alert	Bridgend	Baby born in Bridgend on 12/08/10 discharged home on 17/09/10
Singleton	12/08/2010	27^{+3} twins	NICU red alert	Bristol	Baby born in Bristol on 12/08/10 Twin I admitted to Singleton on 16/08/10 Twin II admitted to Singleton 20/08/10
Singleton	13/08/2010	28/40	NICU red alert	Bristol	Baby born in Bristol on 14/08/10 and remained in Bristol for 19 days
Singleton	13/08/2010	41^{+6}	NICU black alert	Bridgend	Did not deliver
Singleton	13/08/2010	39/40	NICU black alert	Bridgend	Did not deliver
Singleton	13/08/2010	36^{+}	NICU black alert	Bridgend	Did not deliver
Singleton	13/08/2010	32/40	NICU black alert	Bridgend	Did not deliver
Singleton	14/08/2010	40^{+}	NICU black alert	Bridgend	Did not deliver
Singleton	14/08/2010	25^{+6}	NICU closed, no NICU beds in Wales	Luton & Dunstable Hospital, London by Air Ambulance (no land ambulances available)	Did not deliver
Aberystwyth	21/08/2010	40^{+}	NICU red alert	Liverpool Women's' Hospital	Baby born at Liverpool Women's Hospital on 22/08/10

Singleton	28/08/2010	30^{+1} twins	NICU red alert	Royal United Hospital, Bath	Did not deliver
Singleton	31/08/2010	31/40	NICU red alert	UHW, Cardiff	Did not deliver
Singleton	05/09/2010	39^{+}	NICU on red alert	Carmarthen	Baby born in Carmarthen on 05/09/10
Singleton	07/09/2010	34/40 twins	NICU on red alert	Haverfordwest	Did not deliver
Singleton	08/09/2010	38/40	NICU on black alert	Carmarthen	Baby born in Carmarthen on 08/09/10
Singleton	08/09/2010	39/40	NICU on black alert	Bridgend	Baby born in Bridgend on 08/09/10
Singleton	11/09/2010	34/40 twins	NICU on red alert	Bridgend	Twins born in Bridgend on 13/09/10 and were discharged home on 28/09/10
Singleton	15/09/2010	33/40	NICU on black alert	Haverfordwest	Did not deliver
Singleton	15/09/2010	40^{+3}	NICU on black alert	Bridgend	Baby born in Bridgend on 15/09/10 and remained there for 5 days
Singleton	15/09/2010	38/40	NICU on black alert	Bridgend	Baby born in Bridgend on 17/09/10 and remained there for 3 days
Singleton	15/09/2010	39/40	NICU on black alert	Bridgend	Baby born in Bridgend on 15/09/10 and remained there for 5 days
Singleton	15/09/2010	40/40	NICU on black alert	Neath	Baby born in Neath on 15/09/10 and transferred to Bridgend on 16/09/10 and remained there for 4 days

Singleton	15/09/2010	40^{+4}	NICU on black alert	Bridgend	Baby born at Bridgend on 15/09/10 and remained there for 9 days
Singleton	18/09/2010	34/40	NICU on red alert	Bridgend	Baby born at Bridgend on 18/09/10 and remained there for 13 days
Bridgend	21/09/2010	29/40	NICU on red alert	UHW	Baby born UHW on 21/09/10 admitted to Singleton on 02/10/10
Singleton	25/09/2010	36/40	NICU on red alert	Bridgend	Baby born at Bridgend on 25/09/10 and remained there for 5 days
Singleton	26/09/2010	32^{+2} twins	NICU on red alert	Bristol	Twins born at Bristol on 29/09/10 and remained there for 9 days before being transferred to Bridgend where they remained for 19 days
Singleton	01/10/2010	39/40	High activity/ acuity on LW	Bridgend	Baby born in Bridgend on 01/10/10 and remained there for 4 days
Singleton	09/10/2010	40/40	High activity/ acuity on LW	Bridgend	Baby born in Bridgend on 01/10/10 and remained there for 4 days

Bronglais	22/10/2010	31^{+2}	Unable to accept as already accepted 28/40 twins from Neville Hall and 31/40 twins - PET on LW	UHW	Baby born in UHW on 28/11/10 and remained there for 3 days
Bronglais	30/10/2010	40/40	Bed in UHW but Singleton unable to retrieve due to patient numbers and nursing staff	Carmarthen	Baby born in Carmarthen on 30/10/10 and remained there for 6 days
Singleton	31/10/2010	40/40	NICU on red alert	Royal Gwent	Baby born in Royal Gwent on 01/11/10 and remained there for 3 days
Singleton	07/11/2010	34/40	NICU on red alert	Princess of Wales, Bridgend	Did not deliver
Carmarthen	11/11/2010	27^{+6}	NICU on amber alert	UHW	Baby born UHW on 11/11/10 admitted to Singleton on 21/11/10
Singleton	26/11/2010	40^{+2}	LW on red alert	Princess of Wales, Bridgend	Baby born in Bridgend on 27/11/10 and remained there for 2 days
Singleton	26/11/2010	37/40 twins	LW on red alert	Princess of Wales, Bridgend	Twins born in Bridgend on 26/11/10 and remained there for 3 days

APPENDIX 2

PRINCESS OF WALES

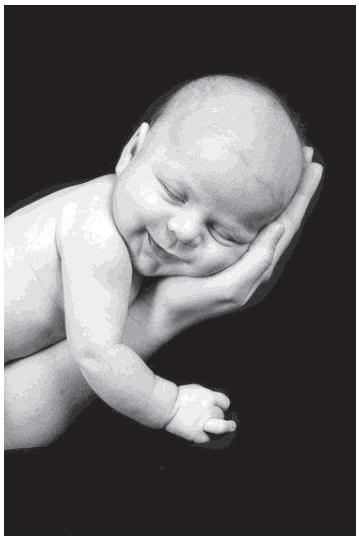
Referring Unit	Date Referred	Gestation	Reason Refused	Accepting Unit
Royal Glam	20/02/10	34	Refused by LW	Not known
Nevill Hall	23/02/10	24^{+2} twins	NICU on red alert	Not known
Nevill Hall	26/02/10	34^{+2}	LW refused	Not known
Nevill Hall	26/02/10	31^{+5}	LW refused	Not known
Royal Gwent	01/03/10	30	LW refused	Not known
Royal Gwent	26/03/10	34^{+6} twins	LW refused	Not known
Worcester	31/03/10	31	LW refused	Not known
UHW	03/07/10	31 twins	LW refused	Not known
Singleton	14/08/10	32	NICU on black alert	Nevill Hall
UHW	14/08/10	30 twins	NICU closed	Not known
Withybush	11/09/10	34 twins	NICU closed	Not known
UHW	22/10/10	36 twins	LW refused	Not known
UHW	27/10/10	35^{+1}	LW refused	Not known
Royal Glam	14/11/10	33	NICU on red alert	Not known
UHW	19/11/10	34	NICU on red alert	Not known
Withybush	22/11/10	29	NICU on amber	Not known
POW	23/11/10	32^{+2}	NICU on red alert	Singleton
UHW	28/12/10	29 twins	LW refused	Not known
UHW	28/12/10	33	LW refused	Not known

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol
Abertawe Bro Morgannwg
University Health Board

Neonatal Intensive Care Unit

Annual Report 2010

Part III



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Part III - Supplementary Data

PART III

Supplementary Data

Women and Child Health
Community Neonatal Nursing Team

Report by Cheryl Morgan Community Lead - Neonatal Services

The Community Neonatal Nursing Team provides supportive services, facilitating a stress free transition from hospital to home, for babies discharged from the neonatal unit. The aims of the service are as follows:-

- To ensure that a neonate has the opportunity to reach their full potential within the environment of their family.
- To provide information, advice and technical support to ensure the neonate maintains a state of well being.
- To provide emotional support.

The service has been a Specialist Health Visitor led service since the recommendations of the Stroud Report 1983.

Since 2000 the service was incorporated within the Child Health Division Swansea NHS Trust.

The base is on the 4th Floor, West Ward Block, Singleton Hospital, Swansea.

The geographical area served is Swansea, Neath & Port Talbot and Llanelli. In September 2010 this was extended across the A.B.M. U.L.H.B. which now includes Bridgend.

Personnel

Since August 2007 the team has been led by a Community Children's Nurse Band 7 and a Community Children's Nurse Band 6 was appointed in October 2007.

Following inclusion of Bridgend in September 2010 a Nursery Nurse Band 4 has joined the team working 18¾ hours.

The band 7 is also the Local Coni co-ordinator for the Swansea area.

Service Specification

The community neonatal team is a flexible service; we offer a home visiting service to the following babies:

- Babies born < 1.5kg.
- Babies <30weeks gestation and under.
- Oxygen dependent babies.
- Special circumstances as requested by the Neonatal Consultant i.e. congenital heart, major neurological concern, tube fed babies. (This includes Swansea, Neath & Port Talbot and Llanelli. With regards to Neath and Port Talbot babies if they are a Bridgend booking these are usually followed up from Bridgend as they are transferred back to their referral unit prior to discharge.) Since September 2010 all babies from Bridgend who fit the criteria have been followed up the Community Neonatal Nursing Team.

Discharge Planning - The Community Neonatal Team will organise:

- Discharge planning meetings for all babies who are visited by the Community Neonatal Team.
- Ordering of specialised equipment and home oxygen.
- Liaise with other members of the multi-disciplinary team.

Follow Up

The duration of follow up is one year post term; the babies with specific medical needs were then referred to the appropriate multi-disciplinary team.

Neuro Developmental Clinic

This clinic follows up neuro development of high-risk babies (as above) at 6 months, one year, and two years corrected age. The 'Community Neonatal Team' are qualified assessors in the Bayley's development assessment and work in conjunction with the consultant. These clinics are run weekly.

Palivizimab immunization

Clinics still continue to be organised and held by the Community Neonatal Team in the winter months (October - February) with babies coming in for monthly vaccinations. Palivizumab (brand name Synagis) is a monoclonal antibody produced by recombinant DNA technology. It is used in the prevention of respiratory syncytial virus (RSV) infections. It is recommended for infants that are high-risk because of prematurity or other medical problems such as congenital heart disease.

Chronic Lung Clinic

These are held in Children's Outpatient Department reviewing those babies discharged from the Neonatal Unit who are oxygen dependant, liaising with the Paediatrician, Dietician and Physiotherapist.

Home Oxygen

Air Products continued to supply and deliver home oxygen, which is paid for by the Local Health boards. They also maintain all of the equipment.

Oxygen concentrator's portable cylinders and micro flow meters are delivered to the family home and Air Products undertake the training of parents and carers.

Oxygen can be delivered 24 hours prior to discharge.

Written parental consent must be obtained prior to ordering home oxygen supplies.

The **Chronic Lung Disease Clinic** continues to be led by Dr Carol Sullivan.

The **Palivizimab Clinic** is held during the winter months October to February.

The team continued to monitor development progress, working closely with the Community Paediatricians, identifying those neonates prior to discharge who have special needs, referring to therapists and support services available in their home area. Developmental assessments were performed at corrected age of 52 weeks gestation on all babies 32 weeks gestation and under prior to discharge.

Caseload Activity

Number of Babies Visited at Home 2010

23 weeks and under	1
24 - 26 weeks	19
26 - 28weeks	22
28^{+} - 30 weeks	34
30^{+} -35 weeks	40
35-term	15

Babies who were born between 30 - 35 weeks

34 babies had a birth weight below 1.5kgs. and 2 were followed up because their twin was below 1.5kgs.
1 oxygen dependent baby who was also n.g.t fed.
1 I.V.H. (Consultant Referral from Swansea).
1 31^{+2}/40 Collapse prior to discharge with N.E.C. (Referral from Consultant in Bridgend).
1 Persistent Hypoglycaemia and the Twin (Consultant Referral from Bridgend).

Babies who were born 35 weeks - Term

1 V.A.T.E.R. syndrome
1 Duodenal Atresia
2 I.U.G.R.
2 Hypoxia Ischaemic Encephalopathy.
1 Tracheospageal Fistula.
2 Down's Syndrome with pulmonary hypertension who were oxygen dependent.
1 Oxygen Dependent also N.G.T. fed.
1 Tetra logy of Fallots.
2 H.I.E.
1 Seizure.
1 Edward's Syndrome (Died).

Oxygen dependent	22
Death	1

Number of Babies who received Palivizimab:

During the winter 2010/2011 25 babies received Palivizumab due to the amount of babies who received Synagis two clinics were run each month.

Coni Families = 12

I am the Coni-Coordinator for the Swansea area and attend yearly updates which are held in St. David's Hospital, Cardiff. These are arranged by the National Coni Co-ordinator who is based in Sheffield.

Objectives 2010-2011

To develop the community service at Princess of Wales so there will be one service across the Abertawe BroMorganwg University Health Board. To audit the service after 12 months.

Singleton Hospital Infant Parent Support

S.H.I.P.S. was set up by some staff members and a group of parents with the aim of raising funds to purchase various items for the nursery, and to provide support to other parents who have infants on the unit, as they know first-hand the difficulties and worries that parents experience when their infants are on the unit. These supporters regularly visit the unit to speak to parents of infants who are inpatients. Their work is invaluable. We are trying to recruit new members at present.

Christmas and summer parties were a great success and enjoyed by all who attended.

This year SH.I.P.S. has purchased Easter gifts, keepsake boxes, new bedding for babies and for the family unit, breast pumps, Christmas stockings and Mother's Day chocolates and cards.

We are donating a large amount to the unit for refurbishment. We are also purchasing waterproof mattresses and new beds for the family unit.

When the new unit is complete we will equip each bedroom with tea/coffee facilities, fridges and microwaves.

Health outcomes of High-Risk Singleton NICU Graduates
(<32 weeks OR <1500grams)

Background: The Working Group of the British Association of Perinatal Medicine (BAPM) / RCPCH in 2008 recommended that all neonatal services providing intensive care should collect standardised dataset on health outcomes of high-risk babies for audit, benchmarking and research across clinical networks and health regions. The document standardised outcome definitions and assessment methods for collecting health status dataset for preterm babies less than 32 weeks gestation at birth or with birth weight <1500gms at 2 years corrected age.

Service: A neurodevelopmental follow up service was set up in early 2008d by Dr Sujoy Banerjee, Consultant Neonatologist. The other members of the team were Dr. Malini Ketty, Specialty Doctor in neonatal medicine, Mrs. Michelle Barry, Senior Paediatric Physiotherapist and Mrs. Vicky Burridge, Outreach Neonatal Community Nurse, all of whom were trained in Bayley scale of neurodevelopmental assessments. The team expanded in 2011 with the joining of two neonatal consultants, Dr James Moorcraft and Dr Pinki Surana. Mrs. Lynda Challacombe and Mrs. Joanna Morgan provide secretarial support. Referral pathways are agreed with the local community services.

The service was designed to cater for all premature babies less than 32 weeks gestation or 1500 grams at birth cared for at Singleton Hospital and aimed to assess these babies at 6 months and 2 years of corrected ages. The service also evaluates all babies who underwent therapeutic hypothermia and babies with identified abnormal neurology.

As the service was established in 2008, concurrent follow up was planned for babies born in this year. Children underwent developmental assessments using the Bayley 3 scales and a health outcome questionnaire was completed. Data was entered on to an electronic database and analysed using Excel 2003.

Families from outreach centres who were unable to attend this clinic due to geographical and/ or financial constraints were contacted and outcome information obtained through validated parental questionnaire (PARCA-r), SOGS2 assessments by Health Visitors or Ruth Griffiths assessment by local paediatricians. Duplication of work was avoided by obtaining information from clinicians if the children had already been assessed on a standardised scale due to ongoing clinical problems.

Clinic: The neurodevelopmental follow up clinic is held every Wednesday afternoon and alternate Tuesday afternoons in the Paediatric Outpatients at Singleton Hospital.

Outcome data presentation: The data is presented in a standardised format as recommended by the BAPM Working party report. In this annual report, we present the cumulative outcome for babies born in 2006-2008 followed by outcomes of babies from 2008 only.

