GIG CYMRU NHS WALES

Bwrdd Iechyd Prifysgol Bae Abertawe

Swansea Bay University Health Board

2024

Annual Report

Neonatal Services

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Annual Report Executive Summary
SBUHB Neonatal Services 2024

We are pleased to present our 2024 Annual Report, summarising the activity within Swansea Bay University Health Board Neonatal Services. This report includes detailed data and analysis of our activity which is an accurate representation of the specialist work we do. Within the report is some historical comparative data, however, due to the boundary changes in 2019 with the Princess of Wales activity moving to Cwm Taf University Health Board, this is still problematic.

Singleton Neonatal Intensive Care Unit, based at Singleton Hospital, part of the Neath Port Talbot Singleton Service Group (NTPSSG) within Swansea Bay University Health Board (SBUHB), provides tertiary level Neonatal care for South West Wales. In addition to caring for our local population, we most commonly receive referrals from Special Care Units (SCUs) at Princess of Wales Hospital and Prince Charles Hospital (Cwm Taf UHB) and Glangwili Hospital (Hywel Dda UHB) in addition to less frequent referrals from other units in Wales and England.

In 2024, 3232 women birthed 3323 babies within SBUHB, of which 3267 babies were born at Singleton Hospital and 56 at the NPT Midwifery-led Birth Centre. The SBU Neonatal Service recorded 499 admission episodes, a slight increase from 2023, of which 15 were re-admissions (3%).

Activity

On analysis of the activity we delivered 6802 care episodes which is an increase from 2023, significantly higher than the 5y (2019-2023) average of 6543. Our intensive care activity reduced slightly this year to 1567 care episodes, very similar to 2021-2022. We continue to deliver a high number of High Dependency Care days, 2703 care episodes in 2024 which is significantly above the 5y average of 2478.4 – this continues to show our commitment to evidence based clinical practice with the use of non-invasive respiratory support and early enteral feeding. Special Care activity has increased this year (following the significant reduction in 2022 and 2023) with 2532 care episodes.

Throughout 2024, our cot configuration continued as in 2022, with 6 IC, 8 HD and 10 SC cots. At times of high activity we continued to flexibly adapt our cots depending on the clinical need.

Using the cot configuration stated, our occupancy was as follows:

Intensive Care (1567/2190) 71.5%

High Dependency (2703/2920) 92.5%

Special Care (2532/3650) 69.3%

Overall, based on 24 cots, occupancy was 72.3%

All Wales work on capacity, demand and cot reconfiguration began in 2022 and we have agreed to increase our HD cots to 9 and reduce SC cots to 9 in order to better manage the demand and capacity across the South Wales Network. Phase 2 of the cot reconfiguration project is likely to begin in 2025.

53.3% of combined IC and HD care was provided to local residents of SBUHB. Care provided to infants from other healthboards represents a large part of our work. Care days provided to those resident in Hywel Dda UHB increased to previous levels after a significant reduction in 2023 (22.2% compared with 9.4% in 2023). We provided a reduced percentage of critical care days to residents of Cwm Taf UHB this

year (16.3% compared with 21.8% in 2022). We cared for a small number of infants from other HBs (namely Powys and Cardiff + Vale UHBs), and the care provided to those infants represented 3% of critical care episodes.

In-born term infants accounted for 55.2% of the total in-born admissions which continues to increase year on year. ATAIN meetings (Avoiding Term Admissions into Neonatal units) continue to run in collaboration with Maternity and Obstetric colleagues and provide useful insight, learning and practice points for the Multi-Disciplinary Team. Overall, term infants (including EUT) accounted for 52.3% of all admissions.

We cared for 69 infants <30 weeks gestation, 14 (20.2%) of these were out-born. 31 (44.9%) were extremely preterm (<28 weeks gestation). 90 infants were <1500g (Very Low Birth Weight VLBW), an increase from previous years. 35 infants were Extremely Low Birth Weight (<1000g; ELBW), 7% of admissions, a reduction from 2023.

Outcomes

Mortality

The mortality rate for 2024 was 1.6% of all admissions, very similar to 2023 (1.5%) and a reduction from 2.2% in 2022; for inborn infants (excluding those born outside SBUHB) this has reduced to 1.4% (from 1.7% in 2023).

When considering national reports and international benchmarking, MBRRACE data is not yet available for 2024, however for the VLBW infant cohort we continue to benchmark favourably as part of the Vermont Oxford Network (VON) – detailed analysis can be found in the relevant section of this report.

Morbidity

We provide details in this report of all measured outcomes considered within VON and the National Neonatal Audit Project (NNAP). We are proud to celebrate continuing achievements in many areas, benchmarking higher than the national average in many data items and positive outliers in breastmilk on day 2, follow-up at 2 years, normothermia and ROP screening. We are proud of the reduction shown in bloodstream infection (9.5% from 15% in 2023). We are not negative outliers in any areas in the NNAP 2024 report but will continue to work on late onset sepsis and breastmilk at discharge as part of our improvement work. Optimal antenatal steroid administration continues to be a challenge and we look forward to the output from the All Wales task and finish group which is aiming to influence this measure nationally. The new measure of use of non-invasive respiratory support has enabled a successful QIP showing that focussed work can have major impact and has potentially also favourably affected our BPD outcomes (treatment effect improvement from 2.1 to 0.2).

Within VON, we are continuing to benchmark favourably in the majority of areas, particularly noting the reduction in death or morbidity, below the UK and VON average and our continuing excellence in thermoregulation for this cohort of infants.

We successfully re-accredited with Unicef Baby Friendly Initiative (BFI) this year (“Achieving sustainability, working towards Gold”) following the success in 2021, thanks to the leadership and enthusiasm of our new Infant Feeding nurse Gabby Morgan-Swinhoe.

Priorities for 2025

BLISS – we are planning to work towards the BLISS Silver Award and have a large multi-disciplinary team tasked with this in 2025.

Workforce – we will continue to focus on nurse and allied health professional staffing. We continue to be below BAPM standard for Allied Health Professional representation in our service and will continue to focus on recruitment and increasing WTE in all areas.

Outcomes – our focus will continue to be on optimal administration of antenatal steroids and late onset infection responding to the information we have from benchmarking organisations.

Following the release of the MBRRACE report (2023) and the increase shown in the extended perinatal mortality rate for SBUHB, the Health Board announced an external Independent Review of our neonatal and maternity services. The report from this review was released in the Summer of 2025 and had a number of recommendations for our service as well as the Health Board as a whole and the All Wales Maternity and Neonatal Network. A Perinatal Improvement Plan is in development and will report regularly to the board in 2026.

I would like to thank the whole team for their invaluable input into this detailed report and for their ongoing hard work and commitment and look forward to continuing the excellent work, upholding the HB values of “Always Improving” and “Working Together” in the coming years.

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PART I

Demography and Unit Activity

Swansea Bay University Health Board
Birth Data for 2024

Between 1st January and 31st December 2024, 3232 women gave birth to 3323 babies, whilst under the care of Swansea Baby UHB Maternity Services. 463 (14%) of these women reside outside of Swansea Bay UHB catchment area, namely Hywel Dda (256), Cardiff & Vale (10), Powys (64), Cwm Taf (80), Aneurin Bevan (10), Betsi Cadwaladr (3) and other (40).

Table 1: Birth data

	Year	Singleton	POW / NPT	All Sites
Normal Birth%	2024 2023 2022 2021 2020	49.59% 53% 51.24% 53.81% 54.1%	100% (NPT) 100% (NPT) 100% 100% 100%	49.59% 53% 51.41% 56.2% 57.4%
Instrumental%	2024 2023 2022 2021 2020	7.52% 9% 9.42% 9.82% 12.3%	0% 0% 0% 0% 0%	7.52% 9% 9.39% 9.3% 11.4%
C-Section Emergency %	2024 2023 2022 2021 2020	7.01%* 6%* 6.17%* 6.3%* 5.6%*	0% 0% 0% 0% 0%	7.01%* 6%* 6.15%* 5.9%* 5.2%*
C-Section Elective %	2024 2023 2022 2021 2020	35.43%** 32%** 32.86%** 30.23%** 28%**	0% 0% 0% 0% 0%	35.43%** 32%** 32.74%** 28.6%** 26%**
Breech %	2024 2023 2022 2021 2020	0.03% 4% 0.05% 0% 0.06%	0% 0% 0% 0% 0%	0.03% 4% 0.05% 0% 0.05%
Stillbirth %	2024 2023 2022 2021 2020	0.42% 0.54% 0.30% 0.30% 0.58%	0% 0% 0% 0% 0%	0.42% 0.53% 0.29% 0.29% 0.54%

Percentage of Births - per site/location

Singleton Hospital - 3267
Labour Ward CDS - 84.89%
Midwifery Led Unit - 13.25%
Home (Unplanned) - 0.80%
Home (Planned) - 0.27%
BBA / In Transit - 0.79%

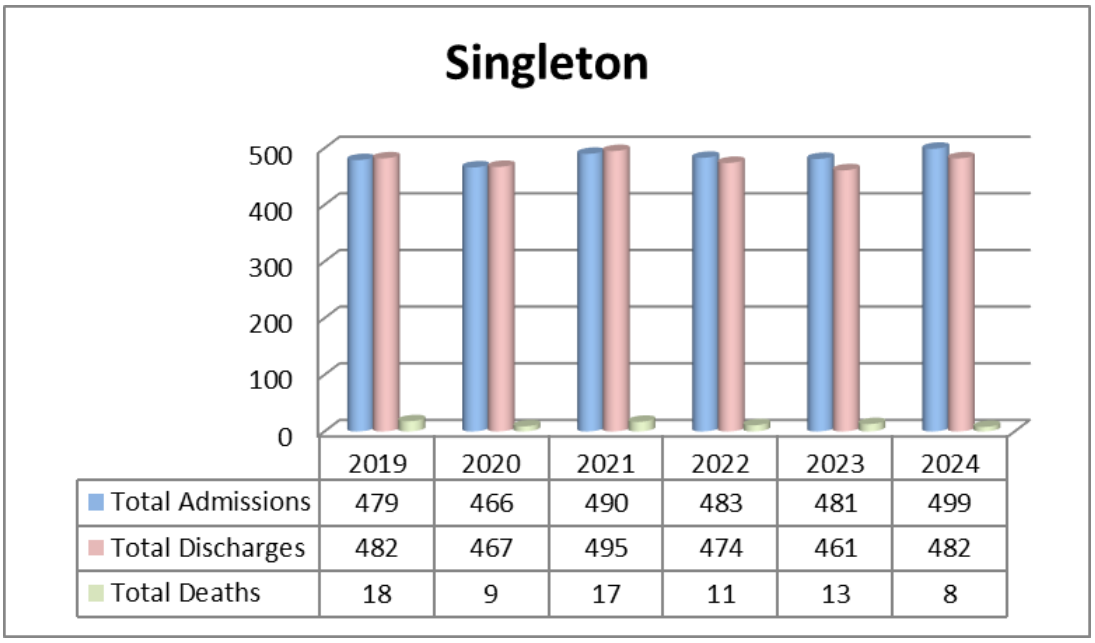
Neath Port Talbot Hospital (NPT) - 56
NPT Birth Centre - 91.07%
Home (Planned) - 1.79%
Home (Unplanned) - 7.14%
BBA / In Transit - 0%

**RCOG Category 1 **RCOG Category 2, 3 & 4. Data Source: Clinical Governance Facilitator – Liz Garland*

Table 2a: Admissions to Singleton Hospital NICU

Month	1st Time Admission Episodes	Re-Admission Episodes	Total Admissions Episodes	Deaths	Total Discharges
	2024				
January	51	3	54	1	38
February	36	0	36	0	35
March	38	3	41	0	42
April	33	3	36	1	38
May	43	2	45	1	40
June	36	2	38	1	38
July	36	1	37	0	43
August	43	0	43	1	40
September	51	0	51	1	43
October	30	0	30	0	43
November	44	1	45	2	39
December	43	0	43	0	43
Totals	**484**	**15**	**499**	**8**	**482**
Admitted before January 2024 but still on ward			**20**	**0**	**20**
Total episodes in 2024			**519**	**8**	**502**

Figure 2b: Admissions, Discharges and Deaths at Singleton NICU over last six years



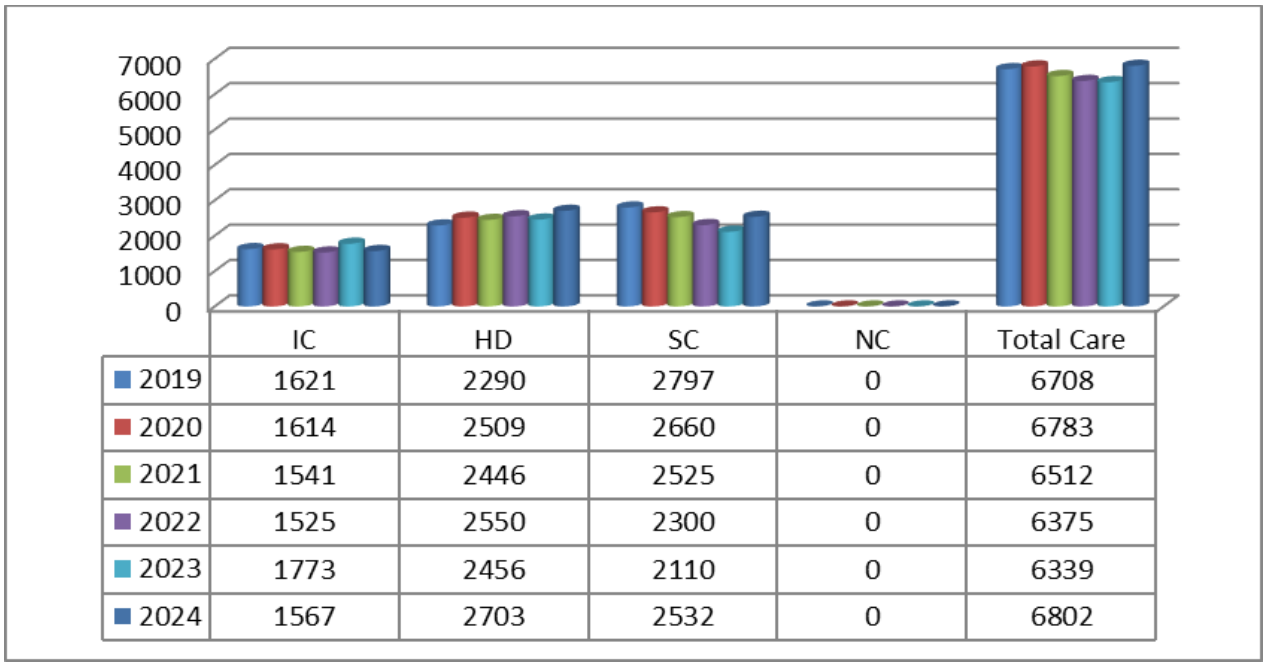
Data Source: BadgerNet

Table 3a: Singleton Hospital Total Care Episodes in 2024

Month	IC	HD	SC	TOTAL
January	165	338	202	705
February	187	236	161	584
March	62	110	162	334
April	126	357	150	633
May	55	187	208	450
June	179	228	216	623
July	148	152	168	468
August	170	238	187	595
September	150	320	382	852
October	116	178	178	472
November	103	203	216	522
December	106	156	302	564
TOTAL	1567	2703	2532	6802

IC= Intensive Care, HD= High Dependency, SC= Special Care, *BAPM 2011 categories of care*
Data Source: BadgerNet – unit daily update **Kindly see Appendix A*

Figure 3b: Care Episodes - six year comparisons – Singleton NICU



	IC	HD	SC	NC	Total Care
2019	1621	2290	2797	0	6708
2020	1614	2509	2660	0	6783
2021	1541	2446	2525	0	6512
2022	1525	2550	2300	0	6375
2023	1773	2456	2110	0	6339
2024	1567	2703	2532	0	6802

BAPM 2011 classification; NICU = Neonatal Intensive Care Unit

Table 4a: Activity by Gestation at Birth in 2024

Gestation Range (Completed Weeks)	Total Number of Babies	Total Admission Episodes*	Intensive Care Days	High Dependency Days In Unit	Special Care Days In Unit	Total Number of Care Days In Unit
<24	4	4	35	0	0	**35**
24-25	6	6	157	161	42	**360**
26-27	20	21	316	657	154	**1127**
28-29	17	19	236	504	53	**793**
30-31	44	45	333	374	572	**1279**
32-33	53	53	126	304	583	**1013**
34-36	88	90	82	205	389	**676**
>36	254	261	282	498	739	**1519**
Total	**486**	**499**	**1567**	**2703**	**2532**	**6802**

**Includes 13 re-admissions*
Data Source: BadgerNet, BAPM 2011 categories of care

Table 4b: Activity by Birth Weight in 2024

Weight Range (grams)	Total Number of Babies In Unit	Total Admission Episodes	Intensive Care Days BAPM2011	High Dependency Days In Unit BAPM2011	Special Care Days In Unit BAPM2011	Normal Care Days In Unit BAPM2011	Total Number of Care Days In Unit BAPM2011
< 500	0	0	0	0	0	0	**0**
500-749	6	6	120	72	23	0	**215**
750-999	27	29	492	756	215	0	**1463**
1000-1499	51	52	381	866	521	0	**1768**
1500-1999	67	68	220	238	732	0	**1190**
2000-2499	55	56	41	191	274	0	**506**
2500-4500	273	281	307	562	749	0	**1618**
>4500	7	7	6	18	18	0	**42**
Total	**486**	**499**	**1567**	**2703**	**2532**	**0**	**6802**

**Includes 13 re-admissions*
Data Source: BadgerNet, BAPM 2011 categories of care

Table 5: Total Care Days by Health Board by GP Post Code (Singleton Hospital NICU)

GP PCT Name	Intensive Care	High Dependency	Special Care	Unknown	Total Care Days
SWANSEA BAY UNIVERSITY HEALTH BOARD	720	1560	2306	0	**4586**
HYWEL DDA UNIVERSITY LHB	393	555	118	0	**1066**
CWM TAF LHB	314	386	69	0	**769**
POWYS TEACHING LHB	14	35	34	0	**83**
CARDIFF & VALE UNIVERSITY LHB	54	74	0	0	**128**
ANEURIN BEVAN LHB	16	13	2	0	**31**
BATH AND NORH EAST SOMERSET, SWINDON AND WILTSHIRE	25	33	1	0	**59**
LANCASHIRE AND SOUTH CUMBRIA	13	0	0	0	**13**
HEREFORDSHIRE & WORCESTERSHIRE ICB	13	40	0	0	**53**
NORTH WEST LONDON	0	2	2	0	**4**
STAFFORDSHIRE AND STOKE-ON-TRENT	5	5	0		**10**
Total	**1567**	**2703**	**2532**	**0**	**6802**