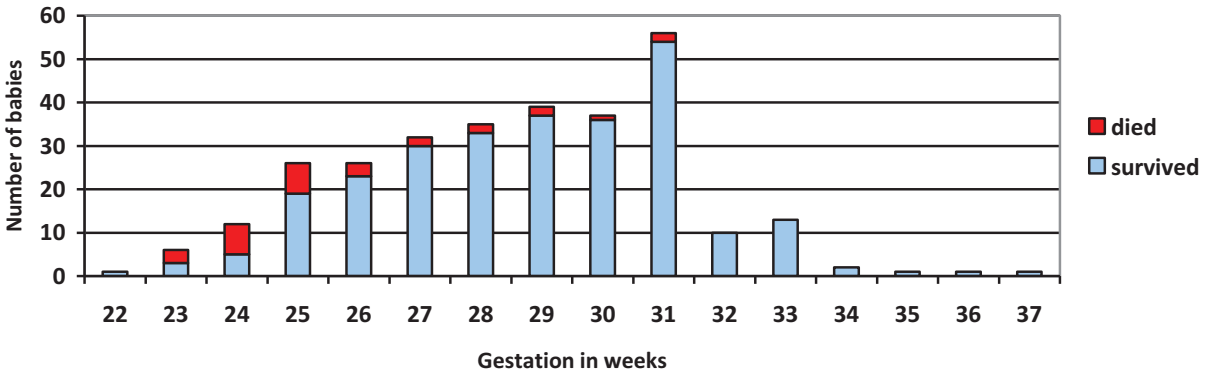
Outcome definitions:

Criteria for	Severe Neurodevelopmental Disability	Moderate Neurodevelopmental disability
Domain	***Any one of the below:***	***Any one of the below:***
Motor	Cerebral palsy with GMFCS level 3, 4 or 5	Cerebral palsy with GMFCS level 2
Cognitive function	Score <-3 standard deviations below norm (DQ<55)	Score -2SD to -3SD below norm (DQ 55-70)
Hearing	No useful hearing even with aids (profound >90dBHL)	Hearing loss corrected with aids (usually moderate 40-70dBHL) or Some hearing but loss not corrected by aids (usually severe 70-90dBHL)
Speech and Language	No meaningful words/signs or unable to comprehend cued command (i.e. commands only understood in a familiar situation or with visual cues e.g. gestures).	Some but fewer than 5 words or signs or unable to comprehend un-cued command but able to comprehend a cued command
Vision	blind or can only perceive light or light reflecting objects	seems to have moderately reduced vision but better than severe visual impairment; or blind in one eye with good vision in the contralateral eye

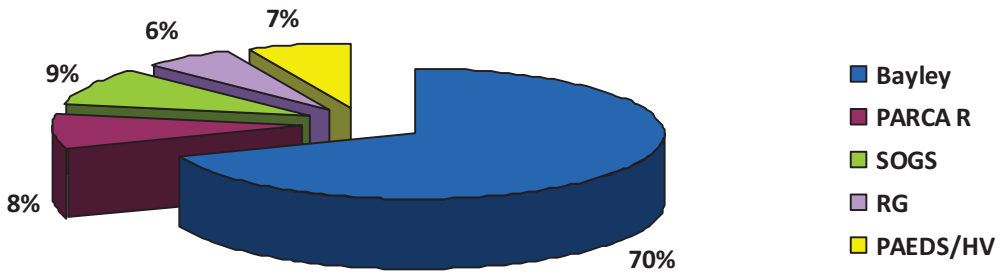
Cumulative outcome (2006-2008):

Outcome (2006-2008)	Number (%)
Admitted for intensive care	298
Survived to discharge	269 (90.3%)
Survived at 2 years corrected age	266 (89.2%)
Contactable (% of surviving children)	192 (72.1%)
Information available	192
Death or Disability at 2 years CGA (% admitted for intensive care)	63 (21.1%)
Total Neurodevelopmental Impairment at 2 years CGA (% of children assessed)	31 (16%)
Neurodevelopmental Impairment only (NDI) (% of children assessed)	27 (14%)
Severe neurodevelopmental disability (SND) (% of children assessed)	4 (2%)
Survival free of Neurodevelopmental Impairment (% of children assessed)	161 (83.8%)

Survival at 2 years CGA by gestation (2006-2008):



Type of assessments (2006-2008):



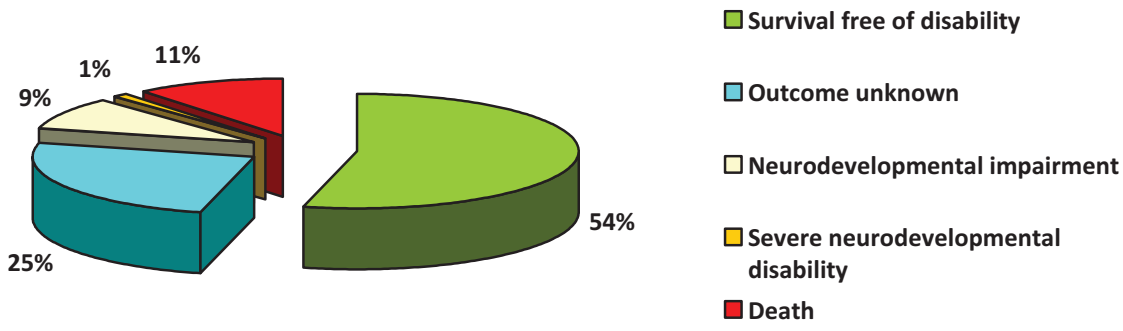
Outcome by gestation (2006-2008):

Gestational age at birth	22w	23w	24w	25w	26w	27w	28w	29w	30w	31w	32w	33w	34w	35w	36w	37w	Total
Number of admissions for intensive care	1	6	12	26	26	32	35	39	37	56	10	13	2	1	1	1	298
No.(% admissions) of survival to discharge	1(100)	3(50)	5(42)	19(73)	23(88)	30(94)	33(94)	37(95)	36(97)	54(96)	10(100)	13(100)	2(100)	1(100)	1(100)	1(100)	269
No. of deaths between discharge and 2 yrs of age	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	3
No.(% admissions) of survivors at 2 yrs	1(100)	3(50)	4(33)	19(73)	23(88)	29 (91)	33(94)	36(92)	36(97)	54(96)	10(100)	13(100)	2(100)	1(100)	1(100)	1(100)	266
No.(%) of survivors where information available for outcome at 2 yrs	1(100)	3(100)	3(75)	14(74)	14(61)	23(79)	27(82)	21(58)	27(75)	37(69)	8(80)	10(77)	2(100)	0(0)	1(100)	1(100)	192
No(% of admission) of Death or Neurodevelopmental Impairment	1 (100)	5(83)	9(75)	9(35)	7(27)	6(19)	4(11)	7(18)	2(5)	8(14)	2(20)	1(7)	1(50)	0(0)	0(0)	1(100)	63
No. (% of survivors evaluated) of Neurodevelopmental Impairment (SND + NDI)	1(100)	2(67)	1(33)	2(14)	4(29)	3(13)	2(7)	4(19)	1(4)	6(16)	2(20)	1(10)	1(50)	0(0)	0(0)	1(100)	31
Neurodevelopmental impairment(NDI) only (% of survivors evaluated)	0(0)	1(33)	1(33)	2(14)	3(21)	3(13)	2(7)	4(19)	1(4)	5(13)	2(20)	1(10)	1(50)	0(0)	0(0)	1(100)	27
Severe neurodevelopmental disability(% of survivors evaluated)	1(100)	1(33)	0(33)	0(0)	1(7)	0(0)	0(0)	0(0)	0(0)	1(3)	0(0)	0	0(0)	0(0)	0(0)	0(0)	4

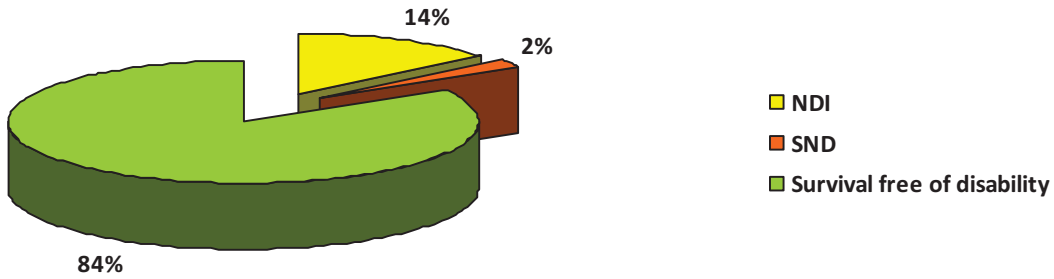
Pattern of impairment /disability at 2 years (2006 - 2008): Total no. Of babies 31 (16.1%)

Gestational age at birth	22w	23w	24w	25w	26w	27w	28w	29w	30w	31w	32w	33w	34w	35w	36w	37w	Total
No. with definite CP	1	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	5
Motor delay GMFCS 2	0	0	1	0	3	0	0	0	0	1	0	1	1	0	0	0	7
Motor delay GMFCS 3-5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Cognitive <2SD	0	1	0	0	0	1	0	2	0	2	0	0	1	0	0	1	8
Cognitive <3SD	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
No. with hearing aids but not severe hearing impairment	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
No. with severe hearing impairment	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
No. with SAL impairment	1	1	0	2	1	2	2	4	1	5	2	0	0	0	0	1	22
No. with severe SAL disability	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	4
No. with visual impairment not corrected with glasses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

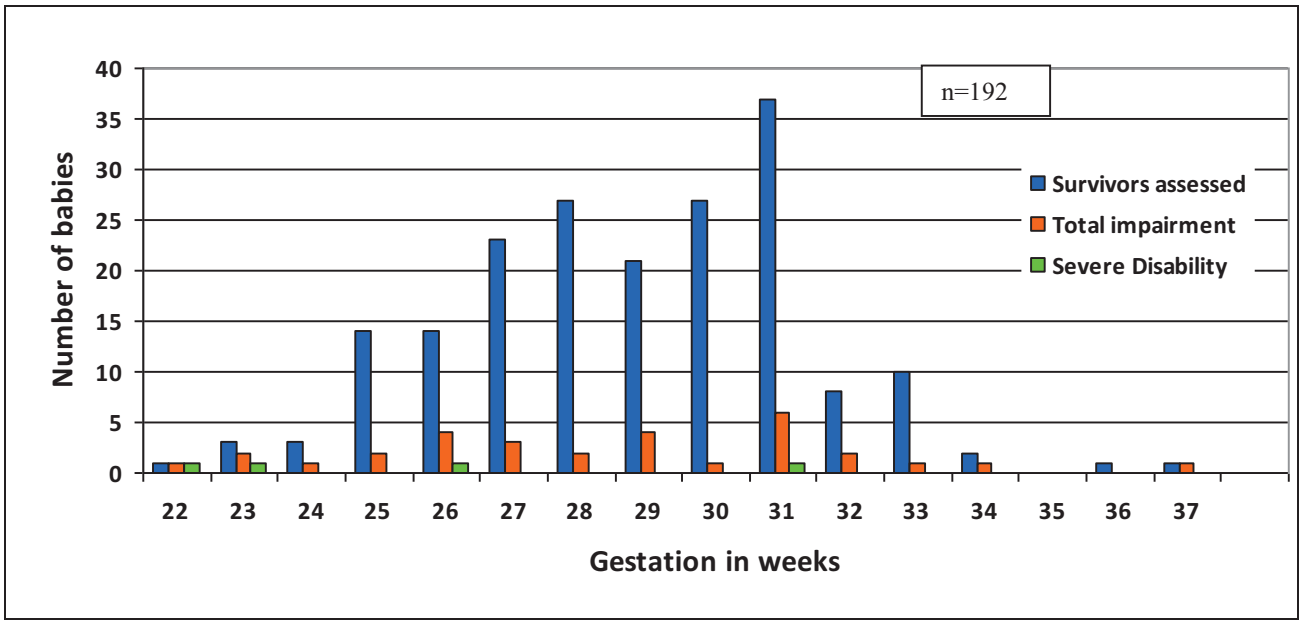
Overall outcome (2006-2008) (<32 weeks or <1500 grams at birth): (% admitted for intensive care)



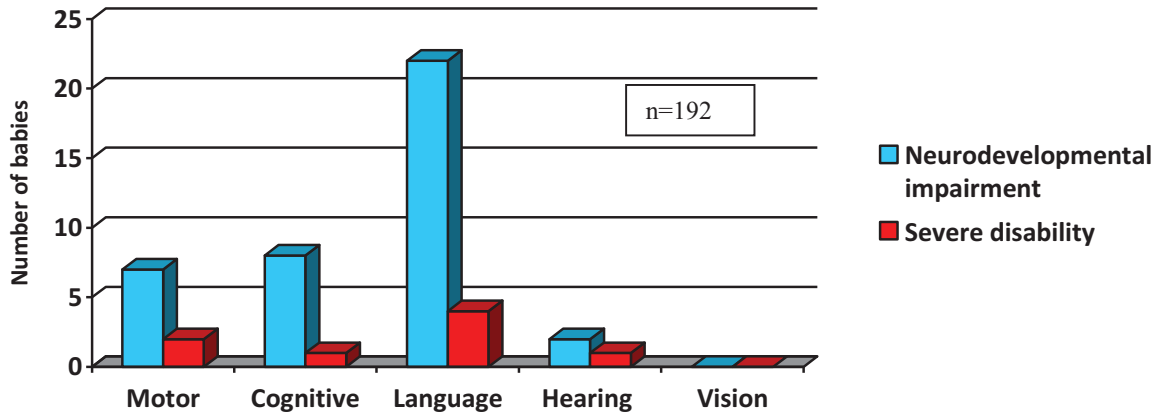
Cumulative outcome in survivors assessed at 2 years CGA (%) (2006-08) (n=192)



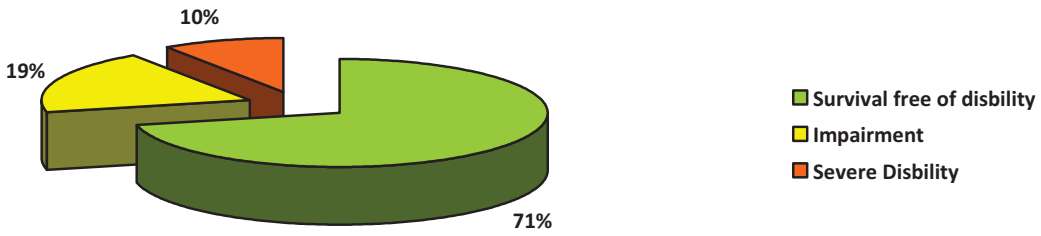
Disability in survivors assessed by gestation (2006-2008):



Pattern of Impairment or Disability (2006-2008): (A few babies had more than one domain of involvement)



Cumulative outcome in survivors assessed in extremely preterm (22-25 weeks) (2006-08)



Other Health Outcomes in survivors assessed: (2006-2008) (n=192)

System	Morbidity in survivors assessed - No. (%)	Description of morbidities identified (number of children)
Congenital Malformations	11 (5.7)	Cardiac (5), Hypospadias (2), Duplex kidneys, Amniotic bands, Absent radius and thumb, Left lung sequestration
Respiratory	35(18.2)	Hyperactive airway (wheezy), poor exercise intolerance, tracheostomy (1)
Gastrointestinal and Nutrition	16(8.3)	Constipation, Poor growth, GORD, Gluten free diet (1)
Neurology other than CP	5 (2.6)	Ventricular reservoir (1), Seizure (3) - 2 febrile convulsions, 1 idiopathic; Down's syndrome
Hearing	3 (3.8)	Moderate loss fully corrected (2) Severe loss - not fully correctable (1)
Vision	0 (0)	7 babies had some issues - refractive errors requiring glasses but fully correctable , squint, nystagmus, astigmatism

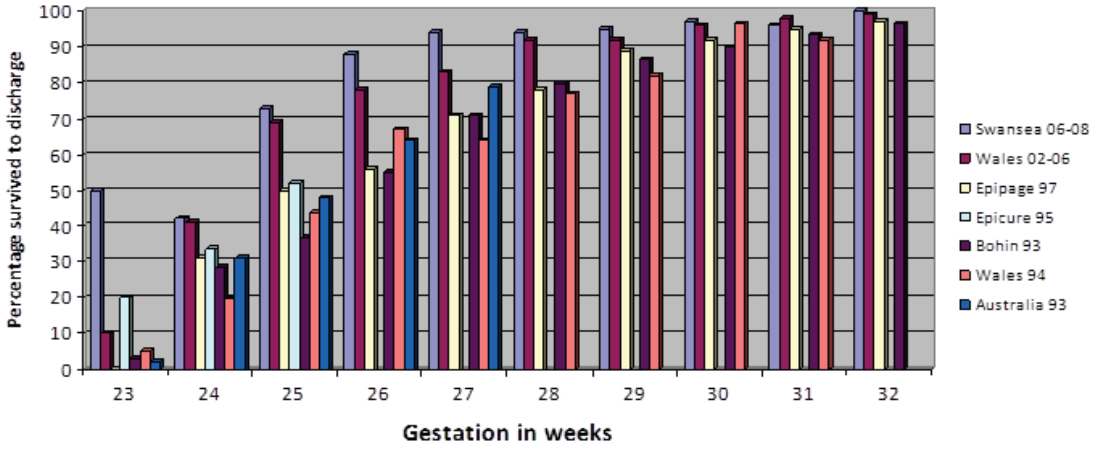
Involvement of specialist therapist at 2 years CGA (2006-2008):

- 46 babies (22.8%) were considered eligible for referral to therapists
- 10 already with multidisciplinary Child Development Team (CDT)
- 31 referrals to Speech and Language Therapist (SALT) (16.5%)
- 7 referred to physiotherapist, 3 referred to dietitian

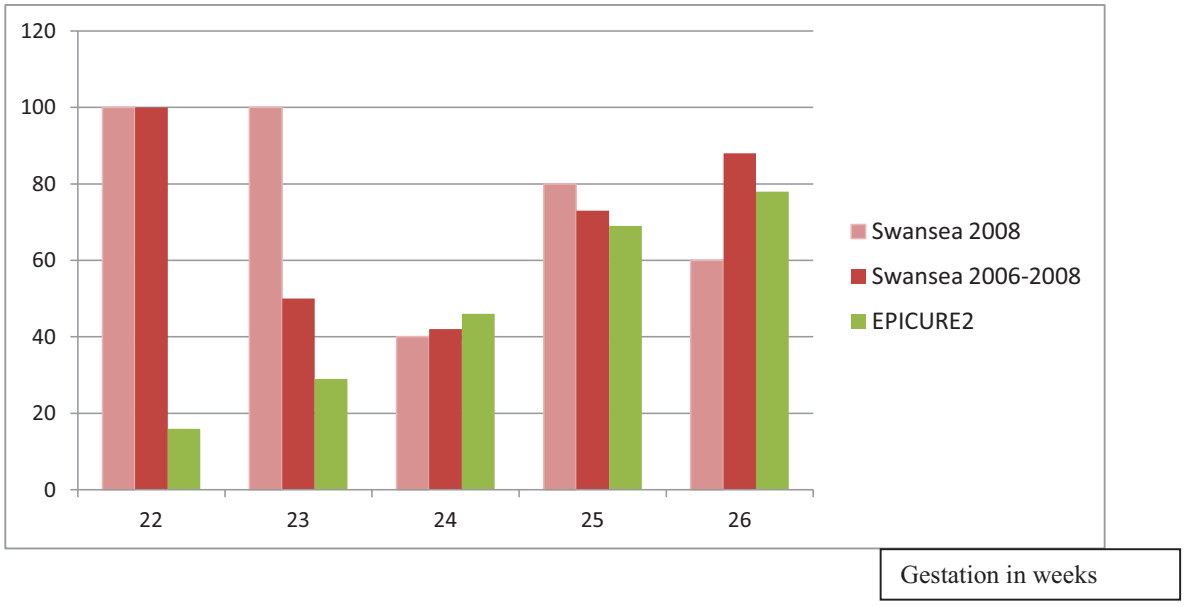
Neurodevelopmental Outcomes

Outcome of babies admitted to intensive care in 2006-2008

Survival by gestation at discharge:



Survival by gestation at discharge (% admitted for intensive care)



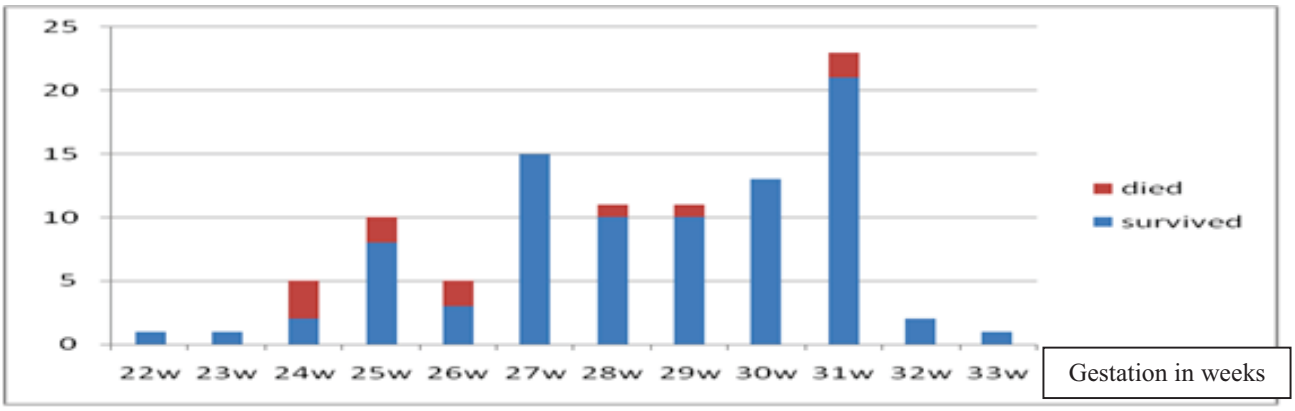
Long term outcomes of extreme prematurity (2-4 years of age)

Outcome	Swansea 2006-2008	Epicure 1995	Minnesota 1986-2000
Time of assessment	24 months	30 months	47.5 months
Survival free of disability	71%	49%	63%
Moderate disability	19%	24%	17%
Severe disability	10%	24%	20%

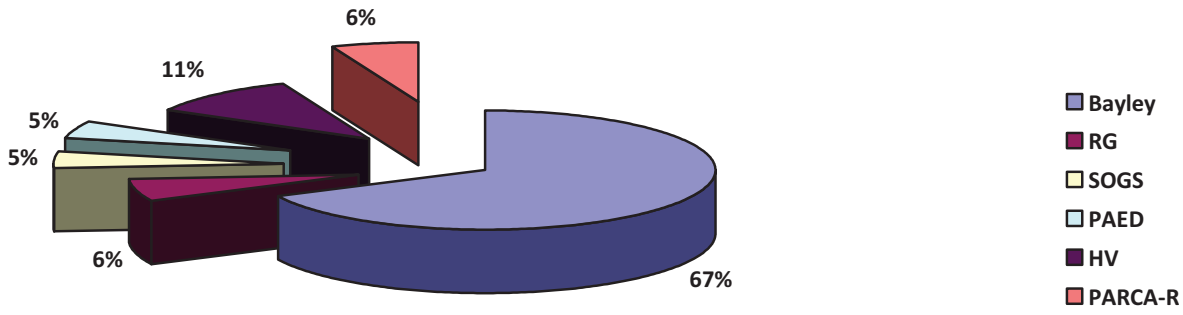
Health Outcome data for babies admitted for intensive care in 2008 (<32 weeks OR <1500gms)

Outcome	Number (%)
Admitted for intensive care	98
Survived to discharge	87(88.8%)
Survived at 2 years corrected age	87(88.8%)
Contactable (% of surviving children)	65(74.7%)
Information available	65(74.7%)
Death or Disability at 2 years CGA (% admitted for intensive care)	22 (22.4%)
Total Neurodevelopmental Impairment at 2 years CGA (% of children assessed)	11 (16.9%)
Neurodevelopmental Impairment only (NDI) (% of children assessed)	9(13.8%)
Severe neurodevelopmental disability (SND) (% of children assessed)	2(3 %)
Survival free of Neurodevelopmental Impairment (% of children assessed)	54 (83.0%)

Survival at 2 years by gestation (2008):



Type of assessments (2008):



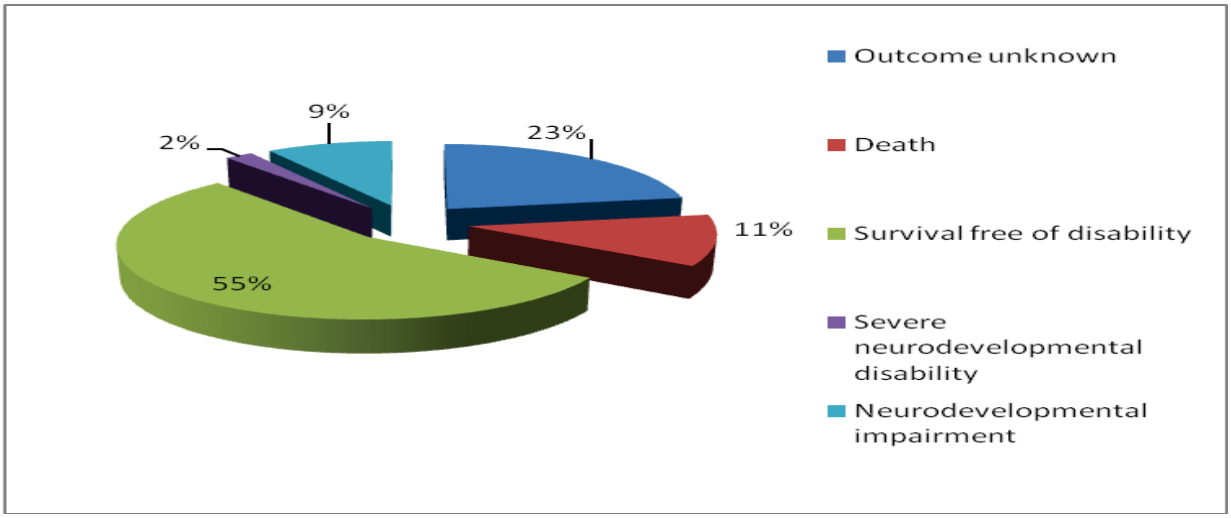
Outcome by gestation 2008:

Gestational age at birth	22w	23w	24w	25w	26w	27w	28w	29w	30w	31w	32w	33w	34w	35w	36w	37w	Total
Number of admissions for intensive care	1	6	12	26	26	32	35	39	37	56	10	13	2	1	1	1	298
No.(% admissions) of survival to discharge	1(100)	3(50)	5(42)	19(73)	23(88)	30(94)	33(94)	37(95)	36(97)	54(96)	10(100)	13(100)	2(100)	1(100)	1(100)	1(100)	269
No. of deaths between discharge and 2 yrs of age	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	3
No.(% admissions) of survivors at 2 yrs	1(100)	3(50)	4(33)	19(73)	23(88)	29 (91)	33(94)	36(92)	36(97)	54(96)	10(100)	13(100)	2(100)	1(100)	1(100)	1(100)	266
No.(%) of survivors where information available for outcome at 2 yrs	1(100)	3(100)	3(75)	14(74)	14(61)	23(79)	27(82)	21(58)	27(75)	37(69)	8(80)	10(77)	2(100)	0(0)	1(100)	1(100)	192
No(% of admission) of Death or Neurodevelopmental Impairment	1 (100)	5(83)	9(75)	9(35)	7(27)	6(19)	4(11)	7(18)	2(5)	8(14)	2(20)	1(7)	1(50)	0(0)	0(0)	1(100)	63
No. (% of survivors evaluated) of Neurodevelopmental Impairment (SND + NDI)	1(100)	2(67)	1(33)	2(14)	4(29)	3(13)	2(7)	4(19)	1(4)	6(16)	2(20)	1(10)	1(50)	0(0)	0(0)	1(100)	31
Neurodevelopmental impairment(NDI) only (% of survivors evaluated)	0(0)	1(33)	1(33)	2(14)	3(21)	3(13)	2(7)	4(19)	1(4)	5(13)	2(20)	1(10)	1(50)	0(0)	0(0)	1(100)	27
Severe neurodevelopmental disability(% of survivors evaluated)	1(100)	1(33)	0(33)	0(0)	1(7)	0(0)	0(0)	0(0)	0(0)	1(3)	0(0)	0	0(0)	0(0)	0(0)	0(0)	4

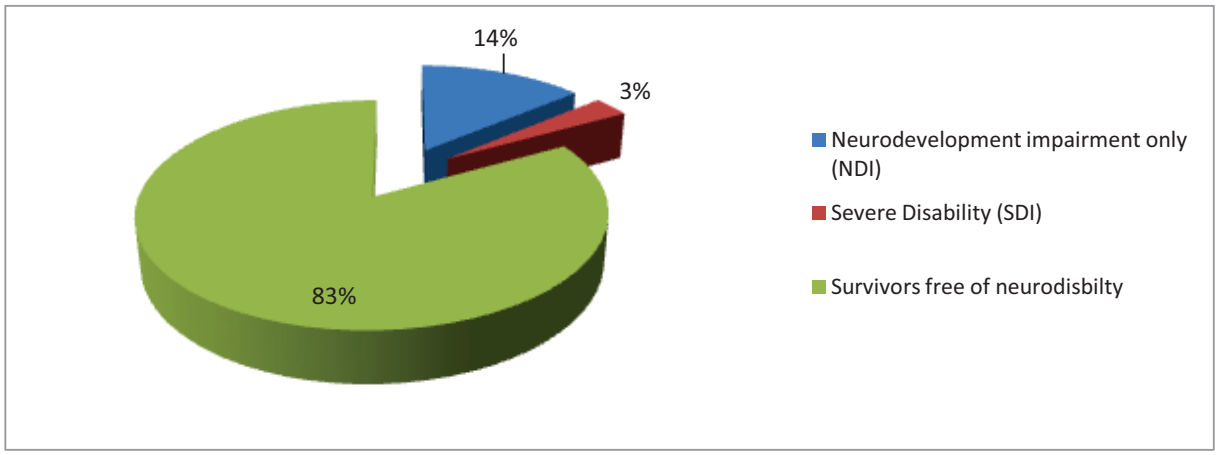
Pattern of impairment / disability at 2 years for 2008: Total No. of babies 11 (16.9%)

Gestational age at birth	22w	23w	24w	25w	26w	27w	28w	29w	30w	31w	32w	33w	34w	35w	36w	37w	Total
No. with definite CP	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	4
Motor delay GMFCS 2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
Motor delay GMFCS 3-5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cognitive <2SD	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Cognitive <3SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. with hearing aids but not severe hearing impairment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. with severe hearing impairment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. with SAL impairment	1	0	0	1	1	2	0	3	0	1	0	0	0	0	0	0	9
No. with severe SAL disability	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
No. with visual impairment not corrected with glasses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

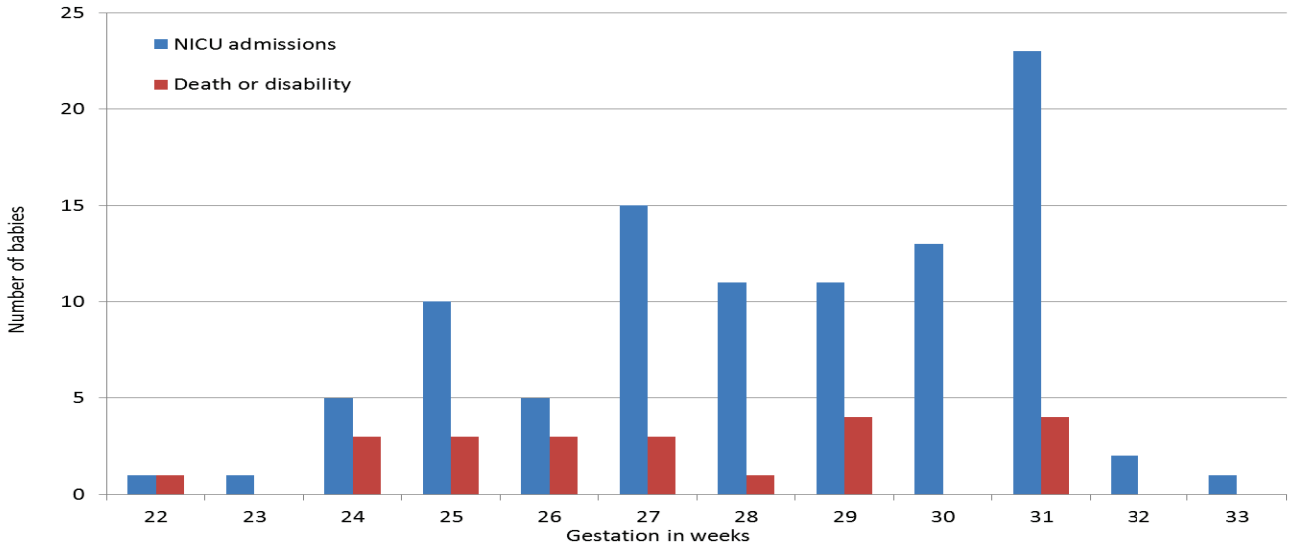
Overall Outcome (2008) (<32 weeks or <1500 grams at birth): (% admitted for intensive care)



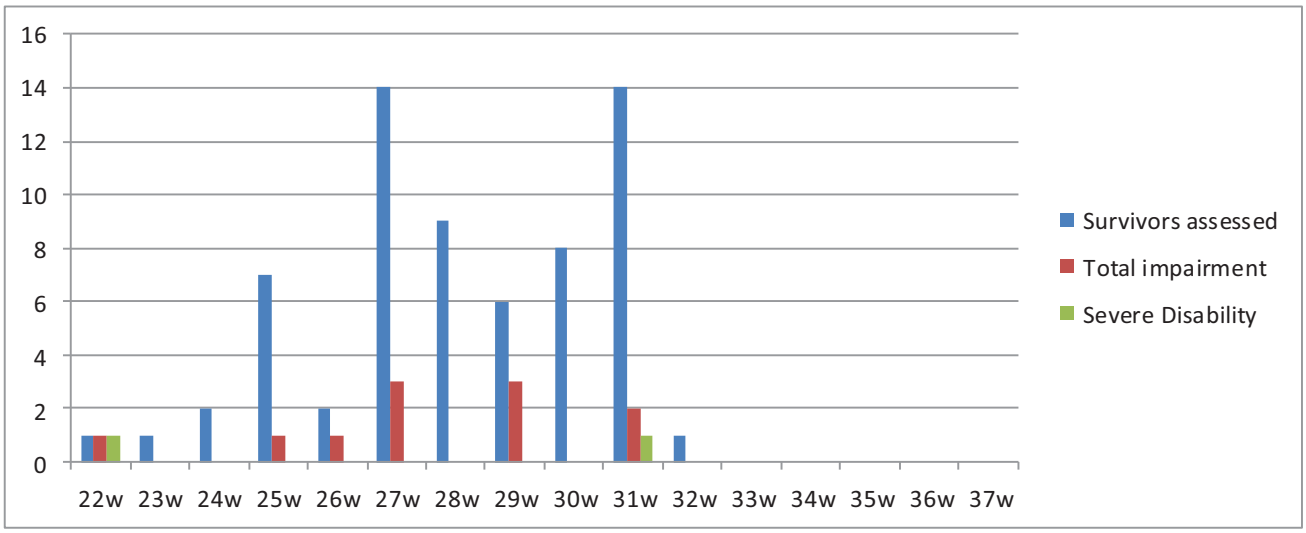
Outcome in survivors assessed at 2 years CGA (%) (2008) (n=65)



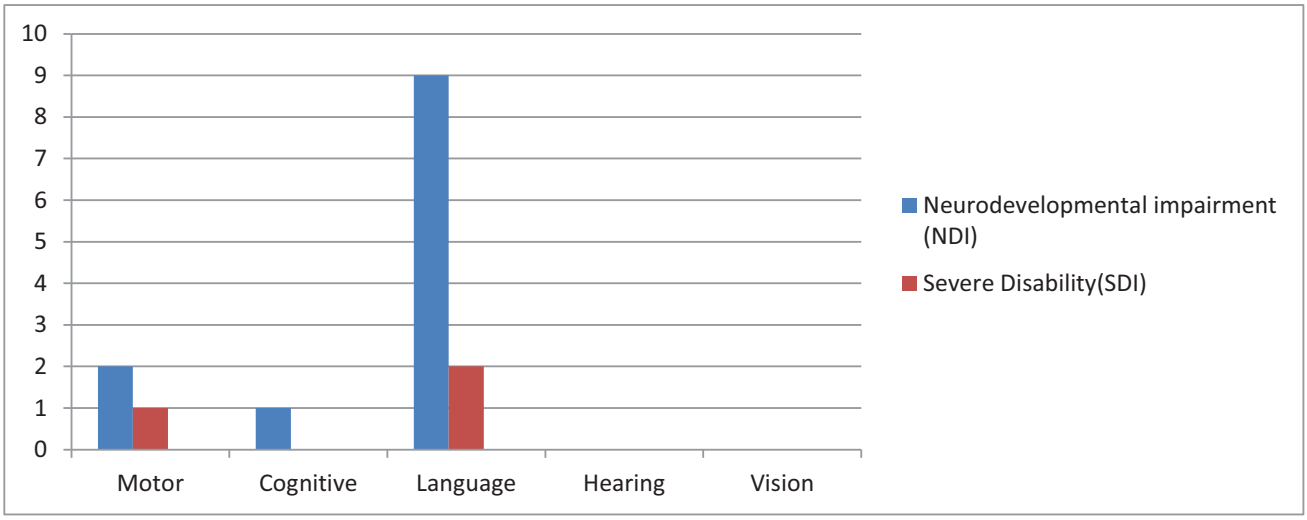
Outcome 2008: death or disability by gestation