Data Source: BadgerNet

Table 6: Sources of Admissions to Singleton Hospital NICU

Source of Admission by Place of Birth	Total Number of Episodes in 2024
Singleton Hospital labour ward or theatre	434
Glangwili Hospital	23
Princess of Wales Hospital, Bridgend	14
University Hospital of Wales, Cardiff	7
Bronglais General Hospital, Aberystwyth	4
Prince Charles Hospital, Merthyr	5
Home	7
Neath Port Talbot Hospital	1
Royal Stoke University Hospital	1
Grange Hospital	2
St Michael's Bristol	1
Total	**499**

Data Source: BadgerNet

Survival Outcomes Singleton Hospital NICU

Table 7a: Admissions and Deaths by Gestation

Gestation	In-born			Out-born			All Admissions		
(weeks)	Total	Deaths	% Survival at discharge	Total	Deaths	% Survival at discharge	Total	Deaths	% Survival at discharge
<23	2	2	0%	0	0	N/A	2	2	0%
23	1	1	0%	1	0	100%	2	1	50%
24	2	1	50%	0	0	N/A	2	1	50%
25	4	0	100%	0	0	N/A	4	0	100%
26	8	0	100%	2	0	100%	10	0	100%
27	8	0	100%	3	0	100%	11	0	100%
28	3	1	67%	3	0	100%	6	1	83%
29	8	0	100%	5	0	100%	13	0	100%
30	13	0	100%	6	0	100%	19	0	100%
31	22	0	100%	4	0	100%	26	0	100%
32	19	0	100%	5	0	100%	24	0	100%
33	28	1	96%	1	0	100%	29	1	97%
34-36	76	0	100%	14	0	100%	90	0	100%
37-41	233	0	100%	20	1	95%	253	1	100%
>41	7	0	100%	1	1	0%	8	1	100%
Total	**434**	**6**	**99%**	**65**	**2**	**97%**	**499**	**8**	**98%**

**Delivery room deaths not included*
Data Source: BadgerNet

Table 7b: Admissions and Deaths by Birth Weight

Birth Weight	In-born			Out-born			All Admissions		
(Grams)	Total	Deaths	% Survival at discharge	Total	Deaths	% Survival at discharge	Total	Deaths	% Survival at discharge
<500	0	0	N/A%	0	0	N/A	0	0	N/A
500-750	15	5	67%	1	0	100%	16	5	69%
751-1000	17	0	100%	2	0	100%	19	0	100%
1001-1250	10	0	100%	6	0	100%	16	0	100%
1251-1500	28	0	100%	11	0	100%	39	0	100%
1501-2500	103	1	99%	21	1	95%	124	2	98%
2501-4500	257	0	100%	21	0	100%	278	0	100%
>4500	4	0	100%	3	1	67%	7	1	86%
Total	**434**	**6**	**99%**	**65**	**2**	**97%**	**499**	**8**	**98%**

**Delivery room deaths not included*
Data Source: BadgerNet

Table 8a: Respiratory Support Days by Birth Weight

Birth Weight (gms)	Conventional Ventilation Days	HFOV Days	CPAP Days	High Flow Therapy Days	Low Flow Oxygen Days	Non-invasive Mode Unrecorded	Total Respiratory Support Days
Less than 1000	336	35	524	555	86	56	1592
1000-1499	113	22	295	522	65	57	1074
1500-1999	36	7	94	216	23	32	408
2000-2499	25	0	42	139	22	12	240
2500-2999	43	2	50	98	14	8	215
>2999	129	21	119	274	88	43	674
Total	**682**	**87**	**1124**	**1804**	**298**	**208**	**4203**

Total respiratory support days excluding low flow oxygen = 3905
Data Source: BadgerNet

Table 8b: Respiratory Support Days by Gestation

Gestation	Conventional Ventilation Days	HFOV Days	CPAP Days	High Flow Therapy Days	Low flow oxygen days	Non Invasive Mode Unrecorded	Total Respiratory Support Days
<26 weeks	149	13	123	98	31	16	430
26-30 weeks	294	44	649	870	100	90	2047
31-36 weeks	85	9	210	543	72	58	977
>36 weeks	154	21	142	293	95	44	749
Total	**682**	**87**	**1124**	**1804**	**298**	**208**	**4203**

Data Source: BadgerNet

Table 9a: Multiple Births – Plurality by Gestation

Plurality	< 26 Weeks	26 - 30	31 – 36	>36	Total
Single	10	51	131	244	436
Twin	0	4	32	10	46
Triplets	0	0	4	0	4
TOTAL	**10**	**55**	**167**	**254**	**486**

Figures represent numbers of babies. Does not include readmissions
Data Source: BadgerNet

Table 9b: Multiple Births – Plurality by Birth Weight

Plurality	< 1000g	1000-1499	1500-1999	2000-2499	2500-2999	> = 3000	Total
Single	30	40	49	49	203	65	436
Twins	3	8	18	6	5	6	46
Triplets	0	3	0	0	1	0	4
TOTAL	**33**	**51**	**67**	**55**	**209**	**71**	**486**

Figures represent numbers of babies. Does not include readmissions
Data Source: BadgerNet

Table 10: Congenital Anomalies Detected in Babies

Congenital Anomalies Hospitals of birth	Number of babies	NICU admissions
NPT	1	0
POW	2	1
St. Michaels	2	0
UHW	2	2
Singleton	79	36
TOTAL	**86**	**39**

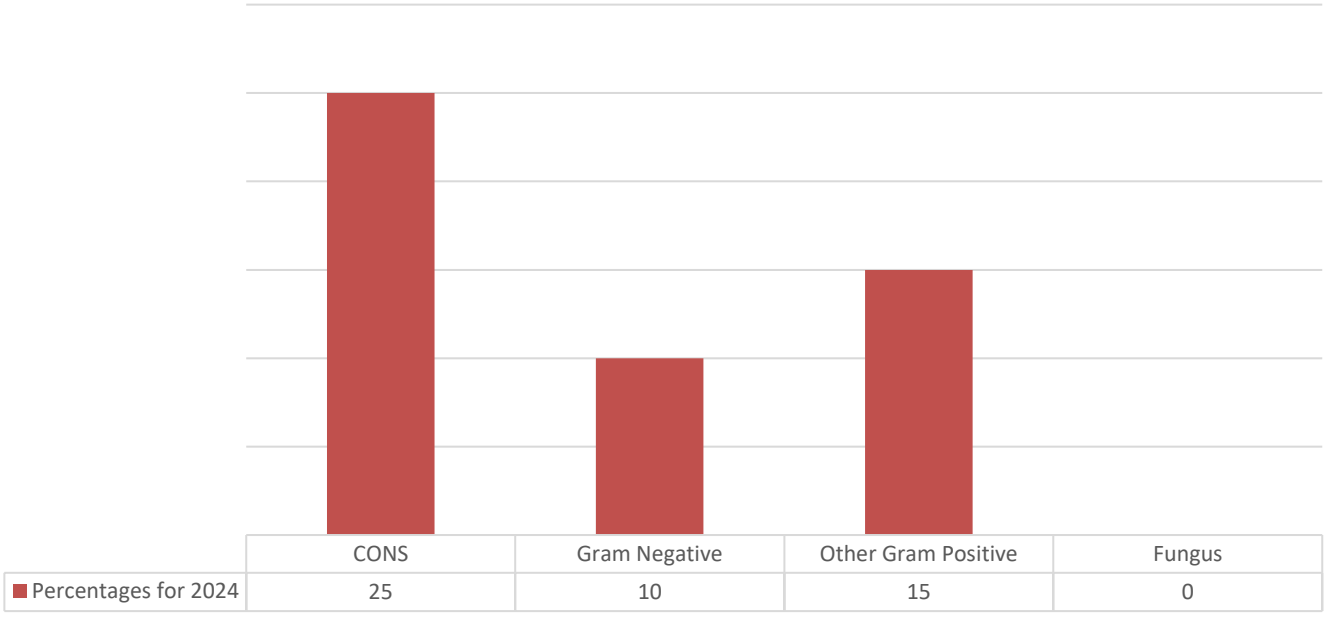
Data Source: Congenital Anomalies Register of Wales (CARIS) Swansea

Table 11a: Organisms grown in blood cultures – Singleton NICU

Organisms grown in blood cultures during 2024													
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Yearly Total**
Staphylococcus Warneri	1		1						1				**3**
Staphylococcus Epidermidis	2		2	2		1	1	1	1	1			**11**
Staphylococcus Capitis	3		1							2			**6**
Moraxella Osloensis	1			1									**2**
Staphylococcus Haemolyticus		1		1				2	1				**5**
Streptococcus Mitis					1								**1**
Corynebacterium Sp			1				1						**2**
Streptococcus Agalactiae					1		1			1			**3**
Strptococcus Oralis						1							**1**
Escherichia Coli						1						1	**2**
Klebsiella Pneumoniae				1		1				3			**5**
Streptoccus Dysgalactiae							1						**1**
Micrococcus Luteus	1				1		1		1		1		**5**
Bifidobacterium Breve							1						**1**
Staphylococcus Saprophyticus							1						**1**
Enterobacter Kobei								1					**1**
Total Infections	**8**	**1**	**5**	**5**	**3**	**4**	**7**	**4**	**4**	**7**	**1**	**1**	**50**

*** Data includes organisms grown from multiple blood cultures from a single episode and those classed as contaminants*
Data source: CLABSI Database

Table 11b: Distribution of organisms in blood culture %
Singleton NICU 2024



Neonatal Transport Activity (CHANTS)

Neonatal Transport Activity by Singleton Hospital in 2024

Compiled by: Steph Cannell, Senior ANNP

CHANTS (Cymru Inter-Hospital Acute Neonatal Transfer Service) is the Neonatal Transport service for South Wales. During the 12-month period January to December 2024, the service operated 24 hours a day and currently continues as an interim model. The service was delivered by each of the three NICUs in South Wales, which are Swansea, Newport (ABUHB) and Cardiff (C&VUHB). Each team covers the service 1:3 weeks in rotation. Each day there is a dedicated Neonatal Consultant, a Transport Nurse and an ambulance driver in a dedicated CHANTS ambulance. The overnight service (8pm-8am) from Swansea consisted of a transport nurse resident on site, a Neonatal Consultant on call from home and an ambulance driver based at the Bryncethin ambulance station. We have continued to provide a safe and uninterrupted service throughout the year.

During the period from 1st January to 31st December 2024, the Swansea CHANTS team dispatched for 101 transfers, which is a substantial decrease on the previous year's activity. This was also evidenced by the Cardiff and Newport teams and is attributed to the temporary closure of the Princess of Wales Hospital in Bridgend. The tables below give a breakdown of clinical and operational indications along with the type of care delivered as per BAPM standards. Within the medical uplifts, 5 transfers were for neurological reasons, 4 for cardiac reasons and 3 transfers for specialist reviews.

		CHANTS Swansea transfers 2024						
Operational reason for transfer		**Number**	**%**	**2023 (%)**	**2022 (%)**	**2021 (%)**	**2020 (%)**	**2019 (%)**
Uplift (medical)		30	29.7	28.6	31.5	22.3	26.2	22.7
Uplift (surgical)		9	8.9	12.8	8.7	13.8	13.8	14.5
Repatriation		55	54.4	48.6	43.6	48.3	48.3	48.7
Capacity		7	6.9	10.0	16.1	11.7	11.7	13.9
Total (number)		**101**		**140**	**149**	**139**	**145**	**158**

CHANTS Swansea Out Of Hours transfers 2024	
Operational reason for transfer	**Number**
Uplift (medical)	7
Uplift (surgical)	4
Repatriation	0
Capacity	0
Total	**11**

Out of the 11 uplifts, 8 were ventilated transfers, 2 required high flow therapy and 1 baby did not require respiratory support

There were no out of hours capacity or repatriation transfers

CHANTS Swansea uplift transfers 2024 (39)		
ITU	24	3 NTG immediate dispatch; 1 local immediate dispatch; 1 active cooling
HDU	10	
SC	5	

Level of care\Operational reason for transfer	**Repatriations (55)**	**Capacity transfers (7)**
ITU	2 (3.6%)	2 (28.5%)
HDU	27 (49.1%)	4 (57.1%)
SC	26 (47.2%)	1 (14.2%)

All Transfers – supplementary information

Out of all transfers, 20 were ventilated, 43 required non-invasive respiratory support, 5 babies required supplementary oxygen therapy and 2 infants had a nasopharyngeal airway in-situ. 53 transfers were "medic-led", 20 were "ANNP-led" by our experienced Advanced Neonatal Nurse Practitioner Steph Cannell and 28 transfers were "nurse led". 1 infant required high frequency oscillation,1 infant required inhaled nitric oxide and 1 infant required inotropic support. 2 transfers were completed in collaboration with EMRTS air ambulance by helicopter, all other transfers were undertaken by road.

Overall, the temperature control was excellent. 3/100 (3%) transfers had a temperature at receiving unit outside of the target range (36.5-37.5) – excluding those infants who received active cooling, no babies had a temperature below 36.5°C and 3 infants had temperature above 37.5°C. All infants had a temperature recorded on arrival at both referral and receiving units, demonstrating an improvement when compared to previous years.

All ventilated infants had a blood gas taken on arrival at receiving units and demonstrates excellent practice that has been maintained for the last 3 years. 1 infant was hypocarbic with a C02 of 3.2 and 1 infant who had a pCO2 outside of the target range (12.3).

The average stabilisation time for uplift transfers was 1 hour and 58 minutes, ranging between 20 minutes and 5 hours. 23 transfers had a stabilisation time of <2hrs, 15 transfers of more than 2hrs.

There was only 1 transfer that was cancelled following dispatch from base when the receiving unit no longer had a cot available.

In terms of governance, there were 2 incident reports relating to transfers, which were all discussed at the Network subgroup meeting with learning/action points fed back to staff. Internal transport governance occurs regularly with all uplift transfers undergoing internal review. There are ongoing challenges with training and familiarisation with the air ambulance attributed to available resources within the Emergency Medical and Retrieval Transfer Service (EMRTS).

The out of hours service remains an interim model and the activity appears to have decreased when compared to the previous year – this is likely also attributed to the temporary closure of the Princess of Wales Hospital in Bridgend. All out of hour transfers were reviewed by the Network Transport Subgroup. The proportion of night capacity transfers for Swansea has reduced when compared to the previous year – from 18.7% to 10.9%. The out of hours service remains under constant review with potential need for changes to the service specification as the 24h service becomes permanently operational.

There was 1 non-CHANTS transfer undertaken in 2024 for end-of-life care.

The team did not require a team swap for any transfer during 2024.

Part II

Clinical Governance and Benchmarking

Audit, Quality Improvement and Clinical Governance activity report for Singleton NICU in 2024

Compiled by: Gemma Davies, Senior ANNP and Dr Lucinda Perkins, Consultant Neonatologist

Overview

The Neonatal Intensive Care Unit (NICU) in Swansea is committed to embedding Quality Improvement (QI) as a core aspect of maintaining and improving the quality of clinical care provided to babies in South-West Wales. In 2024, we have progressed how we deliver QI as a neonatal service and further framed our QI activities more firmly within our Quality Management System. Specific progress has been summarised below in the following domains:

- Building QI Neonatal Capability
- Building QI Neonatal Capacity
- Quality Planning
- QI delivery & accountability

Building Neonatal QI Capability

A culture of QI as 'everybody's business' on Swansea NICU remains at the heart of our improvement ethos. Despite more departmental QI teaching in 2023, with signposting to formal training opportunities, MDT feedback identified improved access to opportunities to develop QI knowledge as having the potential to further empower the team, especially the nursing team, to engage in QI more actively.

In response to this in 2024, greater access to QI methodology training has been made available. An innovative departmental shared learning forum was established in June 2024 known as 'Clwb Gwella Gofal' or 'GG Club'. Gwella Gofal' translates to 'Improving Care' in Welsh, speaking to our overarching aim to maintain a conversation around how we continually improve care for the families we serve. Chaired by the Consultant QI lead, GG Club was pitched as an 'inclusive QI forum with big dreams' creating a relaxed space to talk 'all things QI' as an MDT, to facilitate shared learning, provide QI coaching and to 'demystify' the use of QI methodology/tools. GG club launched as a weekly 30 minute departmental drop-in forum before evolving to a more accessible 1 hour monthly session, in response to team feedback, from October 2024 with topics including 'Exploring the Problem: Tips and Tools' (15.10.25) and 'Model for Improvement: Aims & Measures' (19.11.24).

Significant progress has also been made in improving MDT access to more formal training opportunities, in collaboration with maternity colleagues and the Health Board QI team, through a pilot of health board perinatal 'Fundamentals In QI' training courses. Facilitating course participation required careful planning and coordination with senior neonatal nursing and medical rota coordinators. 3 courses were planned, one was moved to early 2025, due to a last minute requirement for the room space booked to be relinquished for an urgent senior management meeting. And so in 2024 2 course dates ran successfully on 04/11/24 and 12/12/24 (the 27/11/25

course has been moved to 06.02.25). 17 neonatal team members have successfully completed this formal QI methodology training as a result including 11 neonatal nurses, 2 MTI resident doctors, 2 rotating trainee resident doctors, 1 ANNP and 1 neonatal therapist. Feedback has been excellent oth in terms of course content being applicable to practice given active inclusive QI workstreams within our service and in terms of the in-house organisation supporting accessibility with the majority of nurses who attended reporting they would not have been able to access this training otherwise.

Building Neonatal QI Capacity

QI Capacity refers to the 'potential and resources' to deliver effective QI and includes factors such as ensuring sufficient funded time is resourced to support staff in their improvement efforts. QI activity remains under-resourced at a local and national level.

Streamlining of duplicated data collection continued as a means of improving efficiency. A key example being perinatal optimisation data with QI in this domain continuing through the standardised national PERIPrem Cymru programme. The Swansea perinatal team were very active in this programme with representational within PERIPrem Cymru national leadership (M Dey, National Obstetric lead and L Perkins, National Neonatal Lead) as well as a motivated and visible local leadership quad (S Cannell, Local Neonatal Lead, N Ali, Local Obstetric Lead, H Muxworthy Local Midwifery Lead, Sian Barry, Local Neonatal Nursing Lead).

Recognising rotational resident doctors as key enablers for QI, and a precious motivated resource given the requirement to undertake QI as part of their training programme, we formalised the QI offer to trainees as standard through induction processes in 2024. This included QI expectations and signposting at each rotation induction, active mapping & matching of trainees to project of interest early in their rotation, visible QI leadership for coaching and regular departmental QI afternoons supporting accountability, project visibility & as a forum to present individual QI learning supporting professional development.