Disability in survivors assessed by gestation (2008):



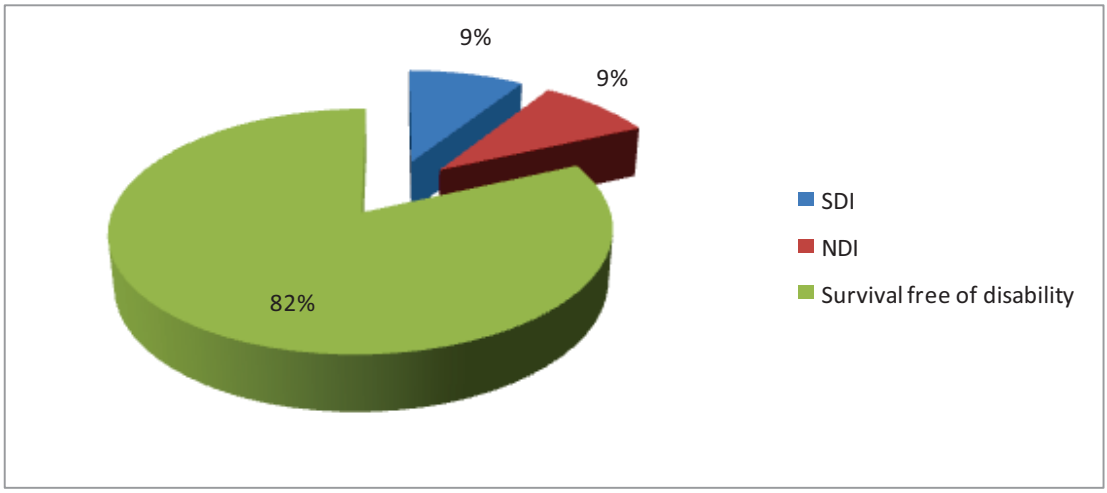
Pattern of Impairment or Disability (2008):



Developmental domain scores (2008)

Domain	Mean	Median	Standard Deviation
Cognitive	102.93	105	15.58
Language	95.2	94	12.8
Motor	100.7	100	14.41

Outcome in survivors assessed in extremely preterm (22-25 weeks) (2008)



Other Health Outcomes in survivors assessed: (2008) (n=65)

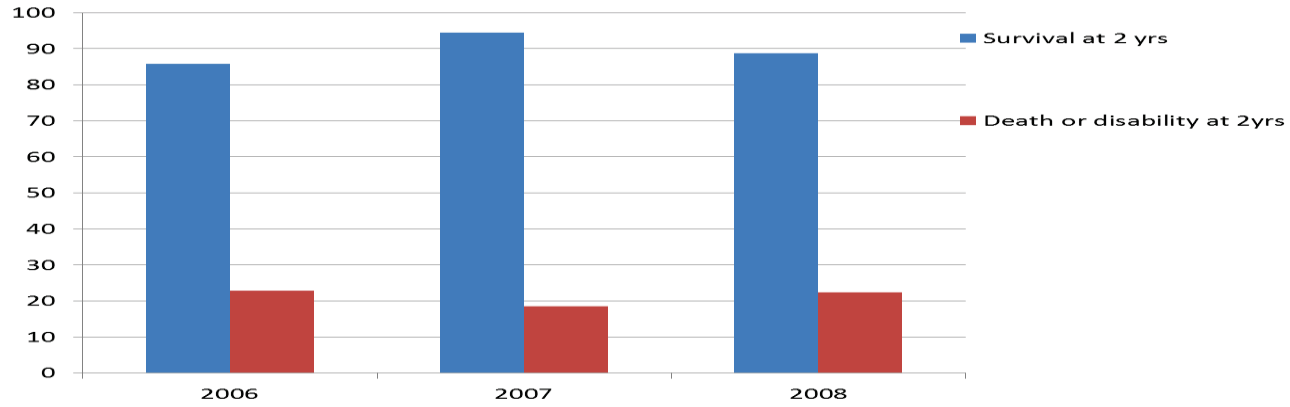
System	Morbidity in survivors assessed - No. (%)	Description of morbidities identified (number of children)
Congenital Malformations	5(7.7)	Hypospadius, ASD, Tetralogy of Fallot, WPW syndrome, Left lung sequestration
Respiratory	12(18.5)	Hyperactive airway (wheezy), poor exercise intolerance
Gastrointestinal and Nutrition	2(3%)	Poor growth
Neurology other than CP	1(1.5)	Down's syndrome
Hearing	0 (0)	None
Vision	0 (0)	Squint (2)

Involvement of specialist therapists at 2 years CGA (2008):

- 17 eligible for referral to therapists
- 5 already with CDT
- 3 referrals to physiotherapist
- 10 referred only to SALT
- 1 referred to dietician
- 3 referred to ENT
- 2 referred to occupational therapists

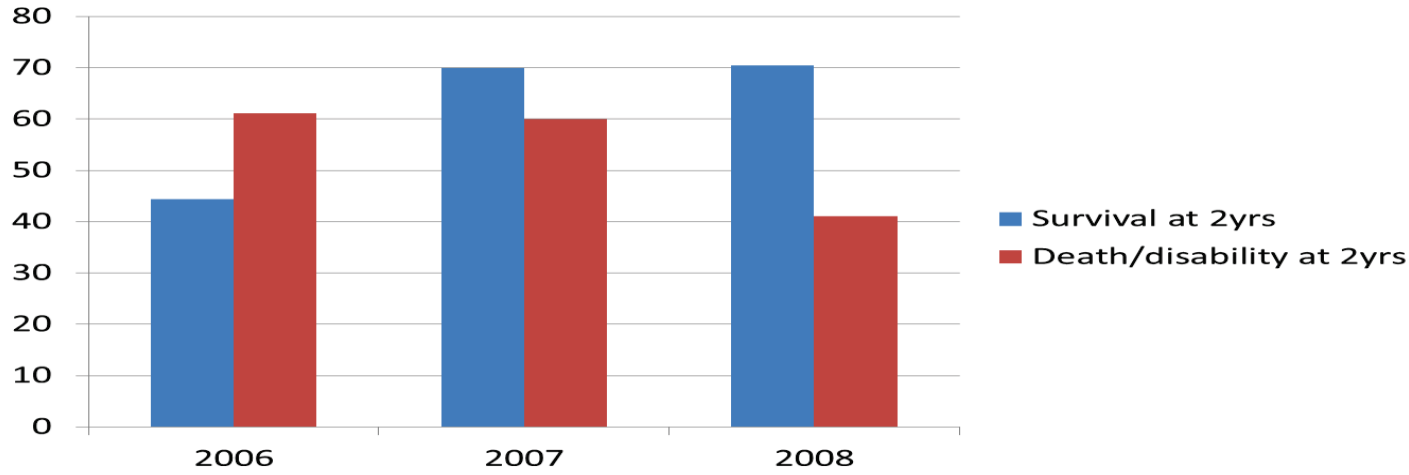
Singleton experience in <32 wks/ 1.5 kg bw

Survival and death/disability rate (% of NIC adm)



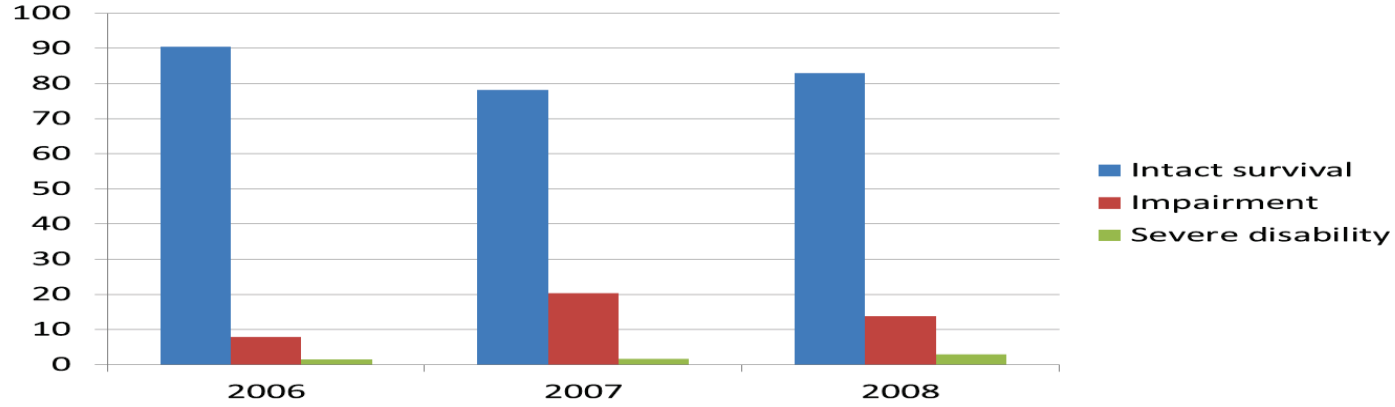
Singleton experience in extreme prematurity <26 wks

Survival and death/disability rate (% of NIC adm)

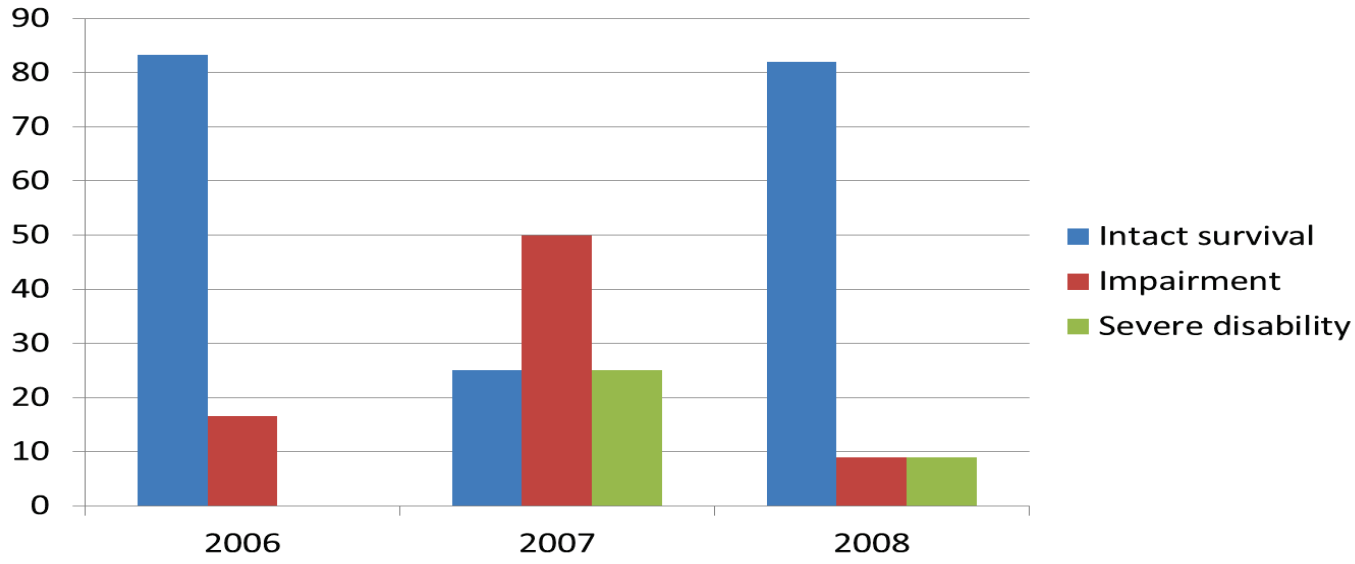


Singleton experience in <32 wks/ 1.5 kg bw

Outcome (% of survivors assessed)



Singleton experience in extreme prematurity <26 wks
Outcome (% of survivors assessed)



Conclusions

- Survival is 89% (% admitted for intensive care) in this high risk cohort of <32 wks/1.5 kg bw
- Majority of survivors do well – 83% disability free survival in the above group
- 22.4% of this high risk group either died or had some degree of neurodevelopmental impairment
- Composite outcome of death or disability has remained fairly consistent over the last three years: around 20% with minor variations in the above group
- Around 70% survival in <26 wks, improved from 2006 (45%)
- Death or disability rate in <26wks is falling: from around 60% in 2006-2007 to 41% in 2008
- Combined death or disability falls sharply after 26 weeks gestation
- Extreme prematurity group - cumulative long term outcome is comparable and possibly better than EPICURE
- Language delay is the commonest domain of abnormality at 2 years followed by motor impairment. One might argue that assessment of cognitive domain is difficult at this age
- Major visual impairment is rare
- Respiratory morbidity (18.5%) is very common in survivors.

Swansea Neonatal Transfer Service

Dr. Sujoy Banerjee, Sister Marcia Jordan

Background:

The Swansea Neonatal Transfer Service was operational for several years as an ad-hoc specialist service from its base at Singleton Hospital. It ceased operation in January 2011, when newborn transfer service in Wales was taken up by the dedicated CHANTS service. During its operational years, the 'Swansea Neonatal Transport Team' managed retrievals to Singleton Hospital of newborns requiring 'step up' intensive care from level 1 and level 2 units across South West Wales The team also managed transfer of babies from Singleton Hospital who required specialist surgical, cardiac and other tertiary level services. It also provided a 'step down' service where babies who no longer require intensive care at Singleton Hospital were transferred back to their home units.

The service was provided by a team of trained neonatal nurses and neonatal middle grade doctors and supervised by the on call neonatal consultant for the unit. The generic Welsh Ambulance Service Vehicles were used for neonatal transfer. The service was led locally by Dr. Sujoy Banerjee, Consultant Neonatologist, and Sister Marcia Jordan. This was an ad-hoc service with no dedicated personnel or funding and medical and nursing staff were provided 'off floor' from the unit to facilitate transfer of ill newborns.

The team had two dedicated neonatal transfer equipment systems built and developed in-house with support from the Medical Physics Department. The equipment could provide full intensive care on transport including mechanical ventilation, CPAP and facilities for intensive monitoring.

Regular training sessions on neonatal transport and equipments were provided in-house as part of the neonatal teaching schedule. Clinical data on transport was recorded on pre-designed medical and nursing transfer forms that then formed part of the clinical notes. Essential data points were entered on to a database as per the BAPM Neonatal Transport Minimum Dataset. Annual audits were undertaken to evaluate efficiency and safety of this service and published as part of the unit's annual report. Anonymised data was submitted every year to the UK Neonatal Transport Interest Group to benchmark our service outcomes with other dedicated neonatal transfer teams across the U.K.

Activities in 2010:

Teams undertaking neonatal transfers:

Team	Total Numbers
Transfer - Any team	**193**
Singleton Team	**133**
Other Hospitals	**59**
Specialist Team (ECMO)	**1**

Transfers undertaken by Singleton Team:

Retrievals	**36**
Transfer Outs	**24**
Local Transfers	**25**
Back Transfers	**48**
Total	**133**

Hospitals from where unplanned step up retrievals undertaken (Singleton Team) (All Intensive care transfers):

Hospitals	No. of Babies
Haverfordwest	**7**
UHW	**0**
Bridgend	**16**
West Wales General	**5**
Aberystwyth/Bronglais	**5**
Bristol	**0**
Merthyr	**0**
Morriston	**1**
Royal Glamorgan	**2**
TOTAL	**36**

All transfers into the unit 2010

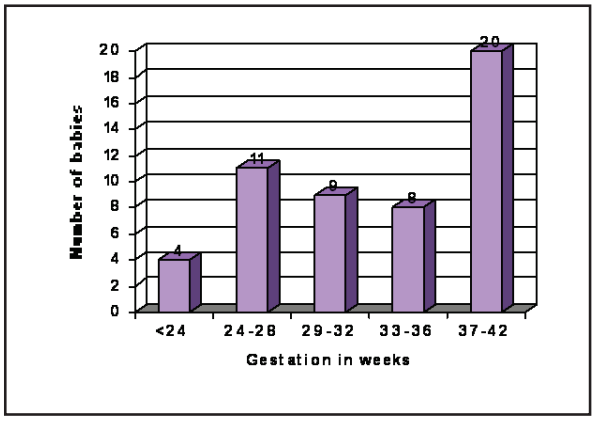
By Place	No. of Transfers	Transferred By	
		Singleton	Other
Bridgend	20	15	5
Bristol	13	1	12
Bronglais, Aberystwyth	5	5	0
Glangwili (WWG, Carmarthen)	5	5	0
Leicester	1	0	1
Morriston	13	13	0
Neath Port Talbot	2	0	2 (Paramedic)
Royal Glamorgan	2	2	0
Royal Gwent, Newport	1	0	1
UHW	17	5	12
Withybush, Haverfordwest	8	7	1
TOTAL:	**87**	**53**	**34**

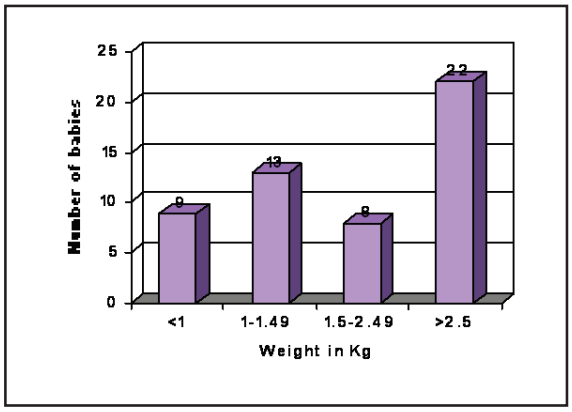
All transfers out of the unit 2010

By Place	No. of Transfers	Transferred By	
		Singleton	Others
Basildon	1	1	0
Bridgend	27	18	9
Bristol	8	4	4
Glangwili (WWG, Carmarthen)	10	7	3
Leicester	1	0	1
Morriston	18	18	0
Oxford	1	0	1
Prince Charles, Merthyr	2	2	0
Royal Glamorgan	1	1	0
Shrewsbury	1	0	1
UHW	20	19	1
Withybush, Haverfordwest	12	8	4
Worcester	2	0	2
TOTAL:	**104**	**78**	**26**

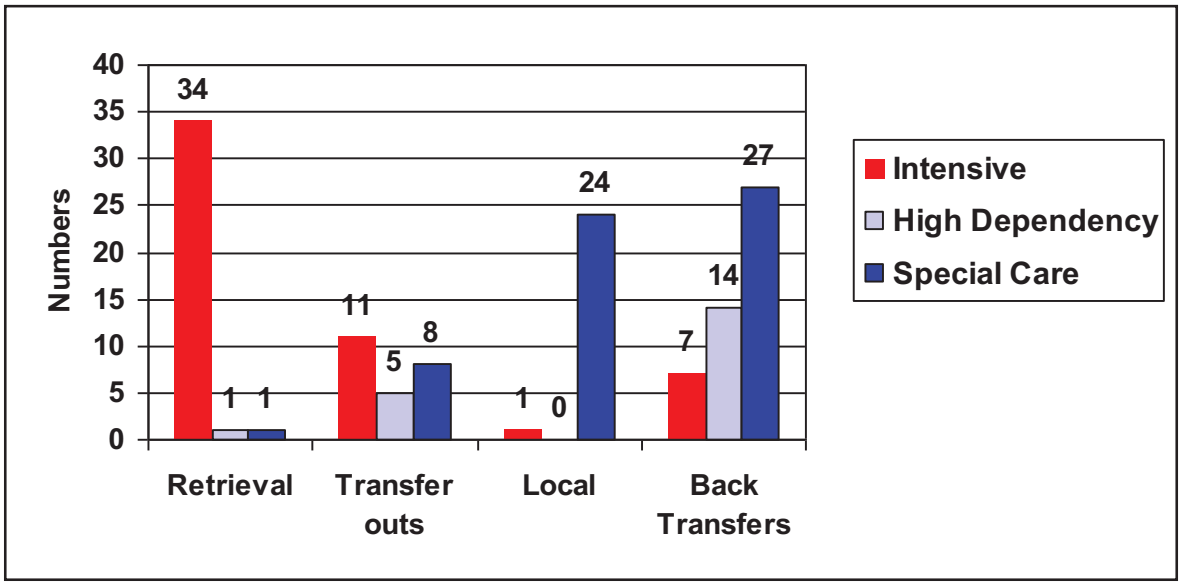
- Care withdrawn in one case in referring hospital before transfer was completed. This is included in statistics.
- Two babies were transferred by Singleton Team between centres other than Singleton Hospital.

Demographics: Gestation and Birth weight (Unplanned by Singleton Team) 2010

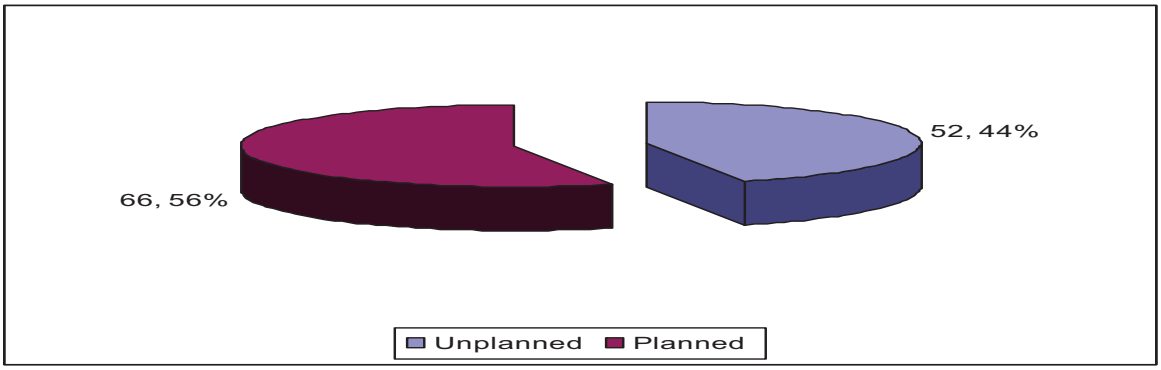




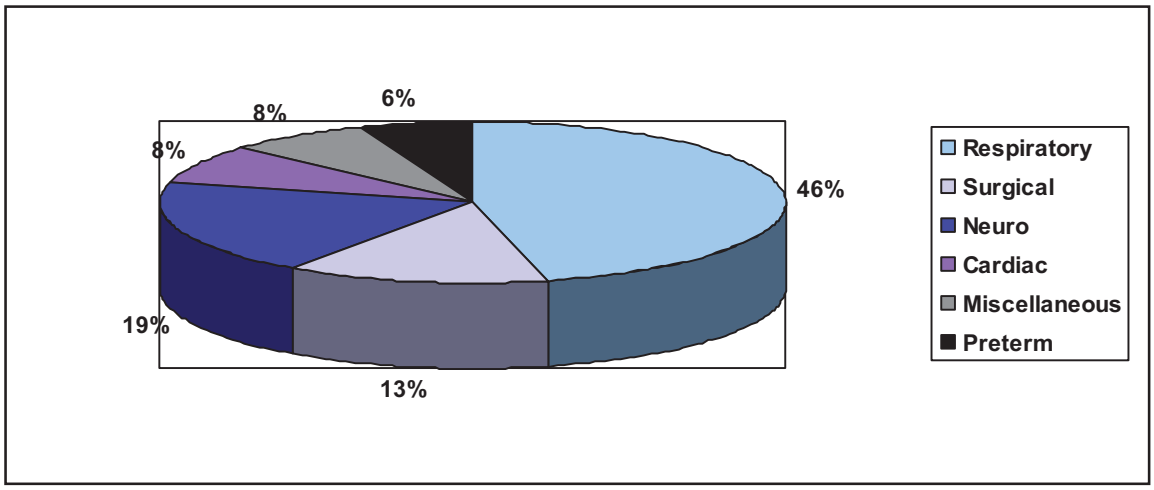
Intensity of care on transport (All Transfers by Singleton Team):



Type of Transfer:

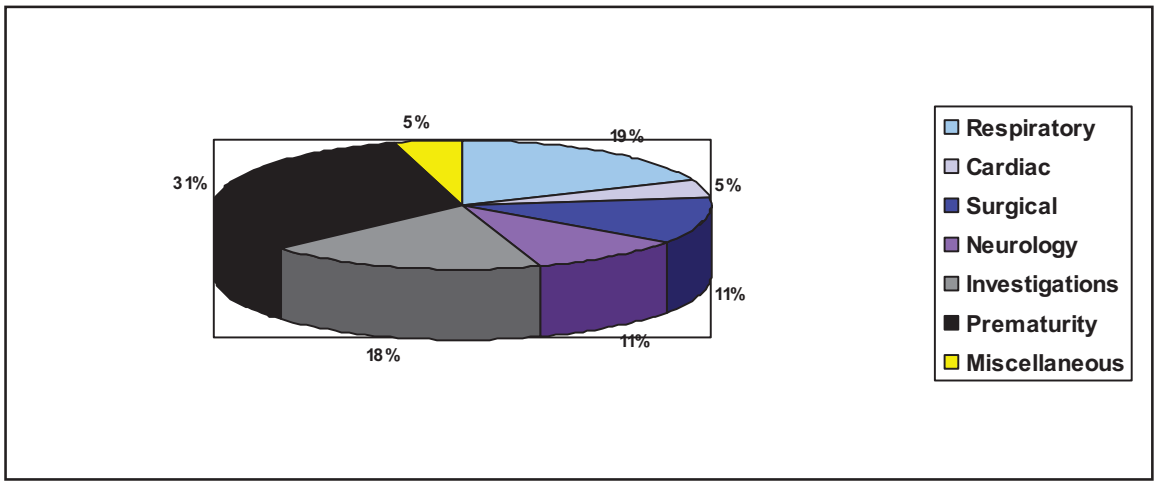


Diagnosis at Transfer (Unplanned transfers by Singleton Team):

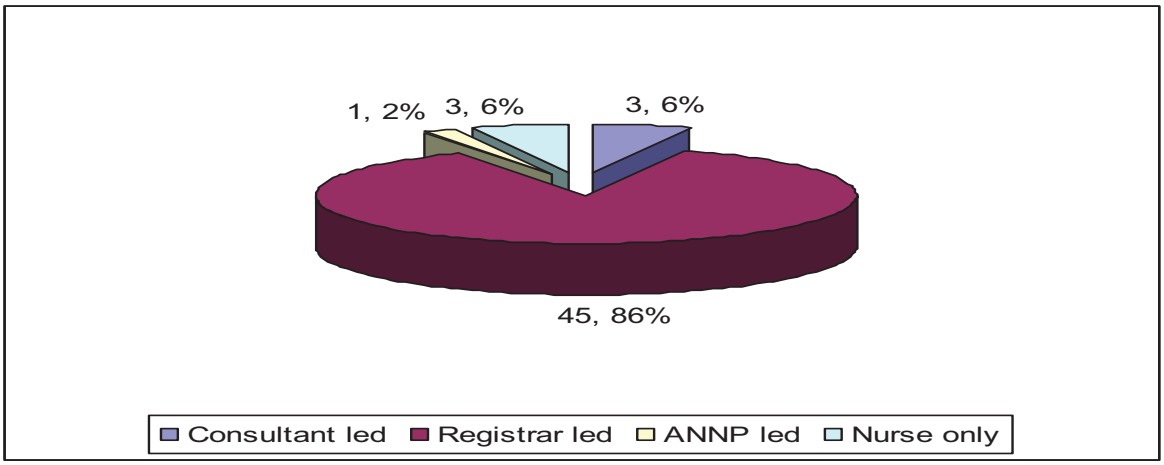


** Acute Capacity reason – 5, HIE 10 (Therapeutic hypothermia 6)

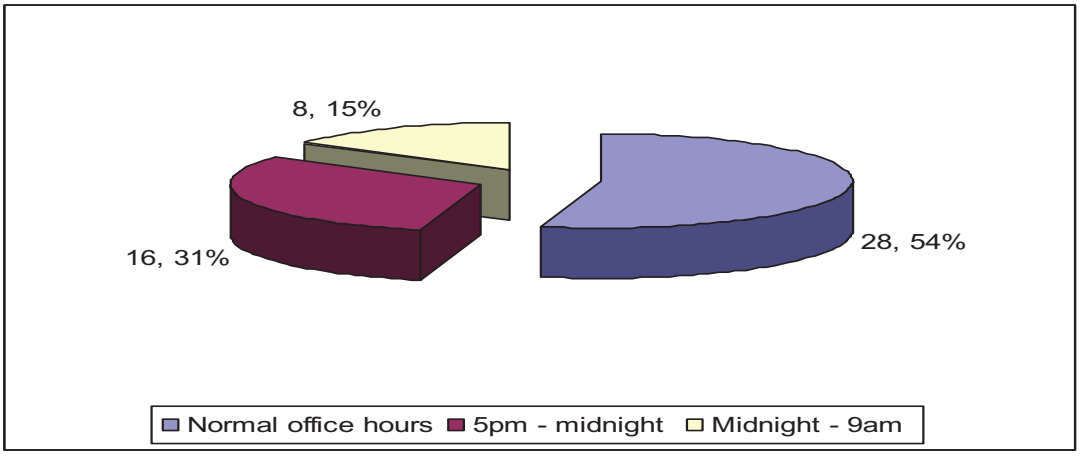
Diagnosis at Transfer (All Transfers by Singleton Team)



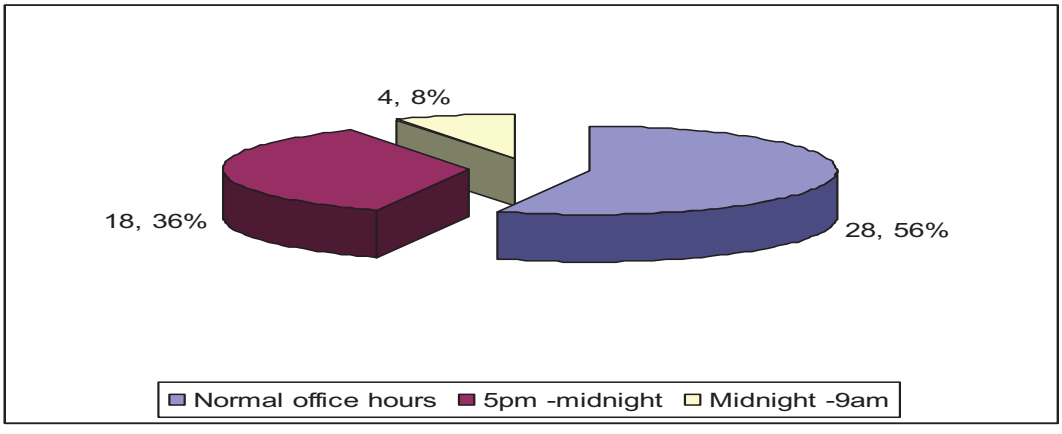
Composition of team (Unplanned transfers by Singleton Team):



Time of referral (Unplanned):

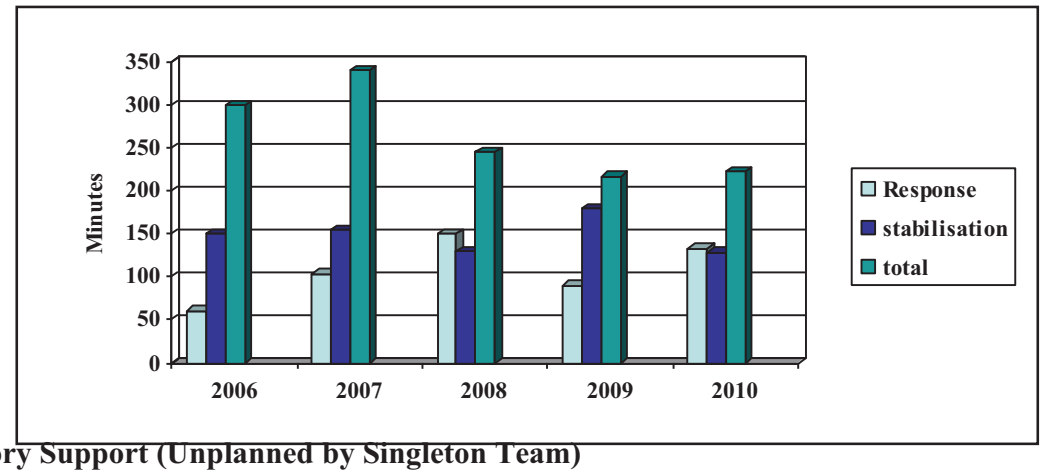


Time of Despatch (Unplanned):

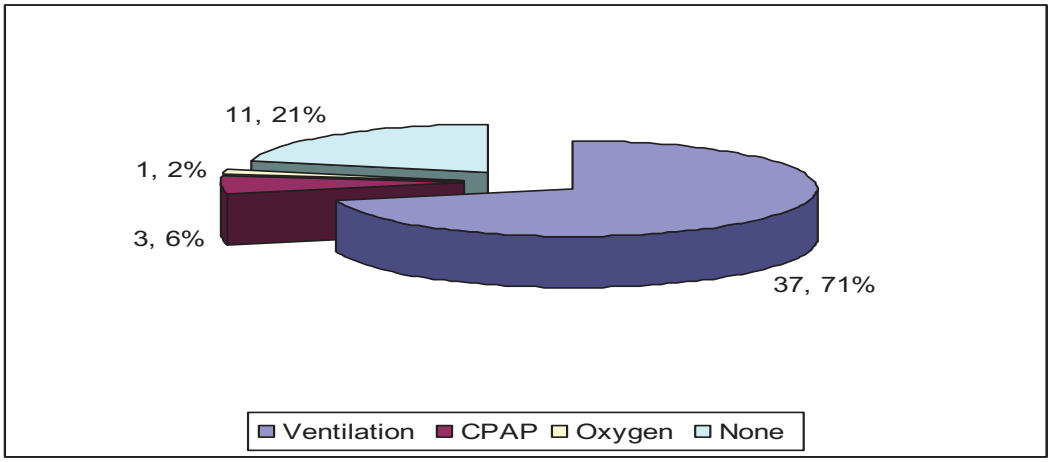


**** Missing data 2**

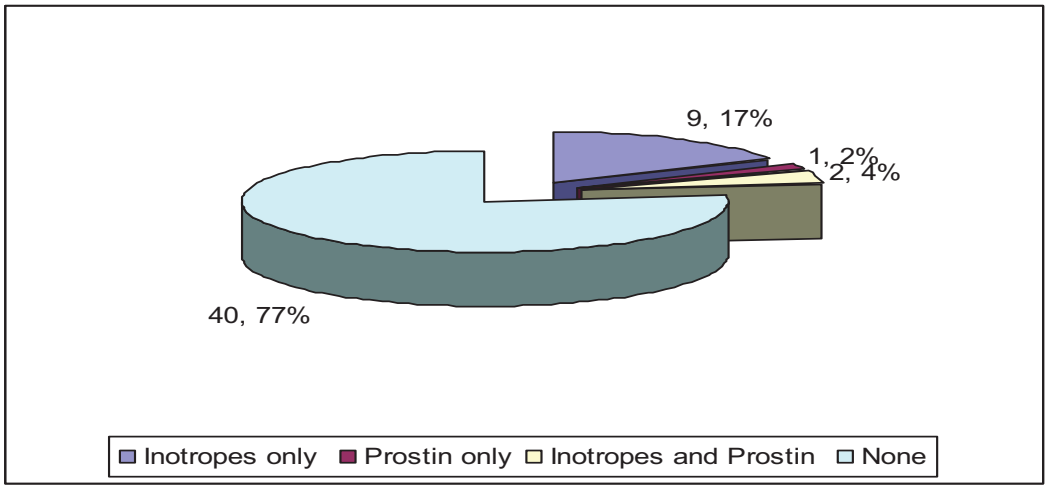
Transfer Times:



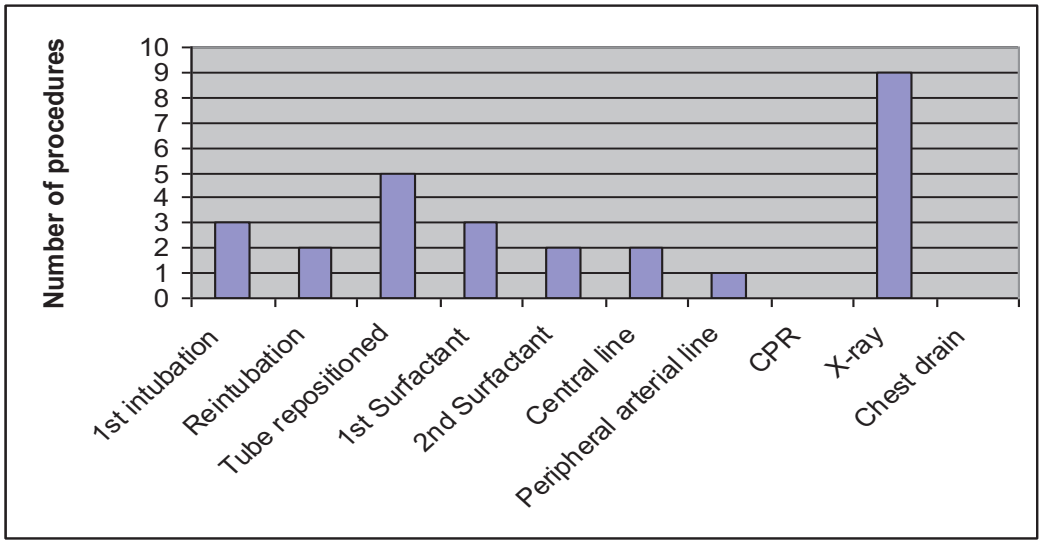
Respiratory Support (Unplanned by Singleton Team)



Cardiovascular Support (Unplanned by Singleton Team):



Major Clinical Procedures by Transport Team (Unplanned):



Adverse incidents:

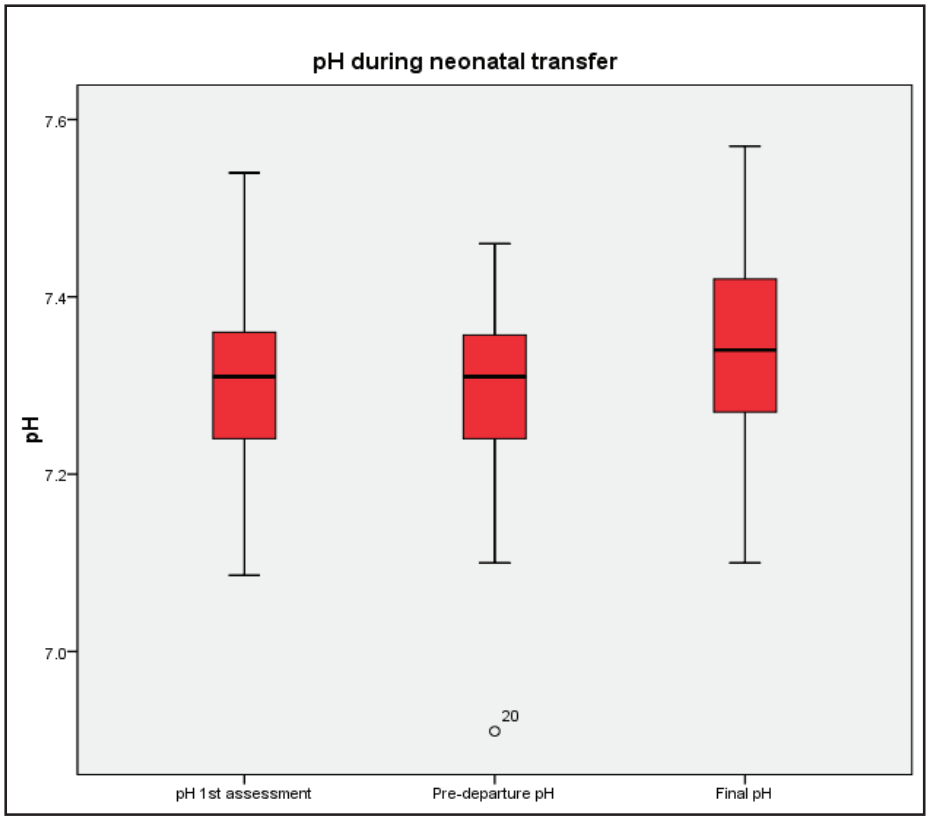
Clinical:

- 1 death at referring hospital – Severe HIE deteriorated – Not retrieved
- 1 unintended hypothermia (34.8C, Retrieved from A&E, Arrival Temp 29C, Difficult airway 29/40 weeks gestation)
- 6 out of 52(13.4%) unplanned cases developed temperature >37.5C
- 4 babies had temperature ≥ 38C , Maximum temperature during transfer 38.7 C – 1 related to prostin
- 1of 6 babies transferred for therapeutic hypothermia had inadequate temperature monitoring and was too warm on arrival
- UVC dislodged in referring hospital (2)

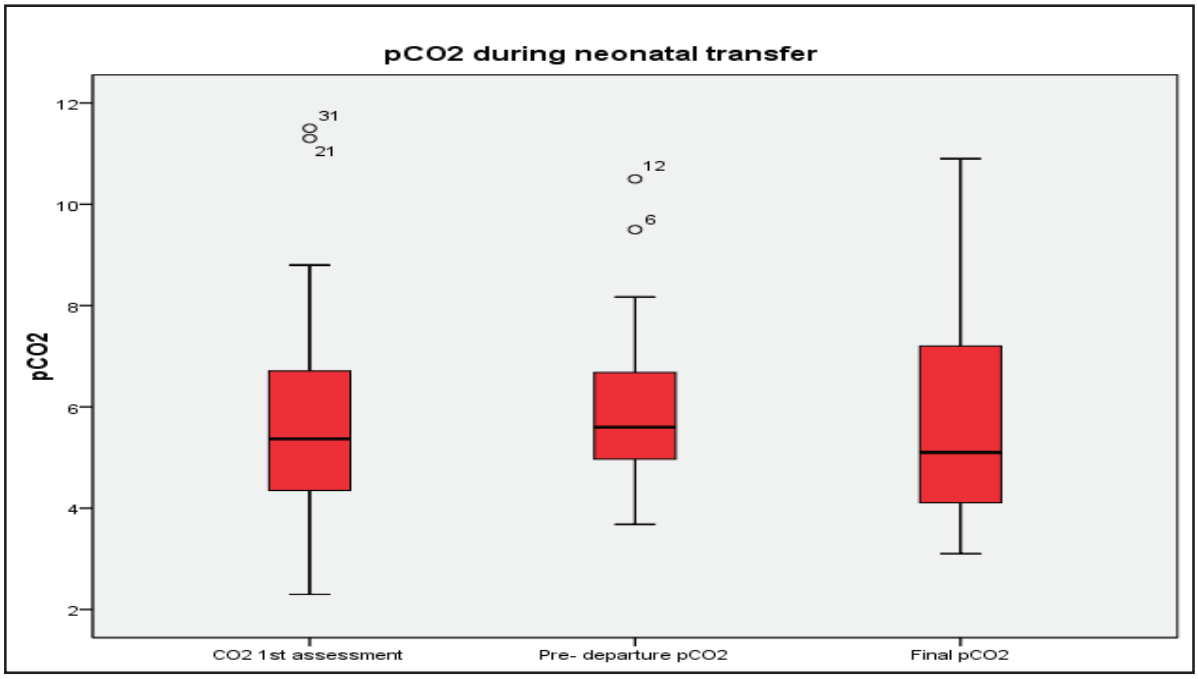
Technical:

- Ambulance power issues – loose connection, one requiring restarting the engine
- Ambulance suspension failure
- Wrong ambulance, delay with ambulance for elective transfers
- No harm in any case

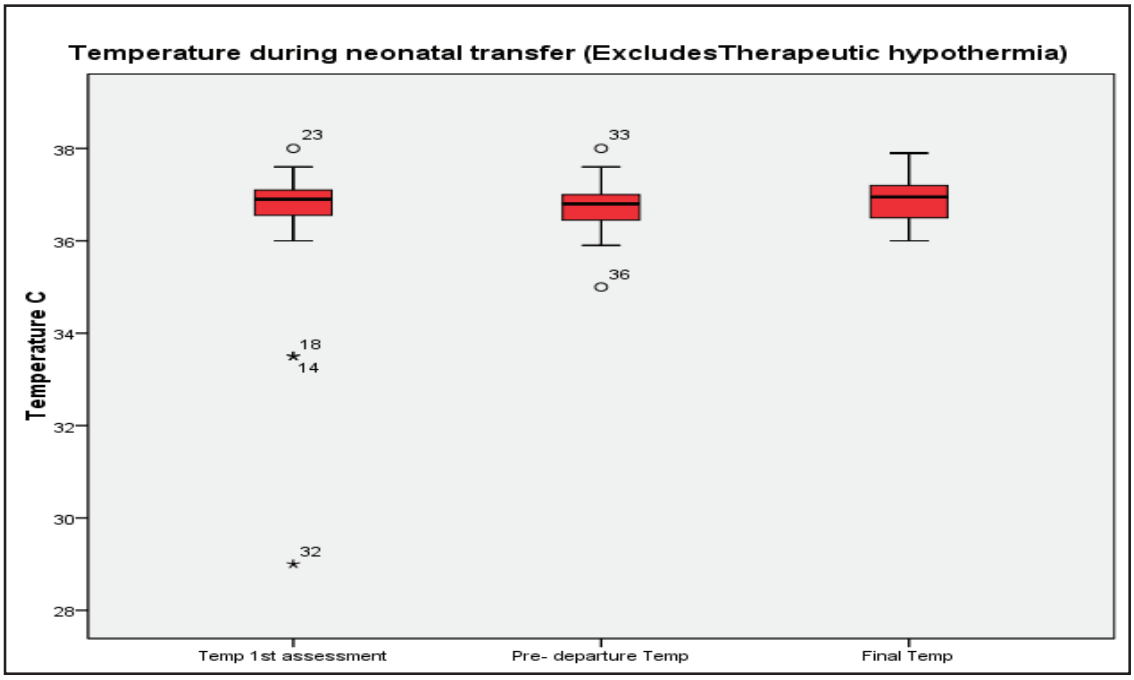
Ph during transfer:



CO_2 during Transfer



Temperature during transfer (excluding therapeutic hypothermia)



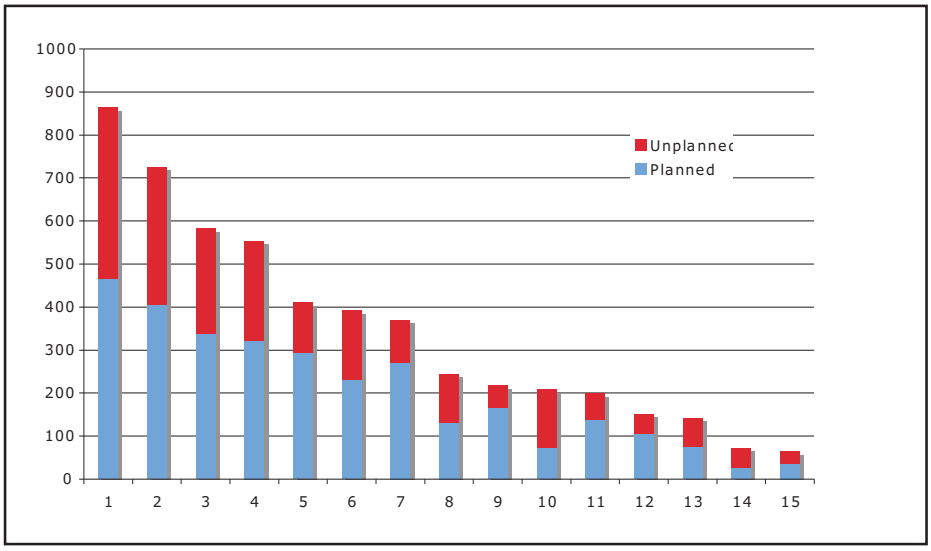
** **Only 2 of the 6 babies undergoing passive cooling reached target temperature before arrival to treatment centre.**

Benchmarking

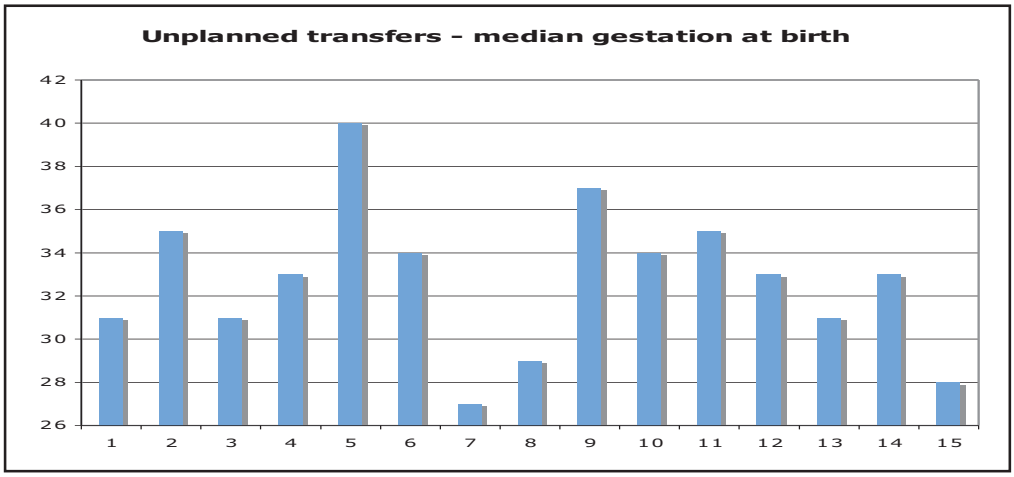
Anonymised data for the **first six months of 2010** was submitted to the UK Neonatal Transport Interest Group for benchmarking outcomes with other established and dedicated neonatal transport teams. Swansea Neonatal Transfer Team compared favourably with other UK teams. Differences in despatch and transfer times, gestation of babies transferred and type of respiratory support on transfer could be explained by geography and composition of local neonatal units as well as reliance on generic ambulance services for retrievals. Swansea neonatal transfer team is represented by No.15 in the following graphs.

	Planned	Unplanned	Total
1 London	54%	46%	864
2 West Midlands	56%	44%	727
3 KSS	58%	42%	582
4 ANTS	58%	42%	553
5 Embrace	72%	28%	411
6 Greater Manchester	59%	41%	392
7 Scotland W	73%	27%	369
8 CenTre	54%	46%	244
9 Cheshire & Mersey	77%	23%	218
10 NR NCL	35%	65%	209
11 Scotland SE	69%	31%	199
12 Scotland N	70%	30%	151
13 Lancs & Sth Cumbria	53%	47%	143
14 Middlesbrough	37%	63%	73
15 Swansea	55%	45%	64
	59%	41%	5199

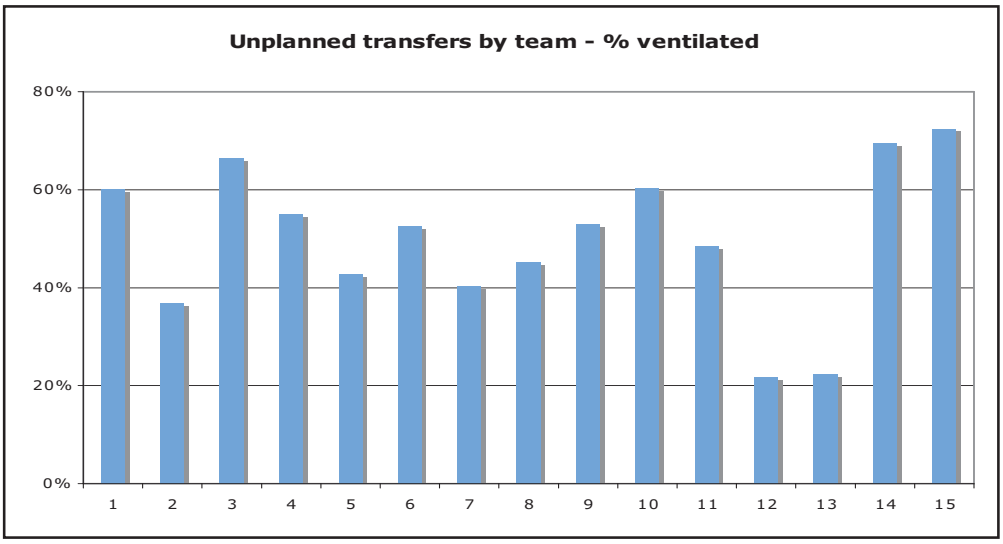
Transfer by type (Planned and unplanned)



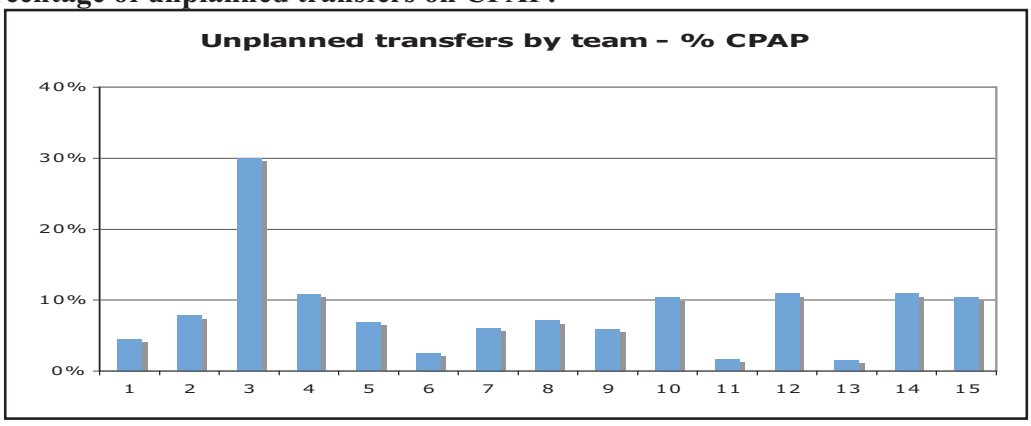
Median gestation at birth by teams (Unplanned Transfers)