Dr Webb, Neonatal Service Clinical Lead has been a key advocate in recognising the importance of resourced leadership to manage quality within our service. All consultants are expected to contribute to QI work as part of the 5-year appraisal cycles but additionally there is a named QI lead consultant. Dr Webb has proposed, collaboratively agreed 'SPA Tariffs' for additional duties, such as QI leadership, to more clearly define role expectations, improve accountability and 'ringfence' our collective consultant SPA resource to maximise positive impact on the quality of our service. Dr Webb has worked to improve visibility to senior leadership and service management of the importance of resourcing quality activities, with the aim of formalising specific SPA allocation to QI leadership in 2025.

Quality Planning

As part of drawing our QI work under a broader Quality Strategy, and moving towards a service level Quality Management System (QMS), in late 2023/early 2024 a more active approach to identifying priorities for QI work was instituted, largely by the neonatal consultant and senior ANNP team, rooted in the priority areas identified on latest data (without waiting for formal publication of retrospective benchmarking data later in the year).

In late 2024 quality planning evolved further to a more collaborative approach to 2025 direction-setting, inclusive of the wider MDT, to identify priorities from multiple perspectives. A dedicated QI planning MDT event took place on 17.12.24 to actively identify and agree the key care issues which should be considered for prioritisation for QI in 2025. This included presentation of latest NNAP & VON data, summary of mortality and morbidity review themes in 2022-2024 and review of breast milk feeding data. This approach was well received and felt to be a effective strategy to not only support more inclusive direction-setting but to improve investment in QI activities by the wider team as co-produced. Parent voices informally fed into this process but recognise ongoing 'gap' in quality planning is lack of true co-production with parents and families to inform this process. We hope to tackle this in future years and aim to explore organisational pathways to facilitate Patient Involvement and Participation (PPI) to 2025. A further 'pitch and prioritisation event' is planned in February 2025 to invite innovative projects 'pitches' to tackle these issues and consensus agreement on projects to take forward.

Quality Improvement Delivery and Accountability

2024 Quality Improvement Priorities:

- Reducing Late-Onset Sepsis (LOS)
- Reducing Bronchopulmonary Dysplasia (BPD) rates
- Optimizing Antenatal Steroid administration
- Bliss Baby Charter QI mapping

Singleton NICU – March 2024

2024 QI Priorities

- **Late Onset Sepsis QI Group**

Leads K Burke, G Davies & R Morris

Local governance processes identified q rise in Staph Aureus LOS cases in Autumn 2023 triggering a local thematic review of 6 cases in October 2023 (no CLABSI's or other correlating factors except 5/6 <1kg). Total 2023 S.A. LOS cases = 9, no related mortality). 2023 VON data awaited due to be published June 2024. Several QIP anticipated under this umbrella work. MDT set-up including MDT professionals from NICU, infection control, microbiology and pharmacy.

- **UNIVERS**

Using **N**on **I**nvasive **V**entilation **E**arly in **R**espiratory **S**upport.

Leads L Perkins, A Wasden, L Deacon

Reducing BPD (CLD) QI Group project. Swansea NICU above average BPD rates on NNAP. NNAP 2022 BPD Unit rate 45.9% UK Rate: 39.7% - even if treatment effect applied still positive. Not outliers however and VON BPD data more reassuring. BAPM BPD Toolkit identifies delivery room respiratory management as the 2nd of 5 key aspects of BPD prevention. The first being perinatal optimisation (see PERIPrem Cymru). New NNAP measures of NIV only 1st week <32 weeks, benchmarking below national average. MDT formed & baseline data collected. MDT explored problem through QI methodology. Major issue high proportion of babies admitted intubated. SMART Aim: To increase proportion of <32 week infants on NIV at 1 week by 10% in 6 months. 1st PDSA: Providing effective nasal CPAP via shuttle mounted ventilator asap after birth for 25-31 week infants where possible and safe to do so.

- **Optimising Antenatal Steroids**

Leads T Hixson, Najiya Ali, S Cannell & the wider PERIPrem Cymru Swansea perinatal team.

Swansea high performing across NNAP Optimal Perinatal Care metric thanks to local perinatal QI group and PERIPrem Cymru programme. Challenge remains in delivering optimally timed steroids (reduces mortality in preterm infants by around 30%) partly due to national challenges in predicting preterm birth. qfFN business case made in May 23 recently approved. Roll-out anticipated this year. In interim focus on evidence-based counselling PDSA.

- **BLISS Baby Charter QI Mapping**

Lead K Burke & team

Currently mapping QI work against BLISS Baby Charter - crossover with ongoing work re. Maternal Breast Milk, inc. PERIPrem Cymru 6 hr target) and DR skin to skin. Planned QI re. 'Active Offer' of Welsh Language.

Maps to:

NNAP Complications of Prematurity Composite Measure – published 2023 data due Oct 2024 **VON** – 2023 data due June 2024

MatNeo SSP: Rec: 12.1 Optimise Maternity & Neonatal Outcomes. G. Consider use of established QI process for neonatal infection e.g. Vermont Oxford Network (VON).

BAPM Service and Quality Standards for Provision of Neonatal Care in the UK (2022) 4.1 NSQI 1 Evidence based care

NNAP - new NNAP quality measure 2022: NIV only <32 weeks for 1st week of life (2022 36.4 vs UK 47.1)

BAPM Service and Quality Standards for Provision of Neonatal Care in the UK (2022) 4.1 NSQI 1 Evidence based care

BAPM Toolkit: Reducing the incidence of bronchopulmonary dysplasia A BAPM Quality Improvement Toolkit December 2023

(Inter) National Guidance: NICE (NG124) **Specialist neonatal respiratory care for babies born preterm,** 2019 **European Consensus on RDS 2022.**

NNAP Optimal Perinatal Care composite quality metric – latest data 27.5% (UK 19.1%)

PERIPrem Cymru (Perinatal Excellence to Reduce Injury in Preterm birth, Cymru) – 1 of a 10 intervention bundle being delivered nationally in Wales to reduce severe brain injury and improve survival <34 weeks.

BAPM Service and Quality Standards for Provision of Neonatal Care in the UK (2022) NSQI 2 Team working and communication

BAPM QI Toolkits: Antenatal Optimisation for Preterm Infants less than 34 weeks (2020)

BAPM Service and Quality Standards for Provision of Neonatal Care in the UK (2022) NSQI 3 Parental partnership in care

Mat Neo SSP: 7.4 All Neonatal Units to adhere to Bliss Baby Charter Standards

Figure 1: Agreed Neonatal 2024 QI priorities from Quality Planning processes, March 2024.

Late-Onset Sepsis (LOS)

According to UK National Neonatal Audit Programme (NNAP) criteria, LOS is defined as:

A positive blood culture (excluding coagulase-negative staphylococci or mixed growth) occurring >72 hours post-birth in infants born between 22–31+6 weeks gestation.

In 2023, Swansea Bay University Health Board (SBUHB) observed an increase in Late Onset Sepsis (LOS) amongst infants born prematurely at less than 32 weeks gestation. This included a significant rise in Staphylococcus Aureus bacteraemia in our patient cohort. In response to this rise in Staph Aureus sepsis case reviews were undertaken in late 2023 with thematic analysis to draw out any rapid learning for practice. Although no obvious correlating factors were identified as a consultant and senior ANNP team we felt LOS should be a key priority for QI endeavours in 2024. So rather than wait several months for, relatively retrospective, benchmarking 2023 data to be published, a core QI team was established to explore the problem further and undertake targeted QI work in this domain.

A period of exploring the LOS problem began early in 2024, including a well-attended Nominal Group Technique session to create a non-hierarchial space to capture wide MDT perspectives of the problem and potential solutions. This structured group process helped break the broad issue of LOS into smaller specific 'problems' to target through QI and service improvement. Within this session potential solutions were also collectively considered and placed within a benefit/ease matrix to help consider where our resource could have greatest impact. A SMART aim for this 'umbrella' project was developed to reduce the incidence of LOS by 50%, for all babies admitted to Swansea NICU, over a 9 month period, by December 2024. Multiple contemporaneous projects commenced including monitoring MRSA and MSSA colonisation on all admitted infants, a campaign to support staff compliance with mandatory Infection, Prevention and Control (IPC) practices including ANTT and a dual focussed sustainability and LOS reduction 'Gloves off' project. SBUHB 2023 benchmarking data, published in Oct 2024, confirmed our concerns of high LOS rates in 2023 falling >3 standard deviations above the expected rate for a unit of our type, and making Swansea NICU a negative outlier for LOS performance among UK neonatal services. Thanks to dedicated effort to 'read the signals' in our local data well before these results were published, we achieved a total LOS reduction of 53% in 2024. This improvement across a complex and multifactorial domain was also reflected in the 2024 pubished NNAP benachmarking data for our unit with Swansea Neonatal service no longer negative outliers for LOS but with recognition rates continue to fall above the UK average. In view of this the LOS QI leads have continued to monitor the data with the aim to sustain lower results and continue to actively advocate for improvement in this domain.

Reducing Bronchopulmonary Dysplasia (BPD): Improving Early Respiratory Care

Reducing BPD (also known as Chronic Lung Disease of Prematurity) in Swansea was an agreed priority for QI in 2024 in view of relatively high rates of BPD over several years, in benchmarking data, alongside underperformance in the NNAP early respiratory care quality metric launched in 2023 measuring proportion of very preterm babies managed on non-invasive respiratory support only in the first week of life. A lead MDT QI team was established with a strong nursing voice in the QI leadership from G Smith and J Bolton amongst others to explore the problem. This identified high rates of intubation in the delivery room as a potential area for improvement and so at admission the UNIVERS (**U**sing **N**on-**I**nvasive **V**entilation **E**arly in **R**espiratory **S**upport) Project was launched in April 2024 with the SMART aim of improving compliance with this NNAP metric by 10% for babies born in Swansea at less than 32 weeks gestation. Data showed a 'signal for

improvement' after only 6 months and in 2024 we have been able to surpass our original 10% aim to move from a baseline median of 33% compliance to 67%. Although we had no anticipated being able to move the more complex metric of BPD rates during such a short timeframe, we were delighted to see a simultaneous fall in BPD in our centre from 48% to 32% during the active phase of UNIVERS. Robust case review processes during this QIP did not raise safety concerns and data was also reassuring with no increase in balancing measure of pneumothorax rate, severe IVH or death. Unexpectedly we have also seen a reduction in the balancing measure of surfactant use during the project so far which may represent a cost saving for our service alongside improved quality of evidence-based care. The active QI project continues into early 2025, with plans to undertake further work to quality assure current best practice next year. The learning from this successful QI project was shared as an oral; presentation at the BAPM Autumn Conference in September 2024 with plans to present internationally in the new year as well as publish our experience so that our learning can be transferred to be adopted and spread across other units.

PERIPrem Cymru: Optimising Antenatal Steroid Administration

Swansea has demonstrated strength in perinatal optimisation performance as a perinatal team prior to and during the PERIPrem Cymru programme, please see separate annual report of progress in 2024. Following discontinuation of dedicated PERIPrem Cymru funding for national and local quads the national leads have drafted 'Recommendations for Sustainability' to support teams to continue to embed PERIPrem Cymru as 'business as usual' in Wales. These recommendations have been through local lead and parent partner consultation and were approved at the final PERIPrem Cymru steering group in December 2024. We await their formal release following the necessary NHS Executive approvals in early 2025. Dr Tom Hixson, Neonatal Grid Trainee based in Swansea, supported by a dedicated team of perinatal professionals locally has produced an updated patient information leaflet for Antenatal Steroids which has been approved by the Maternity Voices Partnership and adapted for national use as part of PERIPrem Cymru in 2024.

In the interim, active improvement work continues around the difficult area of optimising antenatal steroids compliance. This remains a perinatal endeavour, now supported by 'Improvement Cymru' in Swansea as a national 'proof of concept' QI project. Moving the dial on this metric has proved a major challenge across the UK given the inherent challenges in predicting preterm birth. Considerable investment in resources, including equipment, workforce and training requirements, would need to be in places to support the the maternity workforce in Wales to deliver transvaginal ultrasound scanning as standard to help better predict preterm birth. In Swansea we continue to take an active role in improving this aspect of perinatal optimisation, with M Dey, Clinical Director of Women's Health & previously PERIPrem Cymru national obstetric lead, leading the local proof of concept work as well as co-chairing the national working group to support progress more broadly in this domain.

Bliss Baby Charter QI mapping

BLISS is a UK based charity that aims to support every baby born sick and/or prematurely in the UK to have the best chance of survival and quality of life. The Bliss Baby Charter provides a practical guide to help hospitals provide the best possible family-centred care for babies needing neonatal care after birth. It is acknowledged as a quality standard in provision of family-centred care for premature and sick babies and is a meaningful and effective benchmark for assessing performance

in this domain. Bliss baby charter accreditation provides a practical framework for neonatal units to self-assess the quality of family-centred care they deliver and identify areas to further develop care that focus on the needs of babies and their families.

Building on a longstanding commitment to Family Integrated Care (FIC), led by champions of this ethos such of Sue Edwards & Maha Mansour, in Swansea, in 2024 a core MDT undertook mapping of our neonatal service again this BLISS baby charter. The work has ultimately culminated in Swansea NICU being the first neonatal service in Wales to be successfully awarded Bronze Baby Charter accreditation with BLISS and has paved the way to look toward aiming for Silver accreditation in 2025.

Other QI activity

Other QI activity in 2024 include work around improving communication and the Welsh language offer through 'Prosiect Iaith', pharmacy safety and standardisation work including the 'Safe Six' prescribing project and further work around improving skin-to-Skin after birth. Other quality work included mandatory All Wales and Health Board audits against the various metrics.

Summary

The Swansea Bay Neonatal Unit continues to foster a strong QI culture, leveraging national benchmarking and multidisciplinary collaboration to deliver measurable improvements in neonatal care. Sustained focus on LOS and BPD reduction, alongside antenatal steroid optimization and mapping our family-centred care initiatives in 2024, reflects our commitment to excellence. We look forward to the second part of our collaborative Quality Planning process in February 2025 when we will finalise the agreed QI priority projects for our service for next year. Alongside our QI activities we plan to continue our journey to frame QI within the broader context of a neonatal service Quality Management System in 2025

Risk Management Report 2024

Compiled by: Helen James, Matron, SBUHB Neonatal Service
Leanne Richards, Neonatal Quality Safety and Risk Nurse
Dr Arun Ramachandran, Consultant Neonatologist

Swansea Bay Neonatal Intensive Care Unit has a robust risk management system in place. The team consists of Matron for NICU, Helen James and Neonatal Consultant, Professor Arun Ramachandran as the Risk Management Leads, Clinical Lead Dr Joanna Webb, Gemma Davies Senior Advanced Neonatal Nurse Practitioner, Ward Manager Claire Price, Sam Willis Advanced Neonatal Nurse Practitioner, Megha Jagga ST7.

Weekly risk meetings are dedicated to a Tuesday morning, where the team discuss all reported incidents and identify an appropriate investigator. Weekly meetings allow early identification of any high-risk investigations, with in-depth discussions about any immediate actionable plans, the team disseminate this by alerting any urgent risks via safety alert posters, emails and regular reminders on the daily huddle and nursing handovers. Monthly Risk meetings take place on the first Thursday of every month. To create a positive safety culture within NICU, disclosure of all the previous monthly reported investigations are discussed with the wider neonatal team, focusing on themes, lessons learnt, updates of actionable plans from previous meeting and any investigation that needs a wider team input. In addition, a monthly "Risky Business" Poster is shared widely with the multidisciplinary team that identifies themes and provides heighten awareness to improve practice.

In December 2025, there was a successful recruitment into the 8A Neonatal Quality, Risk and Safety Nurse post who will commence post in April 2025. This role will play a key role in supporting and enhancing service improvement initiatives, risk management, and patient safety within the Neonatal Service. Their responsibilities will include leading on clinical governance activities, coordinating incident reviews, supporting staff education around patient safety practices, and contributing to the continuous development of a culture of quality and safety across the neonatal unit.

As part of Governance, all mortalities are reported and reviewed by senior staff, including Neonatal Consultants, senior trainees (supported by consultant) or Senior ANNP's. Gemma Davies as part of the mortality team acts as a link between risk and mortality, providing weekly updates and progress on any reviews. Local presentations of the mortality reviews occur after the monthly risk meetings, and are peer reviewed at the Wales Perinatal network mortality meetings, along with MRRABCE-UK process and PMRT.

The Swansea Bay Health Board Risk Register allows a process of registering any risk within NICU that needs increased resources, monthly reviewed by the management team and remedial measures implemented as required. Monthly Perinatal meetings facilitate collaborative working between the maternity and neonatal team with joint discussion of complex cases and ATAIN reviews, encompassing patient safety, clinical effectiveness and lessons learnt. Swansea Bay NICU is also part of the National benchmarking system for quality control (National Neonatal Audit Project) and an international benchmarking system Vermont Oxford Network. Reports from both are included in the annual report and help quality control the service by raising health standards, quality improvement and patient experience. Swansea Bay NICU has an established dynamic team that work towards embedding a quality improvement culture across its organisation.

Following thorough investigation and review of all reported incidents within Neonatal Services in 2024, **no cases were classified as resulting in Moderate Harm**. This reflects the continued commitment to patient safety, robust clinical governance, and proactive risk management across the service.
Individual investigations focus initially with an isolated incident, but it often results in the team recognising themes and following more cumulative investigations; helping the understanding of the overall influences, whether it be human factors, processing or procedural shortcomings or system failures. Outcomes of these investigations guide effective operational changes, remedial measures or elevated teaching.

Demonstrated below are examples of themes drawn and learning from incident reports 2024.

Embedding Safe Prescribing and Drug Administration Practices in Neonatal Care

The Safe Six Care Quality Improvement Care Bundle for drug administration has been successfully embedded into routine clinical practice within the neonatal service. This structured approach provides a consistent and reliable prompt to support safe prescribing and administration of medications, reflecting our ongoing commitment to patient safety and continuous quality improvement.

Prescribers are actively encouraged to complete prescriptions in a quiet and controlled environment, away from the distractions typically encountered during ward rounds. This practice has proven effective in reducing the risk of prescribing errors associated with interruptions and cognitive overload.

In addition, best practices for discontinuing medications have been reinforced, including, clearly crossing out discontinued drugs across the entire prescription line. Documenting the date, the drug was stopped. Signing and printing the prescriber's name and providing a clear reason for discontinuation. These standards are consistently monitored through regular education and audit processes, promoting sustained compliance and a culture of safety and accountability.

To further strengthen prescribing reliability and reduce the risk of medication errors, prescribers and administrators are expected to refer to the Neonatal Formulary when prescribing medications. This ensures alignment with evidence-based guidelines and supports accurate dosing. In cases where prescribers are unsure how to access the formulary, they are encouraged to seek guidance from colleagues. This fosters a collaborative environment and ensures all staff are equipped with the necessary resources to prescribe safely. This additional layer of checking serves as a safeguard, consistent with the Swiss Cheese Model of error prevention, where multiple layers of checks help intercept potential mistakes before they reach the patient. These combined efforts reflect a proactive and systematic approach to improving medication safety in neonatal care, ensuring high standards of clinical practice and patient outcomes.

To ensure safe administration of intravenous fluids, no intravenous fluids are connected without first being run through an infusion pump and securely clamped. This practice helps maintain accurate delivery rates and reduces the risk of uncontrolled infusion.

Due to the prescribing complexities associated with gentamicin particularly the extended 36-hour dosing interval for neonates under 7 days old a unit-approved prescribing sticker is being used for all gentamicin prescriptions. If the prescribing stickers are unavailable, then the gentamicin prescription is clearly written on the front of the medication chart.

A recent review of immunisation practice has highlighted the need for improvement in adherence to prescribing and administration guidelines. To address these, the following actions and reminders have been implemented. As per established guidelines, the immunisation process must involve three distinct individuals: one to prescribe, one to administer, and one to check. Staff are reminded that both documentation in the notes and signing the prescription chart are required to ensure full traceability and compliance.

To enhance continuity of care and minimise the risk of missed doses or medication errors, the medication chart is formally handed over at each shift change. Medications are administered immediately after preparation to ensure both safety and efficacy. This protocol has been reinforced through monthly team meetings and highlighted in the risky business letter.

Cerebral Function Monitoring.

Storage of Cerebral Function Monitoring (CFM) data has been reviewed and a system is now in place to allow multiple consultants to access and review CFM recordings from the central databank however the ability to print CFM data remains limited. The All-Wales Hypoxic-Ischaemic Encephalopathy (HIE) pathway has been implemented and a new chart for documenting CFM has been developed and implemented.

Updated Guidance for CFM Needle Insertion and Glue Use

To ensure safe and consistent practice in the insertion and management of CFM (Cerebral Function Monitoring) leads, the following measures are now in place.

A revised body map of the head is now in use for all infants with CFM leads. This is completed and filed in the patient's notes. It includes clear identification of needle placement sites, documentation of the number of needles inserted and the number of needles removed. Glue is used sparingly and only when necessary. Guidance on glue use has been provided to staff during morning safety huddles. Any deviation from standard practice or protocol is escalated to the Service Consultant and clearly documented in the patient's notes and communicated effectively during handover to the receiving team.

Discharge process

A discharge checklist is currently under development to support more streamlined and safer discharges from the neonatal unit. Following a recent incident, the criteria for neonatal outreach follow-up has been printed and displayed to raise staff awareness and reduce the risk of recurrence.
As part of good clinical practice, a head-to-toe examination or completion of a body map within 24 hours prior to discharge is now implemented to help identify any emerging birthmarks or bruises. Additionally, any baby who has not had a physical examination within the previous 48 hours receives a full head-to-toe review on the day of discharge, with any findings documented in both Badger Net and the Red Book. NIPEC (The New-born and Infant Physical Examination) training was rolled out to all junior doctors in 2024 to ensure quality control of new born examination of all babies. We aim to ensure an examination is completed within 72 hours of life.

Intra-Hospital Infant Transfers

Infants undergoing intra-hospital transfers should be subject to the same rigorous operational risk management protocols as those transferred between hospitals. A gap in existing procedures has been identified, prompting the development of a new care pathway documentation package. This updated approach ensures that all transfers including those within the hospital are now supported by a fully experienced multidisciplinary team. The team proactively identifies, assesses, and mitigates potential risks to enhance safety and continuity of care.

Thermo regulation

Maintaining optimal thermal regulation is essential for all infants and is a shared responsibility across the multidisciplinary team. This is particularly critical during procedures, where temperature fluctuations can pose significant risks. Temperature should be monitored regularly to enable timely interventions and prevent complications. In recognition of its importance, thermal regulation practices are now subject to regular audit to ensure compliance and continuous improvement.

Cannulation and Line Care Documentation Standards

To improve blood culture practices, clinicians are reminded to complete Line Care Maintenance and Monitoring Charts at the time of cannula insertion. Documentation must include the date and time of blood culture collection, the cleaning solution used, the volume of blood aspirated into the culture bottle, and confirmation that aseptic technique was followed. The number of cannulation attempts is recorded on the VIP chart. Completed Line Care and VIP charts are filed in the patient's notes to ensure accuracy.

Key Themes in Communication Improvement

Pre-huddle handover between maternity and neonatal teams have been reinforced to identify neonates requiring medical attention on the labour ward. Clear delegation of tasks

and senior supervision of team functions is critical to ensure accountability and effective care delivery.

Written documentation of bloods taken in the notes allows all MDT members to follow up on results proactively, with blood results reviewed during ward rounds to ensure timely action.

Clear written communication of ongoing care needs has been highlighted as best practice before transfer neonates to Transitional Care (TC), including medication responsibilities, updated care plans and any deviations from the plan of care clearly documented with evidence of robust teaching and competency assessments for parents.

Equipment
Funding has been successfully secured for the purchase of additional transcutaneous monitors. This follows the identification of the need on the neonatal risk register and a successful application through the capital bid process.
An incident was identified involving incorrect attachment of ventilator tubing, where the inspiratory and expiratory limbs were connected in reverse. Despite the error, the ventilator circuit continued to deliver the required respiratory settings to the patient. In response, a visual diagram has been affixed to each ventilator as a prompt to support correct setup. Additionally, cot-side teaching was delivered to reinforce safe practice and prevent recurrence.

Long line management

A recent review has highlighted the importance of good suturing technique during umbilical line insertion and removal. While complications are rare, they are recognised and can be avoided through adherence to best practice. Medical staff are reminded if cord tissue is adherent to the catheter, soak the cord with gauze moistened with 0.9% saline. If resistance is felt during line removal, pause the attempt, soak the cord, and seek senior assistance. Ensure all sutures have been appropriately removed before proceeding. At the time of umbilical line insertion, the cord is trimmed appropriately to prevent a large section from drying out, which can complicate removal. In cases where difficulty arises during line removal, the line should be retained as per the guideline.

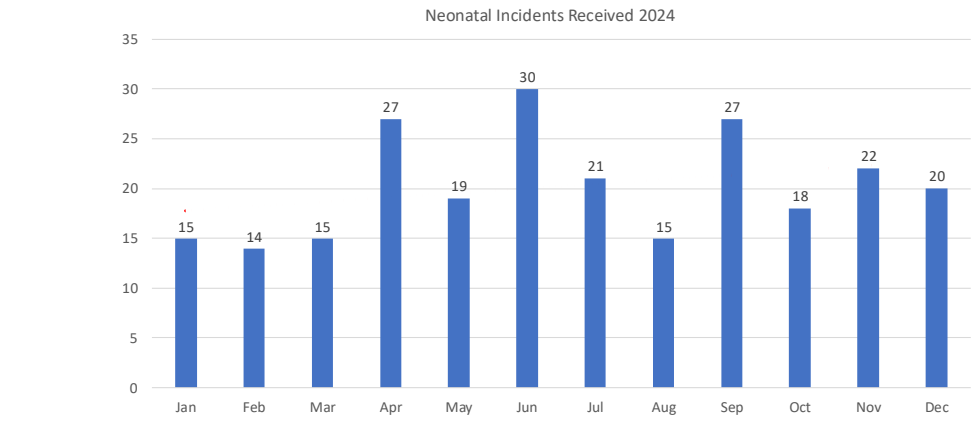
Urinary catheter care

Key safety practices have been reinforced regarding urinary catheter insertion. If resistance is encountered during insertion, the catheter is removed immediately and the balloon is not inflated. In cases where urine flow is not observed, an ultrasound scan is used to confirm correct catheter placement within the bladder.

Phototherapy
To reduce the risk of serum bilirubin (SBR) levels being plotted incorrectly, phototherapy charts now require the infant's gestational age to be handwritten and signed by the reviewer next to the printed gestation box on the NICE chart. This additional verification step will help ensure accuracy and improve patient safety.

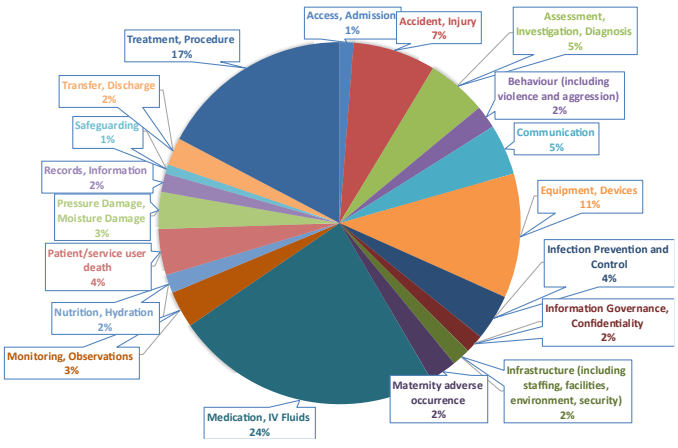
Number of incidents reported in 2024

NEONATAL INCIDENTS 2024



Incident themes for 2024

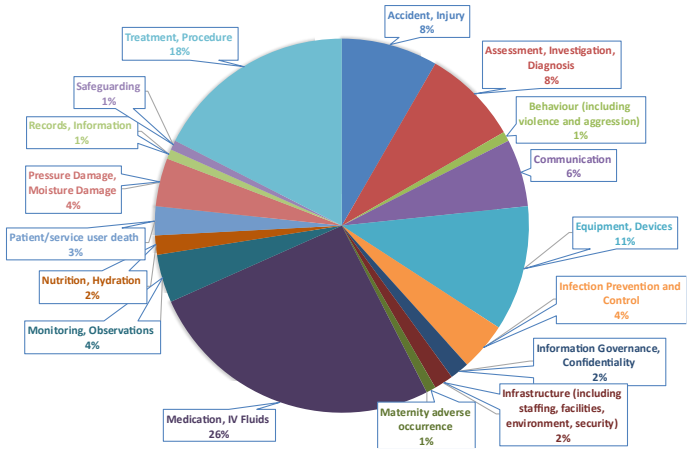
July - December 2024



Access, Admission	3
Accident, Injury	18
Assessment, Investigation, Diagnosis	13
Behaviour (including violence and aggression)	5
Communication	11
Equipment, Devices	27
Infection Prevention and Control	10
Information Governance, Confidentiality	4
Infrastructure (including staffing, facilities, environment, security)	4
Maternity adverse occurrence	6
Medication, IV Fluids	58
Monitoring, Observations	8
Nutrition, Hydration	4
Patient/service user death	10
Pressure Damage, Moisture Damage	8
Records, Information	4
Safeguarding	2
Transfer, Discharge	6
Treatment, Procedure	42

Un Bae Ar y Cyd
One Bay Way

January – June 2024



Accident, Injury	10
Assessment, Investigation, Diagnosis	10
Behaviour (including violence and aggression)	1
Communication	7
Equipment, Devices	13
Infection Prevention and Control	5
Information Governance, Confidentiality	2
Infrastructure (including staffing, facilities, environment, security)	2
Maternity adverse occurrence	1
Medication, IV Fluids	31
Monitoring, Observations	5
Nutrition, Hydration	2
Patient/service user death	3
Pressure Damage, Moisture Damage	5
Records, Information	1
Safeguarding	1
Treatment, Procedure	21

Un Bae Ar y Cyd
One Bay Way

Mortality Review Report 2024

Compiled by: Dr Amit Kandhari, Consultant Neonatologist and Gemma Davies Senior ANNP.

Background

The Neonatal Unit at Singleton Hospital follows a robust and well-established process for reviewing all neonatal deaths. A multidisciplinary team comprising a dedicated Neonatal Consultant, Senior Advanced Neonatal Nurse Practitioner (ANNP) and the Lead Nurse of the Department oversee the reviews, ensuring a comprehensive evaluation of each case. We are working towards establishing a robust Perinatal Mortality review of all neonatal deaths, with the implementation in early 2026.

Summary of Neonatal Deaths in 2024

In 2024, the total mortality rate accounts for 2.2%* of all admissions. Excluding infants born outside of SBUHB reduces the rate to 2.0% and MBRRACE reportable rates equal 1.2%, a reduction from 1.5% in 2023and 2.2% in 2022.

All cases had an internal multi-disciplinary review, with completion of the perinatal mortality review tool.

The review approach is consistent for all infants who die following active resuscitation at birth (but do not get admitted to NICU) any baby who dies >28 days, along with neonatal deaths on the NICU.

10 cases in total were reviewed as 1 infant was born at home and death was declared prior to arrival at the hospital.

*(Crude rates as 2024 report publication pending)

All 10 cases internally reviewed graded at B.

Grading of care

- **A (no issues identified):** 0 case
- **B (Care issues identified, no impact on outcome):** 9 cases
- **C (Care issues identified, which may have affected the outcome):** 0 case
- **Awaiting External review:** 1 case – internal review completed to identify early learning

Post Mortem

Post Mortem examination was offered to 9 of the eligible 10 families with only 2 consenting. One case is open to Coronial investigation until external review is received.

Coroner Referrals

Discussion between the Neonatal service consultant and the Coroner occurred in four of the cases, of these; three were not taken forward for investigation. The outcome of one case remains unclear due to the involvement of an external review process.

Bereavement Follow-up

We continue to offer bereavement follow-up 6-8 weeks following death with a named Consultant and our Specialist Bereavement Midwife. We do not have a Specialist Neonatal Nurse with time allocated for bereavement or palliative work but we have a team of nurses with skills and appropriate training in this area. We have continued to receive support from Ty Hafan Hospice and the charity "2 Wish Upon a Star" and many families have benefitted from these services.

Parental Involvement

In 2024, following the death of their infant, parents receive a letter explaining the PMRT process, are provided with a named Consultant as a point of contact and explanation that they will be contacted by the reviewer asking if they have any specific questions for the reviewer to explore and include within their review.

Detail of 2024 Neonatal Mortality

1a. Early Neonatal Death (death within seven days) – Death in labour ward (LW) - (both congenital anomalies)

Gestation	Birth weight	Age at death	Diagnosis
32+4	**1945grams**	On LW following birth	Hydrops faetalis and pulmonary hypoplasia, Severe congenital skeletal dysplasia and Prematurity
31+6	**2580grams**	On LW following birth	Prematurity, Respiratory failure and Congenital Higher Airway Obstruction Syndrome, PM confirmed

1b. Early Neonatal Death on NNU < 7 days - Death in neonatal unit

Gestation	Birth weight	Age at Death	Diagnosis
22+6	**515grams**	Day 1	Extreme preterm 22 weeks, and Pulmonary hypoplasia
33+2	**2500grams**	Day 2	Pulmonary hypoplasia with Hydrops Faetalis, and Prematurity 33 weeks
42+6	**5000grams**	Day 2	Severe HIE, born at home

24+0	**530grams**	Day 4	Multiple air leaks, severe RDS, extreme prematurity at 24 weeks
37+1	**2140grams**	Day 4	Ex-utero transfer from HDUHB, Heterozygous for 1p36.33 duplication syndrome (ATAD3 gene cluster) autosomal dominant, lethal mutation - from genetic WINGS testing

1c. Late neonatal Deaths (death occurring > 7th day until 28 completed days of life)

Gestation	Birth weight	Age at death	Diagnosis
22+3	505grams	Day 8	Klebsiella sepsis/multi organ failure and Extreme preterm at 22 weeks
23+4	502grams	Day 13	Extreme prematurity at 23+4 weeks gestation and Staph Warneri bacteraemia

1d. Post neonatal Death (death after 28 days of life

Gestation	Birth weight	Age at death	Diagnosis
28+2	600grams	Day 35	Necrotising enterocolitis with Severe Chronic Lung Disease and Prematurity with severe IUGR,

1e. Born at Home and received no NICU care

Gestation	Birth weight	Age at death	Diagnosis
28+0	1140grams	Born at Home	Potter's Syndrome, Anhydramnios, PPROM @ 15 weeks, Prematurity

1f. Death after discharge or transfer to another unit – NONE

Table 2. MBRRACE report for last 6 years (Neonatal deaths of babies born after 24 weeks of gestation who died before 28 completed days

Year of Birth	2019	2020	2021	2022	2023	2024
Number of Births	3577	3420	3483	3384	3337	3316
Early Neonatal Deaths (inborn)	6	1	6	2	5	6
Late Neonatal Deaths (inborn)	5	2	6	1	4	0

Stabilised and adjusted neonatal Mortality rate	2.24	1.52	2.46	1.62	2.10	Awaiting MBRRACE report

Completed Actions and Learning identified following 2024 Mortality reviews

- Capture a family/parallel planning slide in the body of the mortality template slides
- Resuscitation proforma developed and implemented in October 2025 for use
- Challenges with inequity of surgical, fetal medicine team support during Network reviews - escalated to Network
- All in hospital transfers are to be carried out by members of the transport team

Positive Points

- Very good at obtaining specialist MDT input in complex cases
- Good documentation surrounding collaborative parental involvement in re-direction of care in extremely high-risk infants.

Learning points

- Documentation is inconsistent; either excellent or absent in different areas –
    - Resus proforma implemented to improve resuscitation and transfer documentation.
    - Regular monitoring of parental documentation shows improvement

MBRRACE UK Reporting

Data continues to be entered into the MBRRACE system. A detailed SOP was implemented to improve timely MBRRACE notification. Provisional data shows improvement but awaiting for official report.

Conclusion:

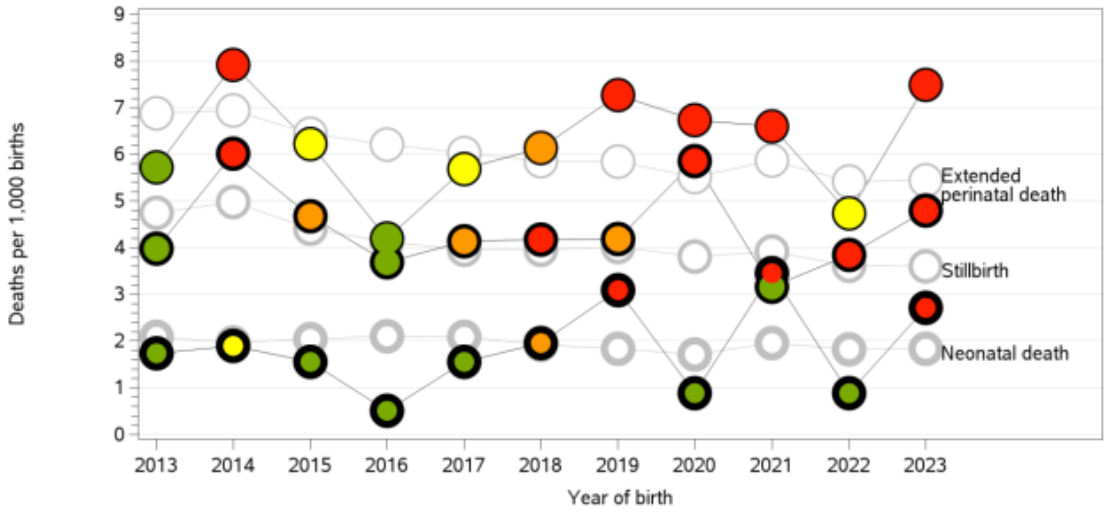
This report reflects the ongoing efforts to improve neonatal care through the detailed review of mortality cases, identifying areas for improvement, and recognizing successes in the care provided.