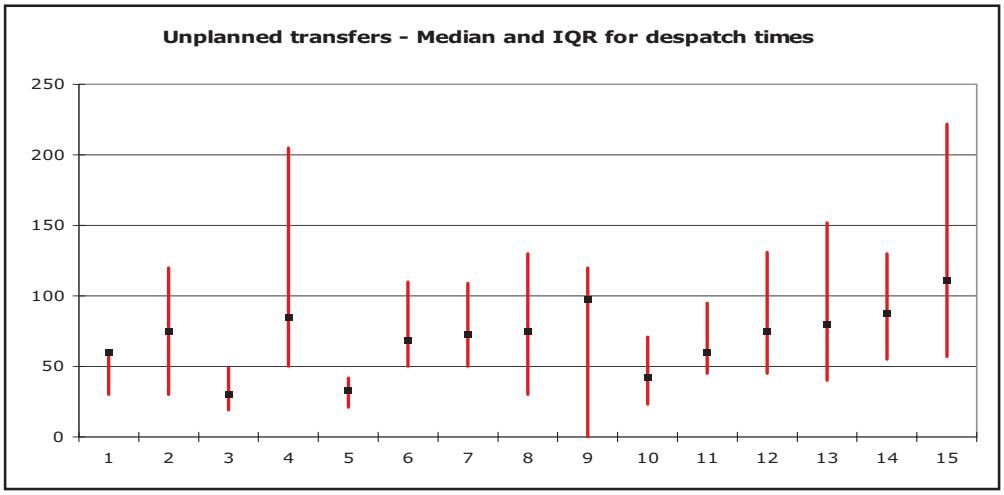
Percentage of unplanned transfers on ventilator:



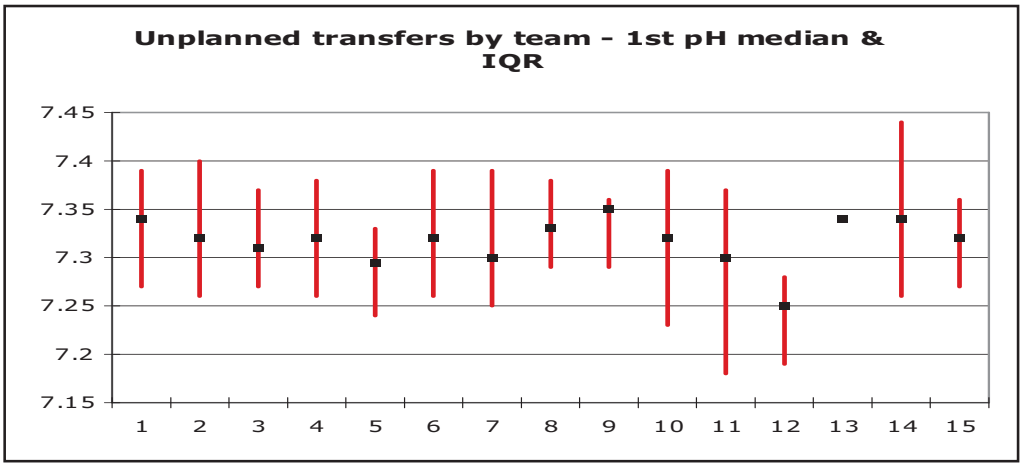
Percentage of unplanned transfers on CPAP:



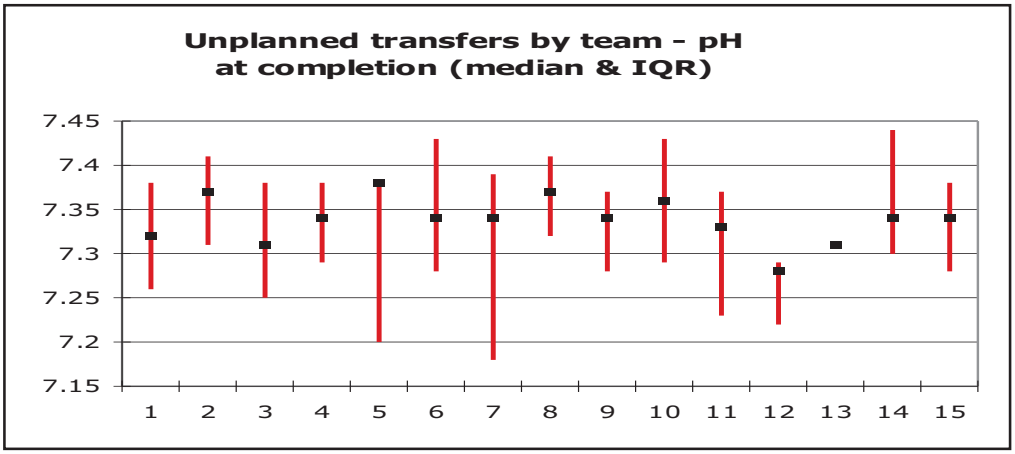
Despatch times by teams (Unplanned Transfers)



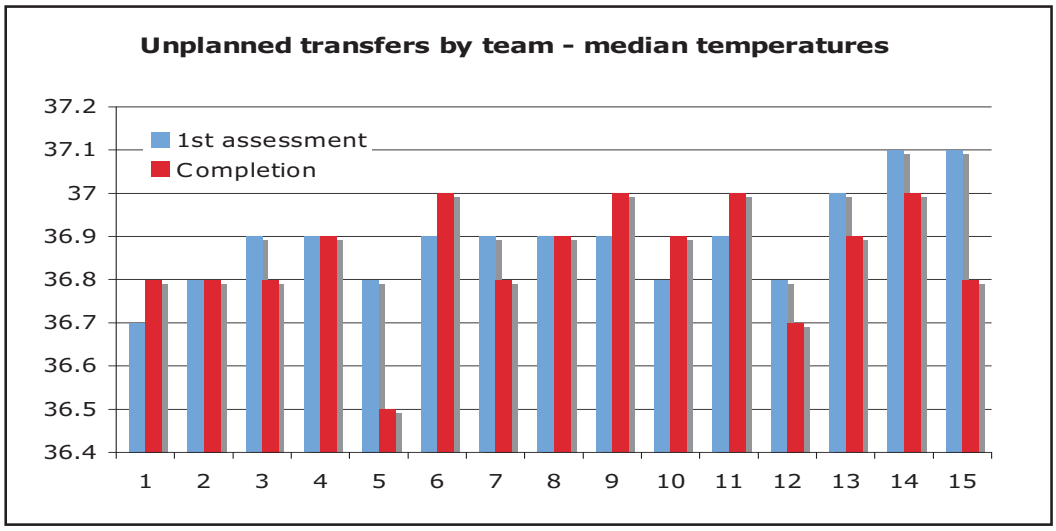
pH at first assessment (Unplanned Transfers)



pH on completion (Unplanned transfers)

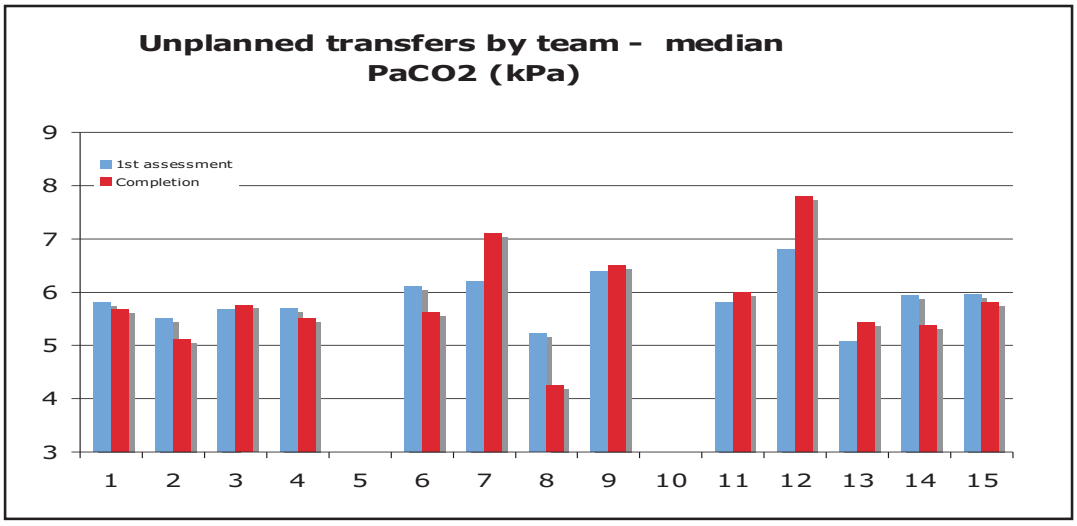


Temperature on transport (Unplanned Transfers excluding therapeutic hypothermia)



Doubling of referral due to HIE – 60% of HIE referred cooled

pCO2 on transport (Unplanned transfers)



Conclusions:

- The ad-hoc Swansea Neonatal Transfer Service was safe during its operation but created strain on the staffing levels of the neonatal unit. It was mainly a registrar/nurse delivered service. Majority of transfers were undertaken during office hours and rest usually by midnight.

- It benchmarked favourably on clinical parameters with dedicated neonatal transfer teams across the UK.

- The differences in despatch times and respiratory support on transfer were influenced by the geography and composition of the local neonatal units as well its reliance on the generic ambulance service.

- There is scope to improve the effectiveness of passive cooling during transfer for therapeutic hypothermia. Inadvertent hyperthermia in 13% of babies should be avoided.

CONSULTANTS

Dr. Jean Matthes	MB, BCh, MD, FRCP, FRCPCH, Consultant Neonatologist
Dr. Carol Sullivan	BM, BCh, MA, FRCP, FRCPCH, Consultant Paediatrician
Dr. Geraint Morris	MB, BCh, MRCP (UK), MRCPCH, Consultant Paediatrician
Dr. Sujoy Banerjee	MBBS, DCH, MD, MRCP (UK), MRCPCH, Consultant Neonatologist
Dr. Maha Mansour	MB, BCh, MRCP (UK), MRCPCH, Consultant Neonatologist
Dr. Arun Ramachandran	MBBS, MD, MRCPCH, Consultant Neonatologist

REGISTRARS

February 2010 - August 2010

Malini Ketty
Suresh Gowda
Amit Kandhari
Huma Mazhar
Jatin Mistri
Arun Sadasivam
Shreedhar Nittur

September 2010 - February 2011

Malini Ketty
Suresh Gowda
Alok Sharma
Rebecca Balfour
Jatin Mistri
Jamie Evans
Danladi Abubaker

ADVANCED NEONATAL NURSE PRACTITIONERS

Clare Barrow
Kate Richards

SENIOR HOUSE OFFICERS

February 2010 - August 2010

Lekshmy Prasad
Rebecca Balfour
Rachel Morris
Rasna Singh
Angeles Torres
Sarika Goel
Shabeena Hayat

September 2010 - February 2011

Arshdeep Bhatti
Francesca Morgan
Jaya Parasuraman
Lekshmy Prasad
Ankita Jain
Gemma Trays

NURSING STAFF

8A Grade Wendy Davies (WTE 1)

Band 7

Janette Allen	(WTE 1.0)	Angela Pieniazek	(WTE 1.0)	Katie Swain	(WTE .60)
Dawn Jones	(WTE .96)	Claire Price	(WTE 1.0)	Lynwen Tregembo	(WTE .64)
Marcia Jordan	(WTE .88)	Gail Smith	(WTE .80)	Sheila Waters	(WTE 1.0)
Helen James	(WTE 1.0)				

Band 6

Name	WTE	Name	WTE	Name	WTE
Flordeliza Auro	1.0	Sarah Lewis	.96	Heather Snow	.40
Rhian Bevan	.64	Sarah Lewis	.64	Karen Taylan	1.0
Vicky Burrage	1.0	Melani Gabales	1.0	Pat Taylor	.64
Llinos Cox	1.0	Hayley Michael	.64	Joanne Thomas	.80
Karen Davies	.72	Elsie Quimpan	1.0	Helen Radford	.72
Sue Davies	.96	Ruth Morgan	.60	Rhian Vaughan	.40
Deborah Griffiths	.92	Deborah Owen	.50	Deborah Verbeck	.96
Sarah Hughes	.64	Catrin Phillips	.72	Marie Whiles	.64
Debra Jones	.80	Gaynor Poptani	.80	Allison Lewis	1.0
Gaynor Jones	.96	Diane Roberts	.40	Julie Williams	.96
Val Jones	1.0	Lil Saunders	.80	Deborah Joseph	.64
Julia Kennedy	.96	Anne Seward	1.0		

Deborah Owen (WTE .50) - Research Nurse
Karyn Phillips (WTE.80) - Practice Development Nurse - Neonatal
Gemma Davies (WTE 1.0) - ANNP Secondment

Band 5

Name	WTE	Name	WTE	Name	WTE
Jocelyn Bermudez	1.0	Anne Richards	.32	Siân Hughes	.64
Jessica Beynon	.80	Jo Honey	1.0	Gemma Fortte	1.0
Sharon Birch	.64	Madge Williams	.53	Zoe Jesssop	.96
Claire Evans	1.0	Rebecca Heaney	1.0	Sue Edwards	1.0
Gemma Martin-Dyer	1.0	Stephanie Cannell	1.0	Marcia Halfpenny	1.0
Shelly Morris	.60	Nia NcNeil	1.0	Liz Kift	1.0
Caroline Szulik	1.0	Rhiannon Jago	.80	Holly Morgan	1.0

Band 4

Name	WTE	Name	WTE
Cheryl Tobin	.48	Sharon Phillips	.64
Rebecca Salisbury	1.0	Gemma Dyer	1.0
Emma Renshaw	.80		

Cheryl Tobin (WTE .48) - Community Secondment

NURSING STAFF

Name	WTE	Neonatal Modules	NLS Certified	Additional Qualification
ANNPs				
Clare Barrow	1.0	Yes	Yes	R.G.N.R.M A19, B.Sc. in Neonatology M.Sc. in Philosophy & Ethics in Health Care, Clinical Leaders Course, Transport Course, Generic Instructors Course, Teaching & Assessing/998 Mentorship (5 days) Research and Critical Thinking Counselling courses
Kate Richards	1.0	Yes	Yes	BSc (Hons) in Neonatal Studies. Research & Critical Appraisal. RGN. R.N. Adult. RM. Teaching in Clinical Practice M.Sc. in Advanced Clinical Practice (pending). Mentorship Managing in Healthcare Healthcare informatics
BAND 8A				
Wendy Davies	1·0	Yes	Yes	R.G.N. R.M. Teaching & Assessing/998 ENB 405 Cert. of Professional Practice Clinical supervision Research & Critical Appraisal. Management Supervisory Skills. Open University Course P553 "A Systematic Approach to Nursing Care".