Stabilised and adjusted mortality rates by year of birth up to 2023 (*2024 report awaited)

Crude mortality by year of birth (all deaths)

Crude mortality rates for each type of death compared to the average mortality rate for Trusts and Health Boards in the same comparator group (shown in grey) by year of birth.

Due to updates to the data, these results might differ slightly from those in previous reports.



National Neonatal Audit Project (NNAP) Report

Compiled by: Dr Amit Kandhari, Consultant Neonatologist

This summary report displays the quality and completeness of the NNAP data entered by the Singleton Hospital Neonatal Unit between 1 January 2024 and 31 December 2024 and how the care provided has been categorised in relation to the NNAP standards.

1. **Does a mother who delivers a baby between 23 and 33 weeks' gestational age receive a full course of antenatal corticosteroids within one week prior to delivery?**

There were 101 eligible mothers identified for inclusion in this audit measure for our unit. Of the mothers with a recorded outcome, **42.6%** were given a full course of antenatal steroids; this was below the national average, but within 2 standard deviation limits, where **51.8%** of mothers were given a full course of antenatal steroids.

2. **Is a mother who delivers a baby between 22 and 30 weeks' gestational age given magnesium sulphate in the 24 hours prior to delivery?**

There were 31 eligible mothers identified for inclusion in this audit measure. Of the mothers with a recorded outcome, **96.8%** were given magnesium sulphate in the 24 hours prior to delivery; this was well above the national average, where **86.7%** of eligible mothers were given magnesium sulphate.

3. **Does a baby born between 22 and 33 weeks' gestational age have their cord clamped at or after one minute?**

There were 114 babies included in this audit measure. Of the babies with a recorded outcome, **74.6%** had their cord clamped at or after one minute (deferred cord clamping); this was just above the national average, where **73.5%** of eligible babies had deferred cord clamping.

4. **Does an admitted baby born between 22 and 33 weeks' gestational age have its first measured temperature of 36.5–37.5°C within one hour of birth?**

There were 114 babies born at less than 33 weeks included in this audit measure. Of the babies with a recorded outcome, **90.4%** had their first measured temperature of 36.5–37.5°C within one hour of birth. We were outstanding positive outliers in this measure, where, nationally **77.6%** of eligible babies had their first measured temperature of 36.5–37.5°C within one hour of birth.

5. **Is there a documented consultation with parents by a senior member of the neonatal team within 24 hours of every admission?**

There were 463 episodes of care that were eligible for inclusion in this audit measure. The first consultation following admission occurred within 24 hours for **98.3%** of the eligible episodes with a recorded outcome. This was above the national average, where **94.6%** of eligible episodes had the first consultation within 24 hours of admission.

6. **What proportion of baby care days had a consultant-led ward round with at least one parent included?**

There were 5948 baby ward days eligible for inclusion in this audit measure, of which 5941 had data about a ward round recorded. A parent was present in **48.6%** of recorded ward rounds. This was well above the national average, where **36%** of recorded consultant-led ward rounds had at least one parent present.

7. **Does a baby born at less than 31 weeks' gestational age, or weighing less than 1501g at birth undergo the first retinopathy of prematurity (ROP) screening according to the guideline?**

There were 55 babies born with a birth weight less than 1501g or with a gestational age at birth less than 31 weeks who were assigned to our unit for ROP screening. **92.7%** of these babies were screened on time in accordance with the UK screening of ROP guideline; this was above the national average, where **80%** of eligible babies had their screening performed on time.

8. **Does a baby born between 22 and 31 weeks' gestational age have one or more episodes of bloodstream infection after 72 hours of age?**

In our unit 74 eligible babies of less than 32 weeks' gestational age were admitted. A balancing analysis has been conducted for LNUs, surgical NICUs, and non-surgical NICUs, including only units who provided assurance of the accuracy of their data. This matching analysis at unit level uses gestational age as the single matching variable. Treatment effect is the difference between the observed and balanced proportions. Therefore, a negative treatment effect indicates that the babies fared better in the unit than they would have done elsewhere in the country, whereas a positive treatment effect indicates that the babies would have fared better, had they been treated elsewhere. In our unit, **9.5% (15% previous year)** of babies born less than 32 weeks gestational age had one or more pure growths of a clearly pathogenic organism. This was above the national average of **5.1%**, but within the two standard deviation limits. The treatment effect for our unit was **3.6 (10.5 previous year)**. Overall, there has been reduction in number of episodes of bloodstream infection, as well as improvement in treatment effect

9. **Does an admitted baby born at less than 32 weeks develop bronchopulmonary dysplasia (BPD) or die?**

NNAP describes the observed number of infants who had BPD or died, and a "matched proportion", which is the proportion of BPD or death of the national group of babies with baseline characteristics weighted to match to those in the unit of interest. Comparing the matched proportion to the observed proportion allows calculation of a "treatment effect". Treatment effect is the difference in the observed and matched proportion. A negative treatment effect suggests that the babies fared better in the unit than they would have done elsewhere in the country, and a positive treatment effect suggests that the babies would have fared better had they been treated elsewhere. There were 66 eligible babies in our unit who were included in the analysis for BPD. Of these babies **43.9%** either died or had BPD. Even though this was higher as compared to the national average of **39.8%**, there has been an overall improvement on this composite outcome. There is also an improvement in treatment effect which has come down to **0.2**.

10. **Does an admitted baby born at less than 32 weeks' gestational age meet the NNAP surveillance definition for necrotising enterocolitis (NEC) on one or more occasions?**

For this outcome, babies are assigned to the unit of presence at the age of 48 hours as a proxy measure of the unit that was intended to provide ongoing care for them. There were 84 babies born at less than 32 weeks and survived to 48 hours after birth in our unit. Of those with a recorded outcome, only one baby (**1.2%**) had a confirmed case of NEC on one or more occasions. This is lower compared to the national average of **5.1%** of eligible babies. The treatment effect for our unit was **-3.4**.

11. **Does a baby born between 22 and 33 weeks' gestational age receive any of their own mother's milk at discharge to home from a neonatal unit?**

There were 56 babies born at less than 34 weeks who met the criteria for inclusion in our unit. Of the eligible babies **64.3% (57% previous year)** were receiving mother's milk exclusively or as part of their feeding at the time of their discharge. This was just below the national average of **65.8%**.

12. **Does a baby born between 22 and 33 weeks' gestational age receive any of their own mother's milk at day 14 of life?**

There were 120 babies born at less than 34 weeks who met the criteria for inclusion in our unit. Of the babies with a recorded outcome, **82.5%** were receiving mother's milk exclusively, or as part of their feeding at day 14; this was above the national average of **80.8%**.

13. Does a baby born at less than 34 weeks' gestational age receive any of their own mother's milk in the first two days of life?

There were 113 babies born at less than 34 weeks who met the criteria for inclusion in our unit. **86.7%** of these infants received their mother's milk exclusively, or as part of their feeding within the first two days of life. We were outstanding positive outliers as compared to the national average of **66.8%**.

14. Does a baby born between 22 and 29 weeks' gestational age receive medical follow-up at two years corrected age (18-30 months gestationally corrected age)?

There were 20 babies born at less than 30 weeks between July 2021 and June 2022 who have been attributed to our hospital for two-year health assessment in 2024, based on the unit of their final neonatal discharge. Data was entered for **100%** of the babies assigned to our unit; this was above the national average, where **77.9%** of eligible babies.

15. What proportion of babies born between 22 and 31 weeks' gestational age only receive non-invasive breathing support during the first week of life?

There were 60 babies born at less than 32 weeks who met criteria for inclusion in our unit. Of the eligible babies, **58.3%** received only non-invasive breathing support during the first week of life. This was well above the national average of **51.7%**. The treatment effect of our unit was **-1.4%**.

16. What proportion of nursing shifts are numerically staffed according to guidelines and service specification?

In our unit, **81.7%** of shifts were numerically staffed according to national guidelines and service specification. This was similar to the national average of **81.5%.**

17. Does a baby born at less than 32 weeks' gestation experience intraventricular haemorrhage (IVH) grades 3 or 4, or die?

In our unit, **18.2%** of eligible babies had a grade 3 or 4 IVH or died. This was above the national average of **13.4%**, which however was deemed inaccurate. According to NNAP summary report for 2024 data, there were 530 babies whose data was missing. This missing data could skew the national average, potentially underestimating the true rate of severe IVH or death.

18. Does a baby born at less than 32 weeks' gestation experience cystic periventricular leukomalacia (cPVL) or die?

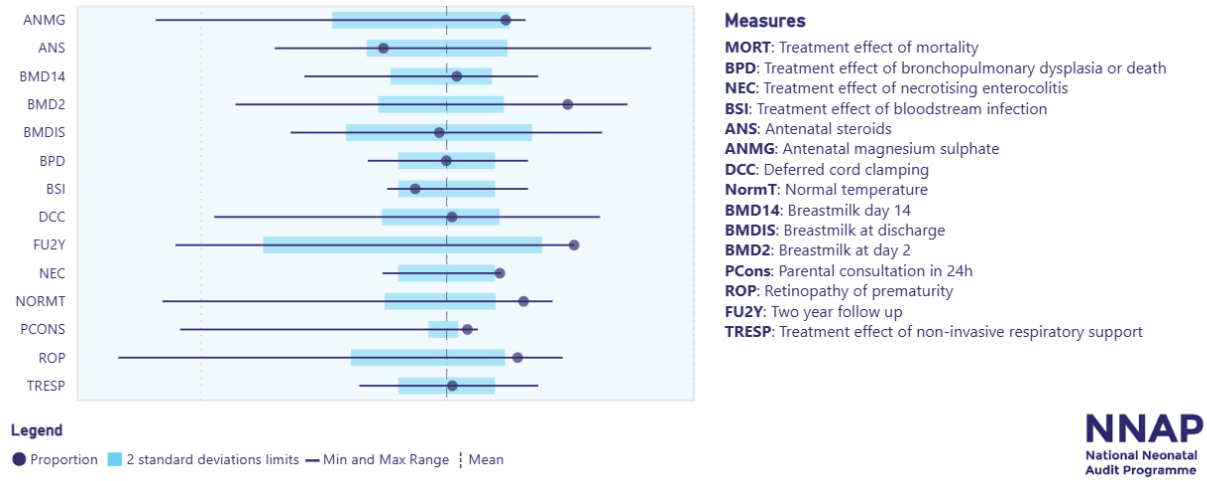
In our unit, **13.6%** of eligible babies had cPVL or died. This is above the national average of **10.4%**, however we did not have any cases of cPVL, so the result is related to our mortality

rate. Additionally, the high proportion of missing data across different UK units undermines the accuracy of the published data, as above.

19. Does a baby born at less than 32 weeks' gestation experience post-haemorrhagic ventricular dilatation (PHVD) or die?

In our unit, **13%** of eligible babies had PHVD or died. This is above the national average of **11%**. As described above, the high proportion of missing data across different UK units undermines the accuracy of the published data and makes this result unreliable.

Singleton Hospital spine plot for 2024 data



The performance of our unit on each measure is shown with a coloured disk positioned on a horizontal line for each measure. The horizontal line extends from the lowest to the highest value for that measure among all units. Proportions are scaled so the overall mean for each measure is aligned along a single vertical line, with better performance oriented to the right-hand side. The grey bar indicates two standard deviations either side of the overall proportion. The measures of NEC, BSI and BPD or death are represented by treatment effect.

Your baby's care

Measuring standards and improving neonatal care

NNAP
National Neonatal Audit Programme

Singleton Hospital takes part in the National Neonatal Audit Programme (NNAP) which reports on aspects of care given to babies on neonatal units. This poster shows how selected 2024 results for this hospital compared with overall (England, Scotland, Wales, and the Isle of Man) performance.

How our unit did across 12 NNAP measures:

Antenatal magnesium sulphate

Overall, **86.7%** of mothers of babies born at less than 30 weeks were given antenatal magnesium sulphate

Unit Rate: 96.8%

Antenatal steroids

Overall, **51.8%** of mothers of babies born at less than 34 weeks were given a full course of antenatal steroids in the week before delivery

Unit Rate: 42.6%

Noninvasive ventilation

Overall, **51.7%** of babies born at less than 34 weeks received noninvasive ventilation on all of the first 7 days of life

Unit Rate: 58.3%

Breastmilk feeding in the first two days

Overall, **66.8%** of babies born at less than 34 weeks received their mother's milk in the first 2 days of life

Unit Rate: 86.7%

Breastmilk feeding at discharge

Overall, **65.8%** of babies born at less than 34 weeks received their mother's milk at discharge home

Unit Rate: 64.3%

Bronchopulmonary dysplasia (BPD)

Overall, **39.8%** of babies born at less than 32 weeks developed BPD or died

Unit Rate: 43.9%

Deferred cord clamping

Overall, **73.5%** of babies born at less than 34 weeks had their cord clamped at or after one minute

Unit Rate: 74.6%

Temperature on admission

Overall, **77.6%** of babies born at less than 32 weeks were admitted within the recommended range of 36.5°C-37.5°C

Unit Rate: 90.4%

Parental consultation within 24 hours

Overall, **94.6%** of parents had a documented consultation with a senior member of the neonatal team within 24 hours of their baby's admission

Unit Rate: 98.3%

Parent inclusion on consultant ward rounds

Overall, **36.0%** of baby care days had a consultant-led ward round with at least one parent included

Unit Rate: 48.6%

Screening for retinopathy of prematurity (ROP)

Overall, **80.0%** of eligible babies were screened on time for ROP

Unit Rate: 92.7%

Neonatal nurse staffing

Overall, **81.5%** of nursing shifts were staffed according to recommended levels

Unit Rate: 81.7%

Find out more.

To find out more about how we use your baby's information, please visit www.rcpch.ac.uk/nnap or scan the QR code with your phone

Measures listed as "N/A" are either masked to reduce the risk of deductive disclosure, or had no eligible babies in 2024

RCPCH
Royal College of Paediatrics and Child Health
Leading the way in Children's Health

Summary of 2024 key achievements and challenges

Singleton Hospital Neonatal Unit continues to deliver high-quality care with notable improvements in infection rates and feeding practices. While certain areas require focused interventions, overall performance reflects a commitment to excellence and alignment with NNAP standards.

Key Highlights

- **Outstanding positive outlier** in three audit domains**,** breast feeding on day 2, two year follow-up and normal temperature on admission within an hour.
- **Positive outlier** in majority domains
- **Bloodstream Infection:** Reduced from 15% (2023) to 9.5%, though still above national average (5.1%).
- **BPD:** Treatment effect has significantly improved from 2.1 to 0.2.
- **Severe IVH, cPVL and PHVD or death:** Our rates were slightly above the national average, however in view of a high percentage of missing data across the UK, it is difficult to draw any valid conclusions.
- **Breastfeeding Support:** Significant improvement at discharge (64.3% vs 57% previous year).

Challenges

- **Targeted improvement in antenatal steroid administration** through enhanced obstetric-neonatal collaboration (PERIprem Cymru).
- **Focus on further reduction in BPD and bloodstream infections** via perinatal optimisation and QI initiatives.
- **Sustain gains in parental involvement and early breast milk feeding** through continued family-integrated care initiatives.

The Vermont Oxford Network Annual Report for Singleton NICU in 2024

Compiled by: Dr Vanessa Makri, Consultant Neonatologist

The Vermont Oxford Network (VON), established in 1988, is a non-profit voluntary collaboration of professionals involved with neonatal care. It is comprised of teams of health professionals representing neonatal intensive care units and level I and II care centres around the world. Its mission is to improve the quality and safety of medical care for newborn infants and their families through a coordinated program of research, education and Quality improvement (QI) projects.

The VON maintains databases on Very Low Birth Weight (VLBW) infants and infants meeting other eligibility requirements. In 1989, 34 NICU teams began submitting data to the Network. Currently, VON includes >1,200 centres around the globe that voluntarily submit data about the care and outcomes of high-risk newborn infants. These include many centres around the globe. The VON databases hold critical information on **more than 4.1 million infants**. It serves as a neutral, independent party in analyzing data for the member centres and facilitating voluntary benchmarking activities. The databases are used to provide comprehensive, confidential reports that serve as a critical foundation for local QI projects for participating centres.

Infants are eligible for the VLBW database, if their birth weight is less than or equal to 1500 grams or their gestational age is less than or equal to 29 weeks 6 days and are admitted to or die in any location at a participating center within 28 days of birth. Infants who die in the delivery room or before admission to NICU, but within the weight and gestation limits, are also included. There are **28 current participating centres in the UK**, contributing more than 2000 infants per annum to the VLBW database. Since 2014 all neonatal units in the **South Wales Neonatal Network**, including the LNUs, have enrolled in the VON. Singleton Hospital has participated in the VON since 2007, thus enabling the data to be benchmarked nationally and internationally.

In 2024, Singleton Hospital registered 82 infants in the VLBW Database, of which 81 infants weighed 500 to 1500 grams at birth. The remaining infant weighed > 1500 grams. Overall, 1,105 centres registered 58,673 infants.

Definitions

The centre-specific data provided include: the number of infants with the characteristic, outcome or intervention, the total number of eligible infants and the unadjusted percentage of the total number of cases. Cases: Number of babies who experienced the outcome (numerator) N: All infants to whom the data item applies (denominator).

The Network data includes the unadjusted number and percentage of all infants with the characteristic, outcome or intervention. Additionally, the percentages for all centres

contributing data are ordered and this provides the 25th percentile value (Q1), the 50th percentile value (Median), and the 75th percentile value (Q3). Of all centres, 25% have averages at or below the Q1 and 25% have averages at or above the Q3.

Key outcomes are reported as Observed minus Expected (O-E), i.e., number of observed cases for the outcome at the centre minus the number of cases expected for the outcome based on the centre's case mix. The number of expected cases comes from a multivariable risk adjustment model, and the O-E values have been corrected to account for random variation. The lower bound (LB) and upper bound (UB) represent the 95% confidence limits around the O-E estimate. **A negative value for O-E indicates** that fewer cases were observed than expected, while **a positive value indicates** that more cases were observed.

A Shrunken standardized morbidity or mortality ratio (SMR) and its upper and lower bounds indicate whether the centre has more or fewer infants with the outcome than would be expected given the characteristics of infants treated at that centre. It is calculated as observed / expected. Shrunken estimates are a weighted average between the calculated SMR and the mean of all SMRs for the Network. **If the upper bound of the SMR is < 1,** the centre has fewer infants with the outcome than expected. **If the lower bound of the SMR is > 1,** the centre has more infants with the outcome. **If the lower and upper bounds include 1,** then the number of infants with the outcome was not significantly different from the number of infants expected, after adjusting for the characteristics of the infants treated.

Obstetric measures and infant characteristics - all VLBW infants 2024

Measure	Singleton (%:cases/N#) Total N = 82	UK (% : cases/N#) Total N = 1438	VON (% : cases/N#) Total N = 58,673
Inborn	78	80	88
Male	43	51	51
White	84	64	36
Prenatal Care	100	99	95
Maternal hypertension	21	16	39
Chorioamnionitis	6	11	13
Antenatal Steroids, Inborn	98	93	86
Antenatal MgSO4, Inborn, GA 22-29 weeks	94	87	73
Caesarean section	71	69	74
Multiple Gestation	17	26	24
Any Major Birth Defect	2	5	7
Small for Gestational Age*	22	18	22

N# = number in denominator where variable applies

*Small for gestational age defined as <10th percentile for birth weight for USA standards

Initial resuscitation and temperature on admission to NICU – all VLBW infants 2024

Measure	Singleton inborn infants (% : cases/N#)	UK (% : cases/N#)	VON (% : cases/N#)
Apgar at 1 minute < 4	19	21	27
CPAP in delivery room	80	50	60
Intubation in delivery room	25	40	33
Oxygen use in delivery room	91	91	87
Temperature 36.5-37.5, Inborn	92	83	64

Center 763 - Very Low Birth Weight Infants Born in 2024: At Birth

	Center			All Infants		All Hospitals		Trend
	Cases	N	%	N	%	Median	(Q1, Q3)	'20 '21 '22 '23 '24
Antenatal Steroids	75	82	91.5	58,284	83.1	84.3	(76.3, 90.5)	
Multiple Gestation	14	82	17.1	58,659	23.8	22.2	(15.6, 28.9)	
Cesarean Section	58	82	70.7	58,538	74.1	75.8	(69.2, 83.3)	
Congenital Anomaly	2	82	2.4	58,635	7.4	3.9	(0.0, 8.6)	
Small for Gestational Age	18	82	22.0	56,633	21.7	20.6	(15.0, 27.0)	
APGAR at 1 Minute <4	18	81	22.2	57,539	28.0	24.8	(15.4, 34.4)	
Admission Temperature <36° C	2	82	2.4	54,261	9.6	3.3	(0.0, 10.5)	
Any Initial Resuscitation	80	82	97.6	58,513	91.5	93.3	(88.1, 97.8)	
Chorioamnionitis	5	82	6.1	57,880	13.3	7.0	(0.0, 17.7)	
Maternal Hypertension	17	82	20.7	58,150	39.2	37.5	(28.1, 46.8)	

	Weight - Grams (%)				Gestational Age - Weeks (%)				
	< 751	751-1000	1001-1250	> 1250	< 24	24-26	27-29	30-32	> 32
Antenatal Steroids	93.3	93.3	93.3	89.2	75.0	84.6	89.3	96.8	100.0
Multiple Gestation	0.0	20.0	6.7	27.0	0.0	15.4	0.0	25.8	66.7
Cesarean Section	60.0	53.3	73.3	81.1	0.0	69.2	57.1	90.3	83.3
Congenital Anomaly	0.0	13.3	0.0	0.0	0.0	0.0	3.6	3.2	0.0
Small for Gestational Age	33.3	6.7	33.3	18.9	0.0	0.0	14.3	29.0	83.3
APGAR at 1 Minute <4	46.7	6.7	28.6	16.2	75.0	46.2	18.5	9.7	16.7
Admission Temperature <36° C	0.0	0.0	6.7	2.7	0.0	0.0	3.6	3.2	0.0
Any Initial Resuscitation	100.0	100.0	93.3	97.3	100.0	100.0	100.0	96.8	83.3
Chorioamnionitis	6.7	13.3	0.0	5.4	0.0	15.4	3.6	3.2	16.7
Maternal Hypertension	26.7	6.7	26.7	21.6	0.0	7.7	17.9	35.5	0.0

Key Performance Measures – all VLBW infants 2024

Measure	Singleton (% : cases/N#)	VON-Similar level NICUs (% : cases/N#)	UK (% : cases/N#)	VON (% : cases/N#)
Chronic Lung Disease <33 wks	24	26	32	30
Any late infection	12	8	13	11
NEC	2	4	5	6
Spontaneous intestinal perforation	2	3	4	3
Severe IVH (grade 3 or 4)	5	7	7	8
Cystic PVL	1	2	2	3
Severe Retinopathy (> stage 2)	3	4	9	6
Mortality	6	14	12	16
Death or Morbidity	32	41	42	46

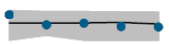
Respiratory care and outcomes – all VLBW infants 2024

Measure	Singleton (% : cases/N#)	UK (% : cases/N#)	VON (% : cases/N#)
Oxygen	95	93	89
Any ventilation	54	57	53
Surfactant	56	64	57
Nasal CPAP	90	81	79
High flow nasal cannula therapy	100	97	74
Ventilation after early CPAP	42	43	40
High frequency ventilation	18	16	24
Inhaled nitric oxide	11	9	8
Pneumothorax	4	4	4
Steroids for CLD (early or late)	11	13	14
Oxygen at 28 days	56	62.5	48
Oxygen at 36 weeks	29	37	33
Oxygen at discharge home	18	20	12

Infection – all VLBW infants 2024

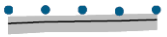
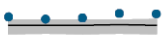
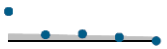
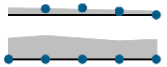
Measure	Singleton (% : cases/N#)	UK (% : cases/N#)	VON (% : cases/N#)
Early bacterial sepsis	0	0.5	1
Coagulase negative Staphylococcus infection (CONS)	2.5	7	4
Late bacterial infection (not CONS)	10	7	7
Fungal infection	0	0.5	1

Center 763 - Very Low Birth Weight Infants Born in 2024: Key Performance Measures

	Center			All Infants		All Hospitals		Trend	Adjusted	
	Cases	N	%	N	%	Median	(Q1, Q3)	'20 '21 '22 '23 '24	O-E	(LB, UB)
Mortality	5	81	6.2	57,484	16.0	13.9	(8.3, 20.0)		-2	(-5, 3)
Mortality Excluding Early Deaths	4	80	5.0	54,295	11.1	9.0	(4.5, 14.3)		-1	(-4, 2)
Death or Morbidity	26	81	32.1	57,266	45.8	41.2	(29.4, 52.0)		-2	(-10, 6)
Any Late Infection	11	81	13.6	53,600	11.5	8.2	(1.2, 14.3)		2	(-3, 8)
Necrotizing Enterocolitis	2	82	2.4	56,187	5.6	3.4	(0.0, 7.1)		-2	(-4, 2)
Chronic Lung Disease <33 Weeks	15	63	23.8	43,568	30.0	23.1	(11.1, 36.4)		1	(-5, 8)
Pneumothorax	3	82	3.7	56,202	4.3	2.9	(0.0, 5.8)		0	(-1, 2)
Severe IVH	4	82	4.9	49,968	8.0	6.0	(0.0, 10.2)		0	(-2, 2)
Cystic PVL	1	82	1.2	51,973	2.6	0.0	(0.0, 3.2)		-1	(-2, 2)
Severe ROP	2	75	2.7	41,371	6.1	2.6	(0.0, 7.5)		0	(-1, 2)

	Weight - Grams (%)				Gestational Age - Weeks (%)				
	< 751	751-1000	1001-1250	> 1250	< 24	24-26	27-29	30-32	> 32
Mortality	33.3	0.0	0.0	0.0	75.0	8.3	3.6	0.0	0.0
Mortality Excluding Early Deaths	28.6	0.0	0.0	0.0	66.7	8.3	3.6	0.0	0.0
Death or Morbidity	80.0	40.0	33.3	8.3	100.0	75.0	35.7	9.7	0.0
Any Late Infection	42.9	13.3	13.3	2.7	66.7	23.1	14.3	6.5	0.0
Necrotizing Enterocolitis	13.3	0.0	0.0	0.0	0.0	0.0	3.6	3.2	0.0
Chronic Lung Disease <33 Weeks	55.6	33.3	21.4	10.7	*	66.7	34.8	3.2	*
Pneumothorax	13.3	0.0	6.7	0.0	0.0	7.7	3.6	3.2	0.0
Severe IVH	13.3	6.7	6.7	0.0	25.0	23.1	0.0	0.0	0.0
Cystic PVL	0.0	0.0	6.7	0.0	0.0	7.7	0.0	0.0	0.0
Severe ROP	11.1	0.0	0.0	2.7	*	18.2	0.0	0.0	0.0

Center 763 - Very Low Birth Weight Infants Born in 2024: Procedures and Interventions

	Center			All Infants		All Hospitals		Trend
	Cases	N	%	N	%	Median	(Q1, Q3)	'20 '21 '22 '23 '24
Surfactant at Any Time	46	82	56.1	58,614	56.6	57.1	(46.5, 67.9)	
Any Ventilation	44	82	53.7	56,174	53.4	52.5	(40.0, 64.3)	
Caffeine for Any Reason	81	82	98.8	55,580	86.8	88.6	(79.2, 94.0)	
Inhaled Nitric Oxide	9	82	11.0	56,160	7.9	3.7	(0.0, 9.2)	
Any ROP Exam	75	82	91.5	56,118	73.8	72.7	(58.3, 82.1)	
ROP Surgery	0	82	0.0	55,952	1.6	0.0	(0.0, 1.3)	
PDA Surgery	0	82	0.0	55,974	2.7	0.0	(0.0, 2.6)	
NEC Surgery	1	82	1.2	56,180	3.5	0.0	(0.0, 3.7)	
Other Surgery	0	82	0.0	56,068	7.7	0.0	(0.0, 7.1)	
Cranial Imaging	82	82	100.0	56,167	89.0	90.0	(78.3, 96.4)	

	Weight - Grams (%)				Gestational Age - Weeks (%)				
	< 751	751-1000	1001-1250	> 1250	< 24	24-26	27-29	30-32	> 32
Surfactant at Any Time	80.0	73.3	53.3	40.5	100.0	100.0	67.9	32.3	0.0
Any Ventilation	93.3	80.0	46.7	29.7	100.0	100.0	71.4	22.6	0.0
Caffeine for Any Reason	100.0	100.0	100.0	97.3	100.0	100.0	100.0	100.0	83.3
Inhaled Nitric Oxide	26.7	6.7	13.3	5.4	50.0	7.7	14.3	6.5	0.0
Any ROP Exam	60.0	93.3	100.0	100.0	0.0	84.6	96.4	100.0	100.0
ROP Surgery	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PDA Surgery	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEC Surgery	0.0	0.0	6.7	0.0	0.0	0.0	3.6	0.0	0.0
Other Surgery	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cranial Imaging	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Cranial imaging and outcomes – all VLBW infants 2024

Measure	Singleton (% : cases/N#)	UK (% : cases/N#)	VON (% : cases/N#)
Cranial imaging	100	98	89
Any IVH	21	32	28
IVH (grade 1 or 2)	16	26	20

Retinopathy of prematurity – all VLBW infants 2024

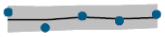
Measure	Singleton (% : cases/N#)	UK (% : cases/N#)	VON (% : cases/N#)
Retinal exam	92	74	74
Any Retinopathy	3	25	31
Retinopathy requiring surgery	0	4	2
Retinopathy requiring anti-VEGF	1	4	3

Feeding and growth at discharge – all VLBW infants 2024

Measure	Singleton (% : cases/N#)	UK (% : cases/N#)	VON (% : cases/N#)
Discharged Home - Any human milk	68	61	60
Human milk only	47	28	10
Human milk & fortifiers/formula	21	33	49
Formula only	29	35.5	39
Infants Transferred – Any human milk	88	77	65
Human milk only	33	42	18
Human milk & fortifiers/formula	56	34	47
Formula only	2	13	20
Weight at initial disposition - <3rd centile Fenton* charts	23	33	29
<10th centile Fenton* charts	40	57	50
Head growth at initial disposition - <3rd centile Fenton* charts	10.5	21	17
<10th centile Fenton* charts	30	39.5	35

*Fenton's Growth Chart for Preterm Infants; http://www.biomedcentral.com/1471-2431/3/13

Center 763 - Very Low Birth Weight Infants Born in 2024: At Discharge Home

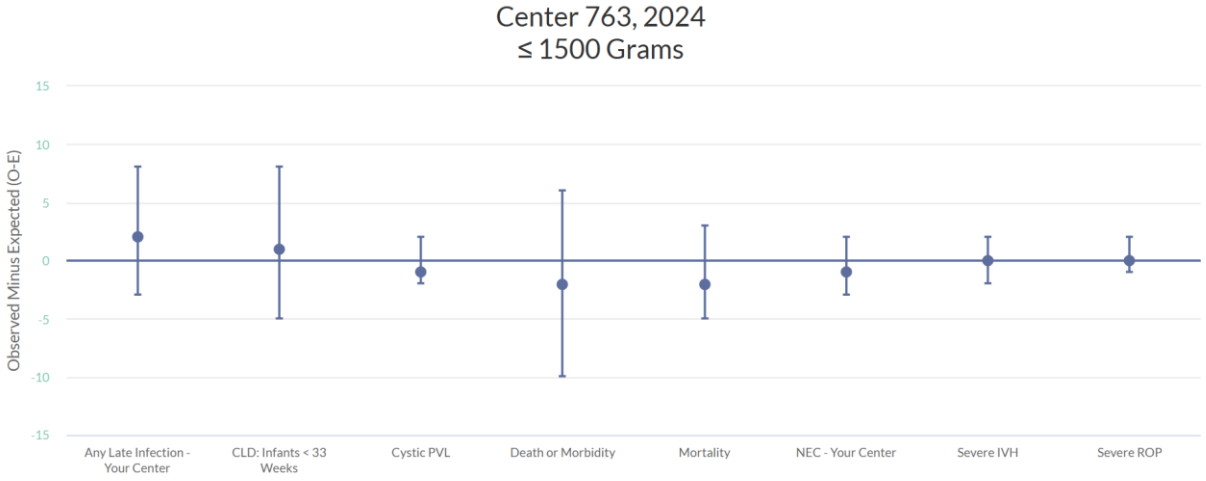
	Center			All Infants		All Hospitals		Trend
	Cases	N	%	N	%	Median	(Q1, Q3)	'20 '21 '22 '23 '24
Any Human Milk	23	34	67.6	42,470	59.6	63.0	(50.0, 80.0)	
Oxygen	6	34	17.6	42,475	12.2	4.9	(0.0, 12.8)	
Monitor	3	34	8.8	42,381	11.4	4.5	(0.0, 12.3)	
Discharge Weight <3rd Pctl.	11	31	35.5	38,170	29.7	27.3	(18.9, 40.0)	
Head Circumference <3rd Pctl.	3	31	9.7	35,754	15.6	11.9	(5.0, 20.0)	
Discharge Weight <10th Pctl.	19	31	61.3	38,170	51.1	50.0	(40.0, 66.0)	
Head Circumference <10th Pctl.	8	31	25.8	35,754	33.3	30.4	(20.0, 42.2)	

	Weight - Grams (%)				Gestational Age - Weeks (%)				
	< 751	751-1000	1001-1250	> 1250	< 24	24-26	27-29	30-32	> 32
Any Human Milk	100.0	71.4	44.4	75.0	*	50.0	66.7	66.7	100.0
Oxygen	50.0	42.9	22.2	0.0	*	50.0	44.4	4.8	0.0
Monitor	0.0	14.3	22.2	0.0	*	50.0	11.1	4.8	0.0
Discharge Weight <3rd Pctl.	100.0	0.0	50.0	31.3	*	0.0	14.3	40.0	100.0
Head Circumference <3rd Pctl.	50.0	0.0	25.0	0.0	*	0.0	0.0	15.0	0.0
Discharge Weight <10th Pctl.	100.0	40.0	62.5	62.5	*	0.0	42.9	70.0	100.0
Head Circumference <10th Pctl.	100.0	0.0	37.5	18.8	*	0.0	14.3	30.0	50.0

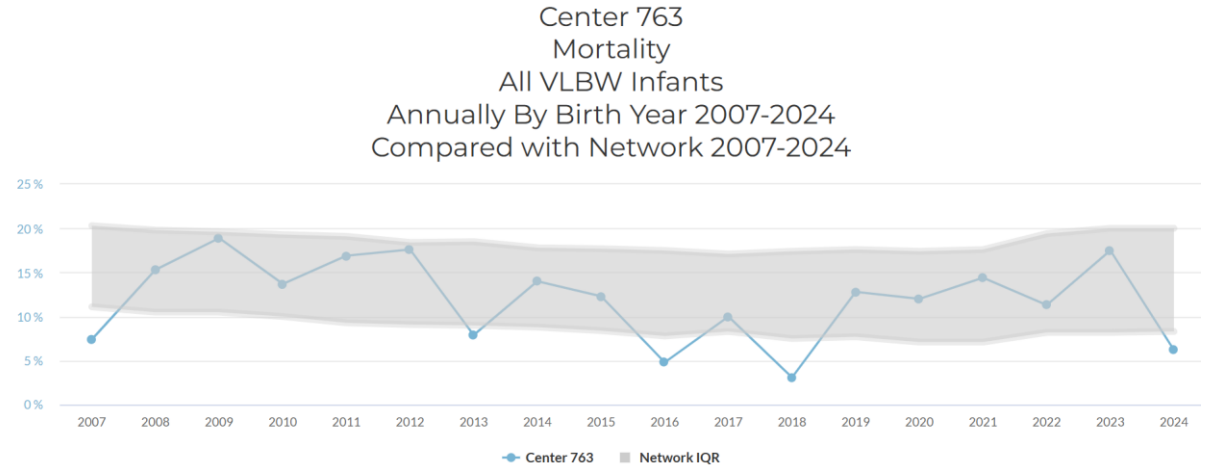
Days to Initial LOS (All Infants)	Center			All Infants		All Hospitals		Trend
	N	Mean	Median	N	Mean	Median	(Q1, Q3)	'20 '21 '22 '23 '24
Home	32	56	44	41,414	70	62	(53, 73)	
Transfer	45	34	27	7,933	49	38	(19, 56)	
Died	5	18	8	8,811	13	7	(3, 15)	
All	82	42	36	58,158	59	52	(40, 61)	