BAND 7				
Sheila Waters	1.0	Yes	Yes	R.G.N. R.M. P.G.C.E Cert. Ed. M.Sc. in Health Promotion Management Course Transport Course, ANNP Teaching & Assessing/998 Module 9 Training, Research & Critical Thinking, P.G.C.E.
Gail Smith	.8	Yes	Yes	R.N. Child R23 Clinical Leaders Course Teaching & Assessing Empower Ward Sisters
Janette Allen	1·0	Yes	Yes	S.R.N. S.C.M. BA in Humanities Teaching & Assessing/998 Research & Critical Thinking
Marcia Jordan	·88	Yes	Yes	R.G.N. R.M. Generic Instructor Course (NALS) Teaching & Assessing Research & Critical Appraisal Supervisor Management 1 + 2 Common Core Neonatal Transport Course
Dawn Jones	·96	Yes	Yes	R.G.N. S.E.N. Women in Management Teaching & Assessing/998 Legal & Professional Issues in Health Care Neonatal Transport Course
Angela Pieniazek	1.0	Yes	Yes	R.G.N. R.M. Common Core. Clinical Leaders Course Teaching & Assessing/998 Law in Healthcare. Management (Diploma)
Katie Swain	·60	Yes	Yes	R.G.N Clinical Leaders Course Transport Course Teaching & Assessing/998 1 day mentorship Communication/HIV Assertiveness courses IV Cert

BAND 7 (Con't)				
Lynwen Tregembo	.64	Yes	Yes	S.E.N. R.G.N. R.M. Diploma in Nursing M.Sc. in Nursing with Research & Critical Thinking Teaching & Assessing/998 Clinical Supervision Course Diploma in Supervisory/ Management. Neonatal Transport Course
Claire Price	1.0	Yes	Yes	R.G.N. R.S.C.N. Advanced Diploma in Child Development. B.A. (Hons) Humanities. Transport Course Teaching & Assessing Research & Critical Thinking
Cheryl Morgan	1.0	Yes	No	R.G.N., R.S.C.N., B.Sc. Community Teaching & Assessing Research & Critical Thinking Mentorship
BAND 6				
Flordeliza Auro	1.0	Yes	Yes	R.G.N. B.Sc. in Nursing Transport Course Mentorship (5 days) S.C.B.U./H.D.U. Neonatal Module
Rhian Bevan	.64	Yes	Yes	R.G.N. Teaching & Assessing
Vicky Burrage	1.0	No	No	R.G.N. R.S.C.N. S.E.N. B.Sc. Community Children's Nursing Common Core, Research & Critical Thinking
Llinos Cox	1.0	Yes	Yes	R.G.N. N.D. Nursery Nursing Mentorship in Practice (1 year) Microbiology Infection Control Course Teaching & Assessing
Karen Davies	.72	Yes	Yes	R.G.N. Transport Course Teaching & Assessing/998

BAND 6 (Con't)				
Sue Davies	.96	Yes	Yes	R.G.N. R.M. Orthopaedic Nursing Cert Common Core, Transport Course Ward Based Instructors Course Manual Handling
Deborah Griffiths	.92	Yes	Yes	R.G.N R.N. Child 'S.C.M.' Teaching and Assessing/998 Research & Critical Thinking
Sarah Hughes	.64	Yes	Yes	R.N. Child Research & Critical Thinking
Debra Jones	.80	Yes	Yes	Diploma in Nursing. B.Sc. (Hons) Degree Aids & H.I.V. related diseases - Certificate Level. Common Core, Mentorship Teaching & Assessing. Research & Critical Appraisal
Gaynor Jones	.96	Yes	Yes	R.N. (Child). Diploma in Nursing, Mentorship S.C.B.U./H.D.U. Neonatal Module
Val Jones	1.0	Yes	Yes	R.G.N. ENB405 Mentorship Research & Critical Appraisal
Julia Kennedy	.96	Yes	Yes	R.G.N. R.M. Common Core. Teaching & Assessing. Neonatal Transport Course
Allison Lewis	1.0	Yes	Yes	S.E.N. Conversion course R.G.N. A systematic approach to Nursing care. Common Core Research & Critical Appraisal Neonatal Transport Course
Sarah Lewis	1.0	Yes	Yes	R.G.N. Common Core Module. Promoting Learning in Health Care Practice (Diploma). Research & A (Diploma). Clinical Leaders

BAND 6 (Con't)				
Sarah Lewis	.64	Yes	Yes	R.G.N. R.S.C.N. Common Core Research & Critical Care. Introduction to Counselling Course Neonatal Transport Course
Melani Gabales	1.0	Yes	Yes	R.G.N. Mentorship (5 days) S.C.B.U./H.D.U. Neonatal Module
Hayley Michael	.64	Yes	Yes	R.N. (Child) Diploma in Nursing (Child) Neonatal Transport Course
Elsie Quimpan	1.0	Yes	Yes	R.G.N. B.Sc. in Nursing
Ruth Morgan	.60	Yes	Yes	R.G.N. Teaching and Assessing/998
Deborah Owen	.50	Yes	No	R.G.N. Diploma in Professional Practice. Common Core, Law & Ethics. Research & Critical Appraisal, Teaching & Assessing Introduction to Counselling Course Neonatal Transport Course Clinical Supervision
Catrin Phillips	.72	Yes	Yes	R.G.N.
Karyn Phillips	0.8	Yes	Yes	R.G.N. R.M. Common Core. Clinical leaders course Research and critical thinking Module 9 training IV Cannulation S.D. Teaching & assessing (998) M.Sc. in Health Promotion Neonatal Transport Course
Gaynor Poptani	.80	Yes	Yes	R.N. (Child). Diploma in nursing
Diane Roberts	.40	Yes	Yes	R.G.N., S.C.M., M.Sc., Teaching & Assessing Mentorship

BAND 6 (Con't)				
Lil Saunders	.80	Yes	Yes	R.N. R.M. Diploma in Nursing Bachelors Degree in Nursing. Teaching & Assessing. Neonatal Transport Course
Anne Seward	1.0	Yes	Yes	S.E.N. - Common Core Certificate level. E.N. Conversion - R.N. Management Module Teaching & Assessing (Diploma) Mentorship
Heather Snow	.40	Yes	Yes	R.M. Common Core
Karen Taylan	1.0	Yes	Yes	R.G.N. B.Sc. in Nursing S.C.B.U./H.D.U. Neonatal Module
Pat Taylor	.64	Yes	Yes	R.G.N., R.M. S.E.N. Common Core Neonatal Transport Course
Joanne Thomas	0.88	Yes	Yes	R.G.N. Teaching & Assessing. City & Guilds (7307) Research & Critical Thinking.
Helen Radford	.72	Yes	Yes	R.G.N. R.M. Teaching and Assessing Research and Critical Thinking
Rhian Vaughan	.40	Yes	Yes	R.G.N., R.M., Teaching & Assessing/998 Neonatal Transport Course
Deborah Verbeck	.96	Yes	Yes	R.G.N. Child Protection Course
Marie Whiles	.64	Yes	Yes	R.N. Child S.C.B.U./H.D.U. /I.T.U. Neonatal Module
Julie Williams	.96	Yes	Yes	Diploma in Nursing (Child Branch) ENB 405. Transport Course
Gemma Davies	1.0	Yes	Yes	N.L.S. Instructors Course R.N. Child Branch S.C.B.U./H.D.U. /I.T.U. Neonatal Module
Deborah Joseph	.64	Yes	Yes	Teaching & Assessing Neonatal Transport Course

BAND 5				
Jocelyn Bermudez	1.0	Yes	Yes	R.G.N. B.Sc. in Nursing Mentorship S.C.B.U./H.D.U. Neonatal Module
Jessica Beynon	0.8	Yes	Yes	R.N. Child
Sharon Birch	0.64	No	Yes	R.N. Child
Claire Evans	1.0	No	Yes	R.N. Child
Gemma Martin-Dyer	1.0	No	Yes	R.N. Child
Shelly Morris	.60	Yes	Yes	R.S.C.N. Counselling Course S.C.B.U./H.D.U. Neonatal Module
Caroline Szulik	1.0	No	Yes	R.N. Child
Ann Richards	.32	Yes	Yes	R.G.N., S.E.N.
Jo Honey	1.0	Yes	Yes	R.N. Child B.Sc. Nursing (Child Branch) Teaching & Assessing Mentorship S.C.B.U./H.D.U. Neonatal Module
Madge Williams	.53	No	Yes	S.E.N.
Rebecca Heaney	1.0	No	Yes	B.Sc. Child Branch
Stephanie Cannell	1.0	Yes	Yes	B.Sc. Child Branch
Nia McNeil	1.0	Yes	No	B.Sc. Child Branch
Rhiannon Jago	1.0	Yes	No	B.Sc. Child Branch
Siân Hughes	.64	Yes	No	B.Sc. Child Branch
Gemma Fortte	1.0	Yes	Yes	B.Sc. Child Branch
Zoe Jessop	.96	Yes	No	B.Sc. Child Branch
Marcia Halfpenny	1.0	No	Yes	
Liz Kift	1.0	No	Yes	
Holly Morgan	1.0	No	Yes	
Sue Edwards	1.0	Yes	Yes	
BAND 4				
Cheryl Tobin	.96	No	No	N.N.E.B.
Sharon Phillips	.64	No	No	N.N.E.B.
Rebecca Salisbury	1.0	No	No	N.N.E.B.
Gemma Dyer	1.0	No	No	N.N.E.B
Emma Renshaw	.80	No	No	N.N.E.B.

Circulation list:
Jean Matthes
Carol Sullivan
Geraint Morris
Sujoy Banerjee
Maha Mansour
Arun Ramachandran
James Moorcraft
Pinki Surana
Cathy Dowling
Siân Passey
Jenny Sanders
Wendy Davies
Carl Verrecchia
Myriam Bonduelle

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Cathy Dowling
Siân Passey
Jenny Sanders
Wendy Davies
Carl Verrecchia
Myriam Bonduelle

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Gofynnwch am/Please ask for:	Trevor Purt, Chief Executive
Rhif Ffôn /Telephone:	01437 771220
Ffacs/Facsimile:	01437 771222
E-bost/E-mail:	Trevor.purt@wales.nhs.uk
Date:	16 March 2012

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Merlins Court, Winch Lane, Haverfordwest,
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Hywel Dda Health Board Headquarters
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Pembrokeshire, SA61 1SB
Tel Nr: (01437) 771220

Ms C Chapman
Chair
Children and Young People Committee
National Assembly for Wales
Cardiff Bay
Cardiff
CF99 1NA

Dear Ms Chapman

Re: Children and Young People Committee – Neonatal Services

Thank you for your letter of 21/02/12 requesting information regarding Neonatal Services prior to the meeting of The Children and Young People Committee. I have responded to your queries in the order given.

- *A copy of your current local neonatal action plan, including information about the mechanisms you have put in place to monitor and evaluate the implementation of the key actions within these plans and timescales.*

  A copy of the Hywel Dda's Neonatal Action Plan is enclosed; these actions are monitored with the All Wales Neonatal Standards, which are updated to inform the network of progress.

- *A copy of the latest annual report on quality of care (as set out in Standard 6.8 of the All Wales Neonatal Standards), alongside information on the number of instances of when patient safety has been compromised.*

  Hywel Dda Health Board has never recognised itself as a "Designated Specialist Centre" and has not produced an annual report on the quality of care in the way described. However Hywel Dda Health Board:

• has identified a named individual who is responsible to the Board clinical governance lead for the comprehensive capture of information on all neonatal cases admitted to our SCBUs;
• participates in the all Wales audit programme co-ordinated through the MCN sharing information via Badgernet
• is agreeing information sharing protocols which will allow participation in national neonatal audit programmes coordinated through the BAPM;
• has a neonatal clinical audit program
• will receive the audit report produced by the lead clinician, and recommend improvements within the Board;
• continue to audit the service against these standards and report the outcome to the Board's Quality and Safety committee on an annual basis;
• does ensure exception reporting to the Board occurs when patient safety is compromised;
• does ensure systems are in place for reporting, investigating and learning from adverse incidents.

- *An outline of any action taken and any plans for investing into neonatal services in the short, medium and longer term to ensure all services in your area are fully compliant with the Standards.*

  • Hywel Dda has undertaken a thorough review of Neonatal services within its hospitals as part of the Clinical Services Strategic Review, and developed a plan to have a single level 2 Neonatal unit on a single site for the board. This plan has been identified to the public as part of our Listening and Engagement exercise. The short, medium and longer term plans are listed in the action plan.

  • Implementing policies to redirect other than low risk births from Bronglais Hospital where there is no staffed neonatal facility to one of the current level one units
  • Implementing a "stabilise and transfer" protocol for neonates with unexpected complications at Bronglais Hospital
  • Submitted a plan for converting variable neonatal nursing pay to core funding for substantive posts which will increase the nursing establishment
  • Developing a planned response to address the strong possibility of a significant gap in the medical staffing workforce from September of this year, in response to the Deanery predictions.

- *The costs associated with cross border transfers, including the amount paid to English PCTs for the transfer of neonates as well as the income generated for Welsh providers.*

  The Health Board has reviewed its financial records for the period April to December 2011 and there has been no expenditure incurred as a result of neonatal activity taking place cross border outside of Wales in respect Hywel Dda Health Board residents. The Health Board has also reviewed its financial records for the period April to December 2011 and there

have been no costs recharged as a result of neonatal activity taking place in Hywel Dda Health Board for cross border residents outside of Wales.

- *Whether you have had any discussions with WHSSC and neighbouring LHBs about the overall increase in cots needed and any joint planning as to where they are located and at what level of intensity.*

  Hywel Dda Health Board is committed to, and informed by the Welsh Neonatal Network with regard to the above. We have developed our long term plan (which has been shared with the network) in response to, and in accordance with their figures. We were pleased to be able to discuss the plans originally in outline and subsequently in detail with the Network lead, and with our sub regional partner LHB.

- *Whether any work has been undertaken with neighbouring Boards, or the Welsh Government via WHSSC, on workforce planning to address what impact changes to junior doctor recruitment and the number of training places in the future will have on services in coming years.*

  Hywel Dda Health Board contributes to the NLIAH Workforce plans review, and has utilised the forward information provided by the Welsh Deanery to inform this process. We also believe that as part of the Neonatal Network we contribute to the impact assessment of medical, and neonatal nursing training places. We have had ongoing discussions with the Wales Deanery around future numbers of trainees.

I do hope that this information is of use.

Yours sincerely

Trevor Purt
Chief Executive

Hywel Dda Neonatal Services Action Plan February 20012

Standard Number	Standard Text								Comment	Actions	Short term	Medium Term	Long Term
OBJECTIVE 1: ACCESS TO NEONATAL CARE Rationale: All newborn babies who require over and above the normal birth pathway have equitable access to the appropriate level of care in a timely manner.													
1.1	Neonatal care is commissioned to meet the local and national population need.								Remains at amber as BGH does not have facilities to provide neonatal care.	Plans for reconfiguration to improve this position accepted the Health Board. Currently shared with the public in Listening and Engagement exercise.	Protocols and policies in place to ensure risk avoidance of complex obstetric cases by transfer within Hywel Dda	Full consultation and business plan	Single level two neonatal unit for Hywel Dda, with Stabilise and transfer for emergencies from Bronglais and second site
2.5	All neonatal units have a designated neonatal nurse with protected time dedicated to providing teaching and education of the neonatal team.								This does not exist within the current establishment funding available to provide service delivery.	Staffing and role review undertaken to support reconfiguration plans.	Convert variable spend pay to established posts	Review of staff configuration, staff change engagement to implement	Centralise staffing on single level two unit
LEVEL II Care in Level II Unit Neonatal High Dependency Care													
2.16	A nursing ratio of 1:2 is provided for babies requiring High Dependency care. The named nurse has training in neonatal care.								As we are not funded as a Level II unit, whilst we try to maintain this level it is not always guaranteed.	Staffing and role review undertaken to support reconfiguration plans.	Convert variable spend pay to established posts	Review of staff configuration, staff change engagement to implement	Centralise staffing on single level two unit
2.17	The unit can provide evidence that the establishment is correct for the number of High Dependency cots commissioned.								As above our unties are not Level II units	Staffing and role review undertaken to support reconfiguration plans.	Convert variable spend pay to established posts	Review of staff configuration, staff change engagement to implement	Centralise staffing on single level two unit
2.21	A Level II unit has SHOs/ANNPs dedicated to the neonatal service.								During the hours of 9 -4, there is a dedicated rota in operation, after 4 pm the rotas is across Paediatric services	Staffing and role review undertaken to support reconfiguration plans.	Review opportunities to develop ANNP roles	Audit training gaps and facilitate all necessary training	Centralise staffing on single level two unit

LEVEL III Care in Level I Unit Neonatal Special Care												
2.23	The unit can provide evidence that the establishment is correct for the number of Special Care cots commissioned.								Sometimes compromised by numbers of neonates, and levels of care required	Staffing and role review undertaken to support reconfiguration plans.	Convert variable spend pay to established posts	Review of staff configuration, staff change engagement to implement	Centralise staffing on single level two unit
OBJECTIVE 3: FACILITIES FOR NEONATAL SERVICES, INCLUDING EQUIPMENT **Rationale: Appropriate, up to date and safe equipment and facilities are available to care for babies with neonatal care needs and their families.**												
3.1	Neonatal facilities are commissioned based on population need, taking into account local differences.								No neonatal care in BGH	Plans for reconfiguration to improve this position accepted the Health Board. Currently shared with the public in Listening and Engagement exercise.	Protocols and policies in place to ensure risk avoidance of complex obstetric cases by transfer within Hywel Dda	Full consultation and business plan	Single level two neonatal unit for Hywel Dda, with Stabilise and transfer for emergencies from Bronglais
3.5	Support services are readily available. These include: Pharmacy Dietetics Therapy Screening Genetics Physiotherapy Social Work Speech and Language Therapy These include staff with expertise in the care of neonates.								Whilst these services are accessible, they are not readily available and are dependant on their own capacity issues. Only some of these services currently have identifiable staff with neonatal expertise,	Plans for reconfiguration to improve this position accepted the Health Board. Currently shared with the public in Listening and Engagement exercise.	Intention to hold discussions with the services detailed, once the reconfiguration planning is complete to develop and implement that accessibility.	Full consultation and business plan	Centralise staffing on single level two unit, allowing these services to have critical mass on a single site
3.9	Each cot on a Neonatal Intensive Care Unit or High Dependency Unit has the following equipment: a. Incubator or unit with radiant heating b. Ventilator* and NCPAP driver with humidifier c. Syringe/infusion Pumps d. Facilities for monitoring the following variables: I. Respiration ii. Heart rate iii. Intra-vascular blood pressure iv. Transcutaneous or intra-arterial oxygen tension v. Oxygen saturation vi. Ambient Oxygen. * Intensive Care Cot only								All cots within the HB have this equipment apart from d points iii & iv.	Within WGH SCBU - Intra vascular BP equipment is on order.	Take opportunity of replacing monitoring equipment to address Glangwili site	Full review of equipment provision in preparation for centralisation	Single level two neonatal unit for Hywel Dda, with fully appropriate equipment provision

OBJECTIVE 4: CARE OF THE BABY AND FAMILY/PATIENT EXPERIENCE **Rationale: The baby and the family receive holistic child and family centred care as close to home as possible, with ease of access to specialist centres when this care is required.**												
5.1	Transport services are planned and commissioned on an all Wales basis with working arrangements in place for each network and across the border with England. All units accepting and/or referring neonates have, or have access to, an appropriately staffed and equipped transport service.								Although CHANTS is in operation , this is only on a 12 hours access and the risks for infants delivering in BGH remain, due to escort and accepting unit capacity.	Plans for reconfiguration to improve this position accepted the Health Board. Currently shared with the public in Listening and Engagement exercise.	Protocols and policies in place to ensure risk avoidance of complex obstetric cases by transfer within Hywel Dda	Full consultation and business plan	Single level two neonatal unit for Hywel Dda, with Stabilise and transfer for emergencies from Bronglais and second site
5.4	Staff responsible for transfers are in addition to those of the clinical inpatient team.								Transfers form BGH as detailed above present challenges for the workforce available.	Plans for reconfiguration to improve this position accepted the Health Board. Currently shared with the public in	Protocols and policies in place to ensure risk avoidance of complex obstetric cases by transfer within Hywel	Full consultation and business plan	Single level two neonatal unit for Hywel Dda, with Stabilise and transfer for emergencies from Bronglais and second site