Adjusted Data and Time Series compared with VON Network

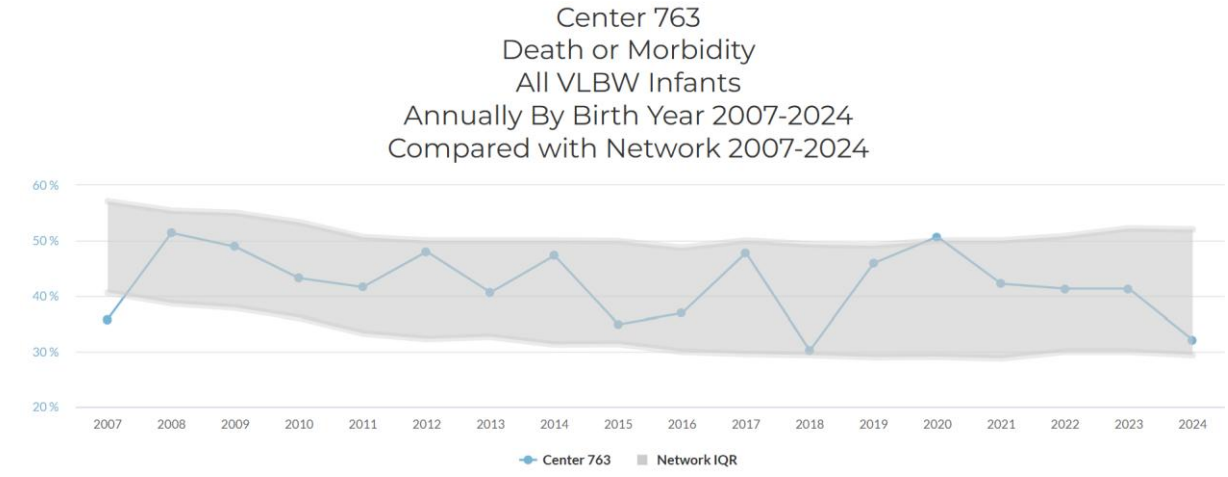
- Schrunken Risk adjusted key performance measures in 2024 (Infants ≤ 1500 grams)



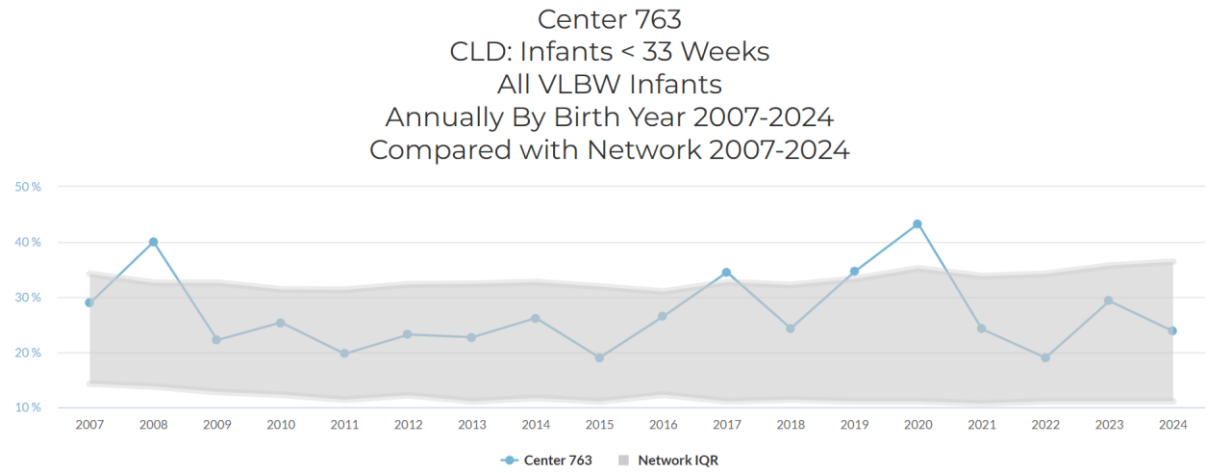
- Time series for Mortality (Infants 501 to 1500 grams)



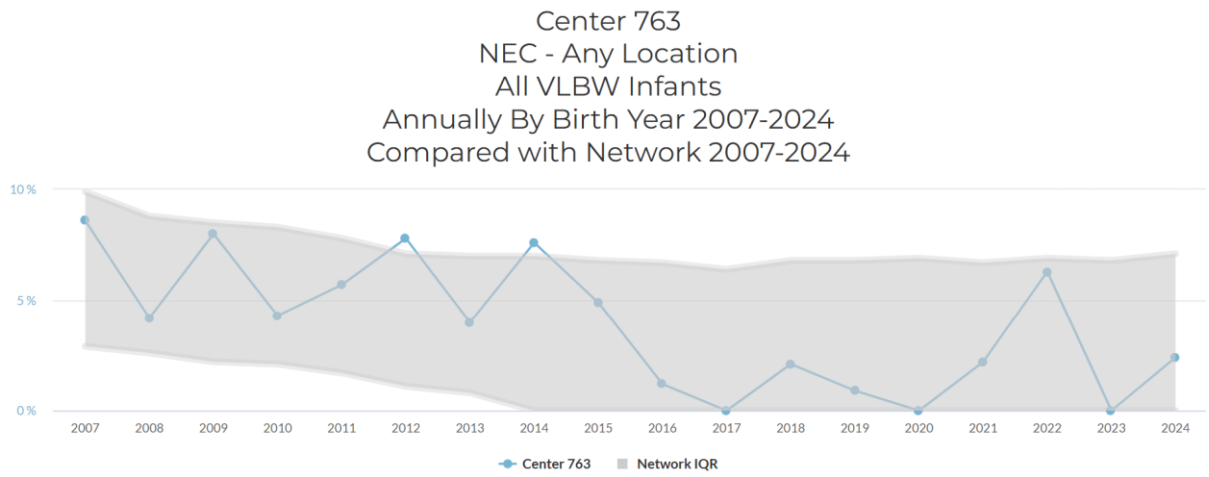
- Time series for Death or Morbidity (Infants 501 to 1500 grams)



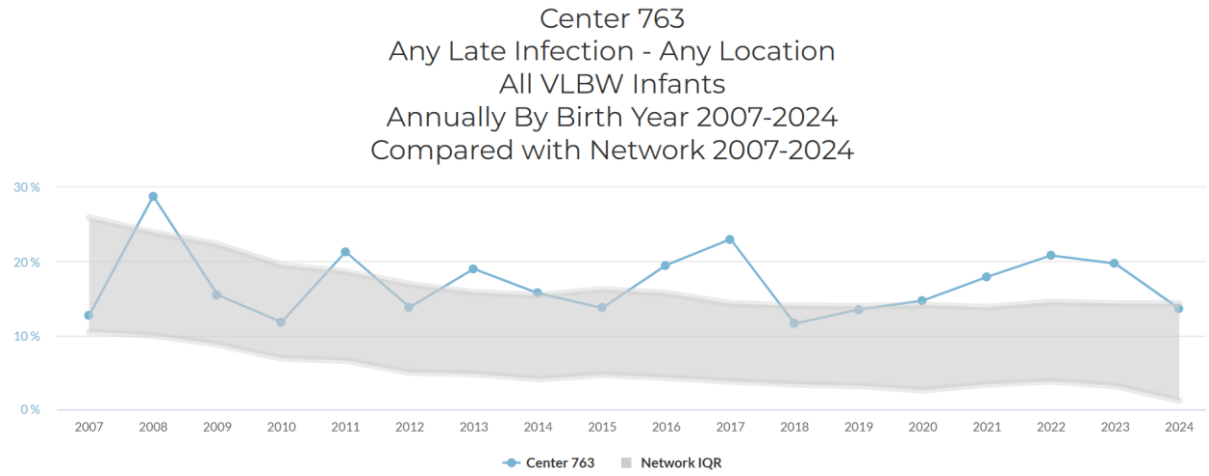
- Time series for Chronic Lung Disease (CLD) in infants < 33 weeks (All VLBW Infants)



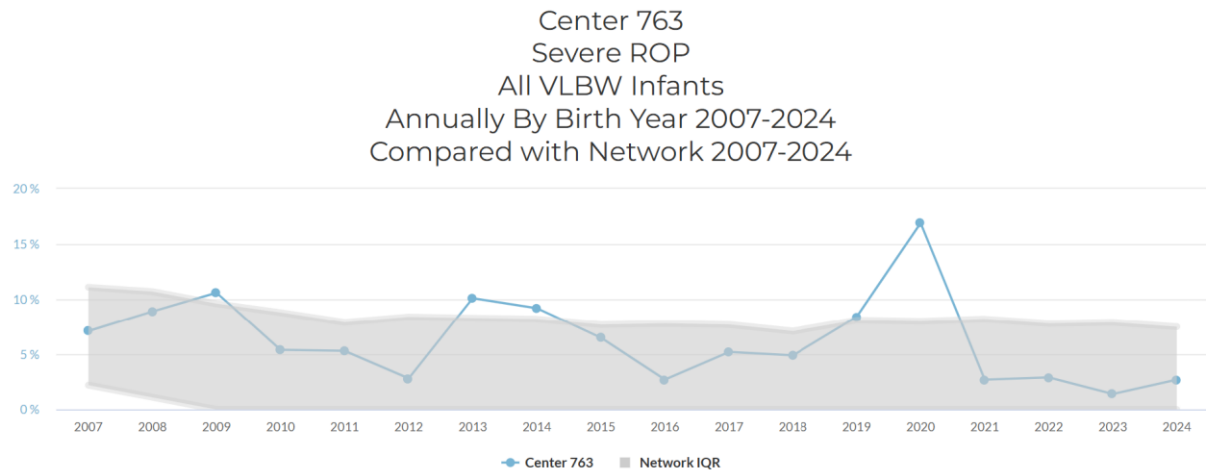
- Time series for Necrotizing Enterocolitis (NEC) (All VLBW Infants)



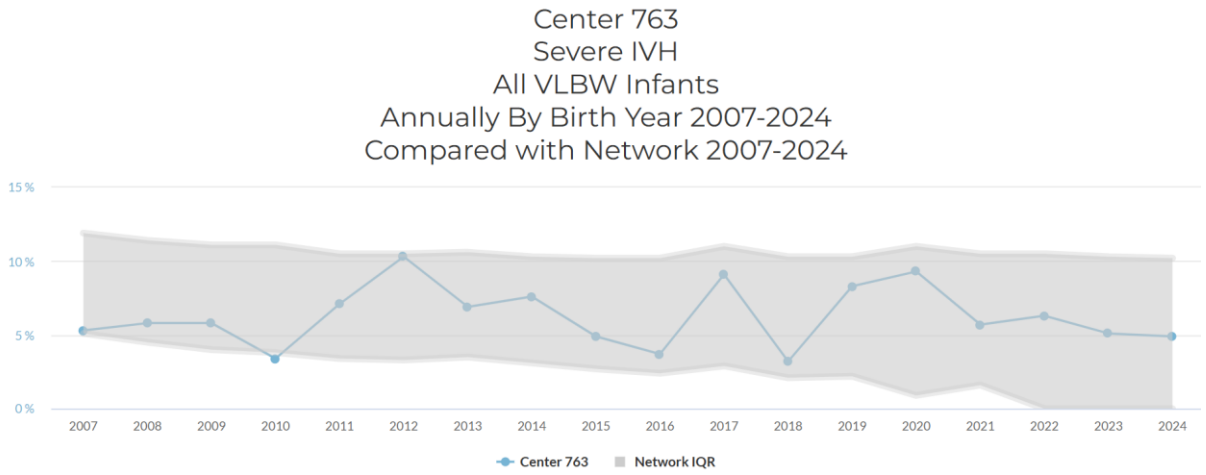
- Time series for Any Late Infection (All VLBW Infants)



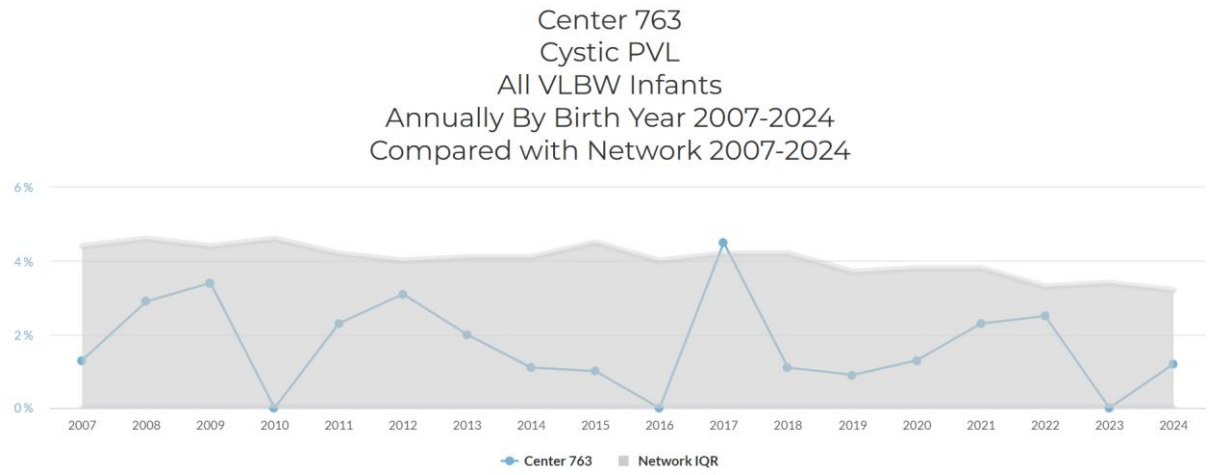
- Time series for Severe ROP > stage 2 (All VLBW Infants)



- Time series for Severe Intraventricular Haemorrhage (IVH) grade 3 or 4 (All VLBW Infants)



- Time series for Cystic Periventricular Leucomalacia (PVL) (All VLBW Infants)



Summary

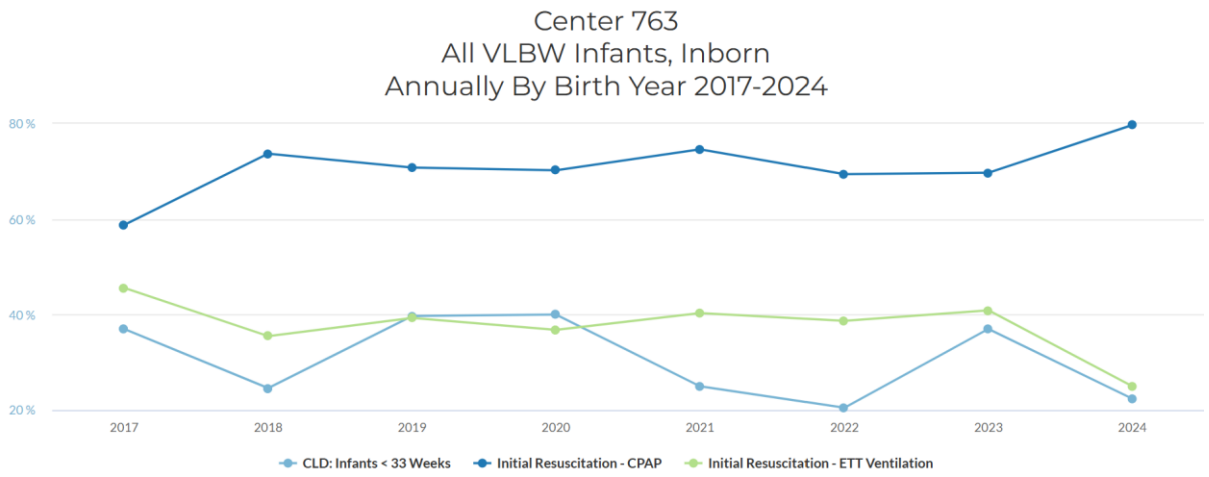
In 2024, Singleton NICU registered 82 eligible babies to the VON database. All admitted babies (100%) received prenatal care. Singleton Hospital continues to benchmark well in all key performance indicators, but there is always scope for further improvement.

Key achievements:

- Administration of antenatal steroids and magnesium sulphate in eligible mothers with threatened premature labour remains above the mean for the VON network (98% vs. 86% and 94 vs. 73% respectively).

- Our temperature control prior to admission remains excellent with 92% of inborn infants being normothermic (36.5-37.5°C) on admission to our neonatal unit.

- In 2024 we embarked on a new Quality Improvement Project, UNIVERS (Using Non-Invasive Ventilation for Early Respiratory Support), aimed to improve evidence-based RDS management and minimise CLD in preterm babies. We subsequently saw a significant change in our initial management of preterm infants born between 25 and 31+6 weeks' gestation, as we managed to reduce the initiation of mechanical ventilation in the first week of life by commencing early nasal CPAP in the delivery suite. This led to a reduction of intubation rates in delivery room from an average of 40% in the previous years to 25% in 2024. The CLD rate of our inborn infants reduced from 37% in 2023 to 22.4% in 2024 and we hope that this downward trend will be maintained in the following years.



- With regard to all Key Performance Measures, our Shrunken risk adjusted indicators show that our centre's performance plots within the expected range for our case mix. We were pleased that our centre's performance was better than average in terms of mortality, death or morbidity, cystic PVL and NEC.

Challenges:

As a team we were overall pleased with our benchmarking results for 2024 data, but we are always keen to learn from other neonatal units around the world and aim for further improvement. Our late infection rate, though within the expected range once risk adjusted for our case mix, remains on the higher margin of normal. We therefore continue to work within a dedicated quality improvement team looking into possible causes and ways to improve.

Health Outcomes of High-Risk Singleton NICU Graduates Born in 2021 (<30 weeks OR <1500 grams)

Compiled by: Dr Vanessa Makri, Consultant Neonatologist

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 very preterm babies less than 32 weeks 'gestation at birth or with birth weight <1500g at 2 years corrected age. Since 2018 there has been a change in the above criteria, based on the updated NICE guidance published on 18th May 2018, to include only very preterm babies born less than 30 weeks' gestation or with a birth weight <1500g.

Service: Singleton Neurodevelopmental Follow up Service was established in 2008 by Dr Sujoy Banerjee, Consultant Neonatologist. All clinical members of the team are certified assessors in Bayley's 3 scale of neurodevelopmental assessment. Regular in house Bayley refresher sessions are also held annually. Most of the team members are also trained in Prechtl's assessment of general movements, which is now part of the neurodevelopmental assessment. Mrs Abigail Morgan provides secretarial support. Referral pathways are agreed with the local community services.

Clinic: The neurodevelopmental follow up clinic is held every Thursday morning in the Paediatric Outpatients at Singleton Hospital.

Team members (2014-2024):
Dr Sujoy Banerjee – Consultant Neonatologist
Dr Nitin Goel – Consultant Neonatologist
Dr Joanna Webb - Consultant Neonatologist
Dr Vanessa Makri – Consultant Neonatologist
Dr Lucinda Perkins – Consultant Neonatologist
Dr Oliver Walker – Consultant Neonatologist
Dr Tom Hixson – Consultant Neonatologist
Mrs Michelle Barry – Senior Paediatric Physiotherapist
Mrs Sarah Owens – Outreach Community Neonatal Nurse
Mrs Amanda Lawes – Occupational Therapist
Mrs Ceri Selman – Paediatric Physiotherapist
Mrs Joanna Morgan – Neonatal Secretary
Mrs Abigail Morgan – Neonatal Secretary

Scope: The service caters for all high risk premature infants <30 weeks 'gestation or <1500 grams at birth cared for at Singleton Hospital. The service also evaluates all infants who underwent therapeutic hypothermia and those with identified abnormal neurology on the Neonatal Unit on a referral basis. Initially children are offered Prechtl's assessment of general movements at 12 weeks corrected age, aiming to identify high risk infants to develop motor impairment and provide early intervention with therapies. At 2 years corrected age, all eligible children are sent the PARCA-R questionnaire to be filled by their parents and are then invited for a face-to-face neurodevelopmental assessment using the Bayley's 3 scales. Provided that the PARCA-R result is within normal range, children are assessed using only Bayley's 3 Cognitive, Fine and Gross Motor scales in that clinic. All appointments are additional to their routine follow up. Families from

outreach centres who were unable to attend this clinic due to geographical and/or financial constraints are contacted and outcome information obtained either through a validated parental questionnaire (PARCA-R) or by obtaining reports of Schedule of Growing Skills (SOGS) assessments by Health Visitors or Ruth Griffiths (RG) assessment by local paediatricians. In the absence of the above, outcome information is sought from paediatric clinic letters and Health Visitor Questionnaires (HVQ).

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 high risk infants born in 2006-2022 followed by outcomes of infants from 2022 only.

Outcome definitions:

Figure 3 Summary of definitions for recommended outcome categories

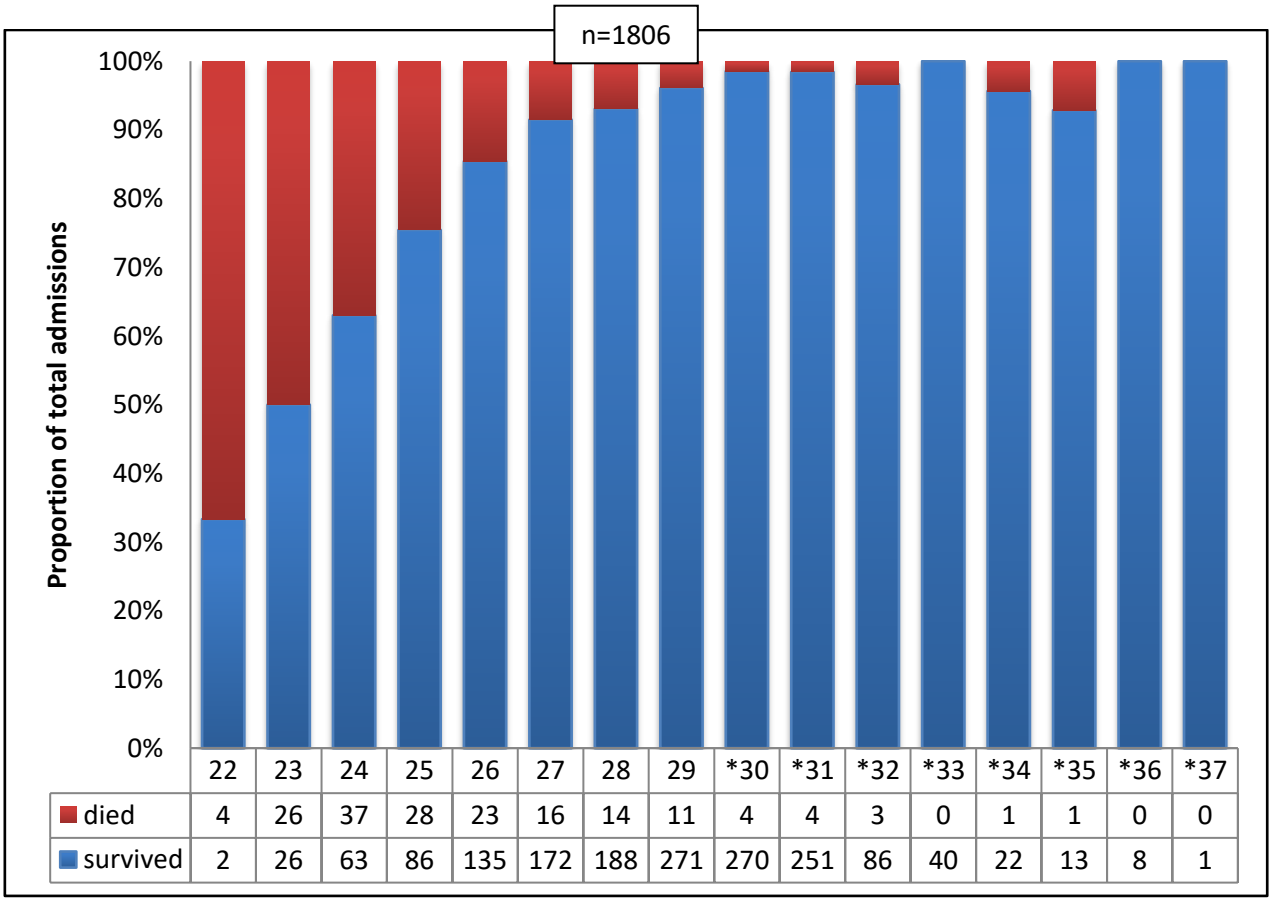
Criteria for	Severe Neurodevelopmental Disability	Moderate Neurodevelopmental disability
Domain	***Any one of the below:***	***Any one of the below:***
Motor	Cerebral palsy with GMFCS level 3, 4 or 5	Cerebral palsy with GMFCS level 2
Cognitive function	Score <-3 standard deviations below norm (DQ<55)	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
Other disabilities (included as additional impairments to SND or NDI)		
Respiratory	Requires continued respiratory support or oxygen	Limited exercise tolerance
Gastrointestinal	Requires TPN, NG or PEG feeding	On special diet or has stoma
Renal	Requires dialysis or awaiting organ transplant	Renal impairment requiring treatment or special diet

Reference: Report of a BAPM/RCPCH Working Group Version 1.0; 8 January 2008

Cumulative outcome (2006-2022): All high risk infants < 32 weeks OR <1500gms

Outcome (2006-2022)	Number (%)
Admitted for intensive care	**1806**
Survived to discharge	1641 (91%)
Survived to 2 years corrected age	1634 (90%)
Information available (% of survivors at 2 years)	**1379 (84%)**
Death or Disability (MND +SND) at 2 years CGA (% admitted for intensive care)	459 (25%)
Total disability @ 2 years CGA (% of children assessed)	286 (21%)
Moderate Neurodevelopmental Disability (MND) (% of children assessed)	194 (14%)
Severe neurodevelopmental disability (SND) (% of children assessed)	92 (7%)
Survival free of Neurodevelopmental Impairment (% of children assessed)	1093 (79%)

Survival at 2 years CGA by gestation (2006-2022) for infants < 32 weeks or < 1.5 kg birth weight:



	22	23	24	25	26	27	28	29	*30	*31	*32	*33	*34	*35	*36	*37
died	4	26	37	28	23	16	14	11	4	4	3	0	1	1	0	0
survived	2	26	63	86	135	172	188	271	270	251	86	40	22	13	8	1

** Outcome for infants >31 weeks is only for those with birth weight < 1.5kg (2006-2017 era)*
Outcome for infants >29 weeks is only for those with birth weight < 1.5kg (2018-2019 era)

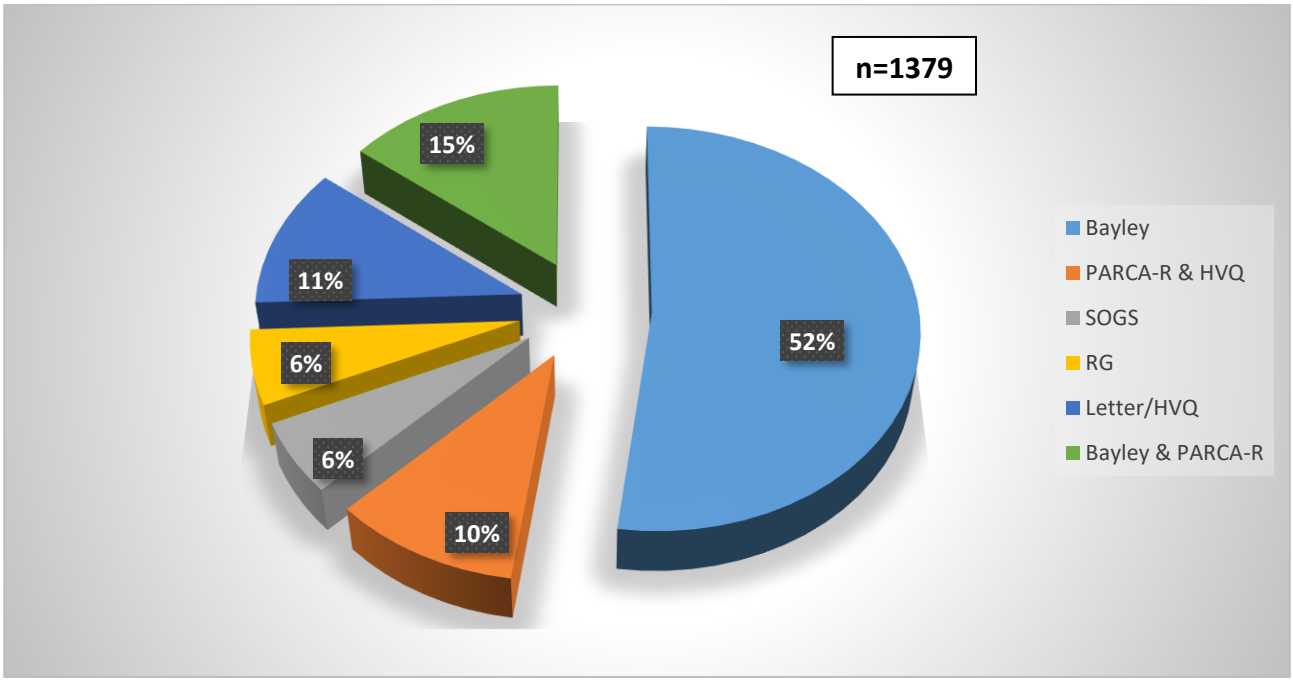
Outcome by gestation (2006-2022):

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	6	52	100	114	158	188	202	282	274	255	89	40	23	14	8	1	**1806**
% admitted and survived to discharge	33	50	64	76	85	92	94	96	99	98	98	100	96	100	100	100	**91**
No. of deaths between discharge and 2 years of age	0	0	1	1	0	1	1	1	0	0	1	0	0	1	0	0	**7**
% admitted and survived to 2 years corrected age	33	50	63	75	85	91	93	96	99	98	97	100	96	93	100	100	**90**
% of survivors where information available for outcome at 2 years	100	96	89	84	86	84	84	82	85	81	88	85	100	77	88	100	**84**
% death or disability (MND +SND) at 2 years CGA	83	69	55	41	30	23	22	21	14	15	25	20	39	36	13	100	**25**
% total disability @ 2 years CGA	50	36	32	26	22	19	19	22	15	17	25	24	36	40	14	100	**21**
% moderate neurodevelopmental disability (MND)	0	28	20	17	17	14	13	14	11	11	12	21	23	20	14	100	**14**
% severe neurodevelopmental disability (SND)	50	8	13	10	4	5	6	8	4	5	13	3	14	20	0	0	**7**

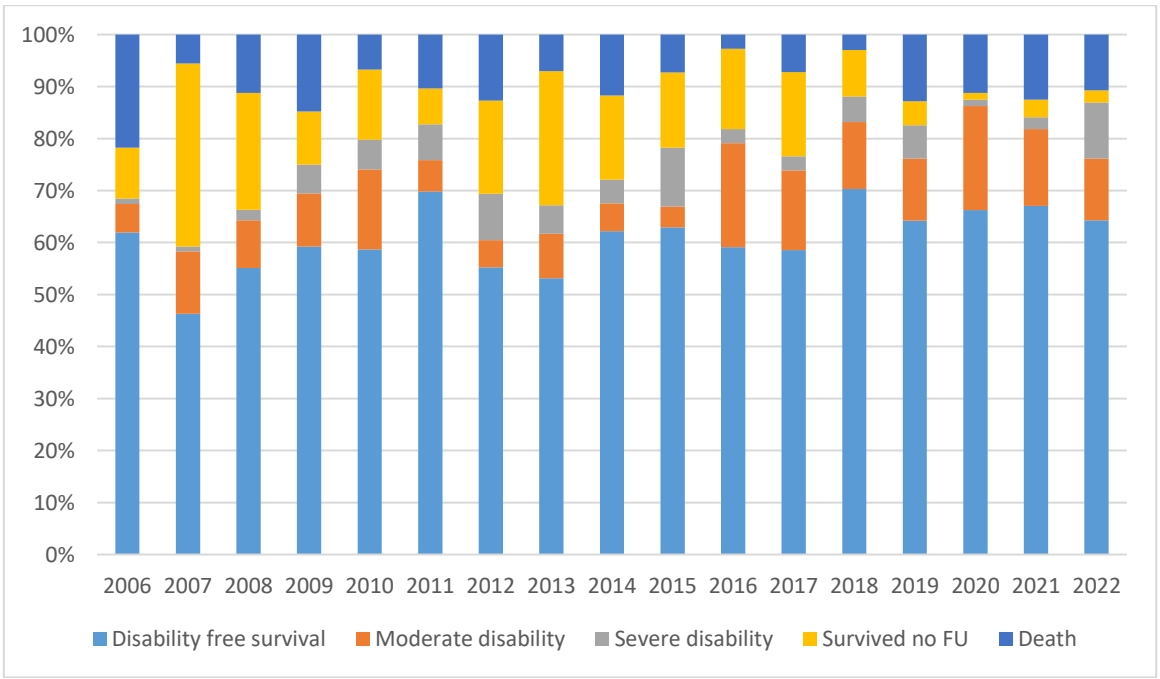
Pattern of impairment (some children had affection in multiple domains) at 2 years (2006 - 2022):
Total no. of babies 286 (21%)

Gestational age at birth	22w	23w	24w	25w	26w	27w	28w	29w	30w	31w	32w	33w	34w	35w	36w	37w	Total
No. with definite cerebral palsy	1	2	4	2	7	7	6	13	10	10	5	0	0	1	1	0	**69**
No. with moderate motor delay (GMFCS 2)	0	3	5	0	6	2	4	5	4	6	2	2	2	1	0	0	**42**
No. with severe motor delay (GMFCS 3-5)	1	0	1	2	3	4	4	4	5	6	4	0	0	0	0	0	**32**
No. with moderate cognitive delay (<2SD)	0	2	5	7	3	6	4	11	7	6	2	2	1	0	0	1	**57**
No. with severe cognitive delay (<3SD)	0	0	2	3	1	3	3	5	2	2	3	1	0	1	0	0	**26**
No. with hearing loss but not severe hearing impairment	0	0	0	2	1	2	1	4	1	3	2	0	1	0	0	0	**17**
No. with severe hearing impairment	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
No. with moderate speech and language impairment	1	6	9	12	18	22	17	32	26	25	9	6	3	3	0	1	**190**
No. with severe speech and language impairment	1	3	7	5	4	4	8	11	6	9	9	1	3	1	0	0	**72**
No. with reduced vision but not severe visual impairment	0	2	2	1	2	1	1	1	4	4	0	0	1	0	1	0	**20**
No. with severe visual impairment	0	0	0	2	0	0	0	0	2	1	1	0	0	0	0	0	**6**

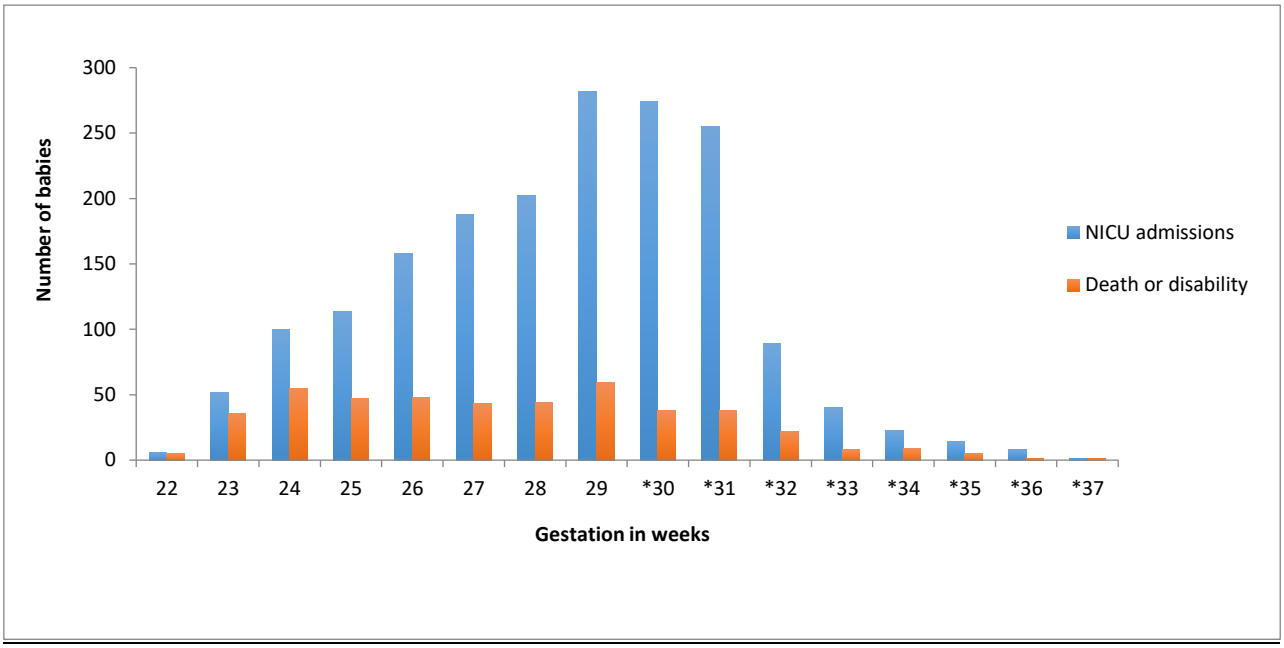
Type of assessments (2006-2022):



Overview of outcome year on year (2006-2022) in < 32weeks or birth weight < 1.5 kg

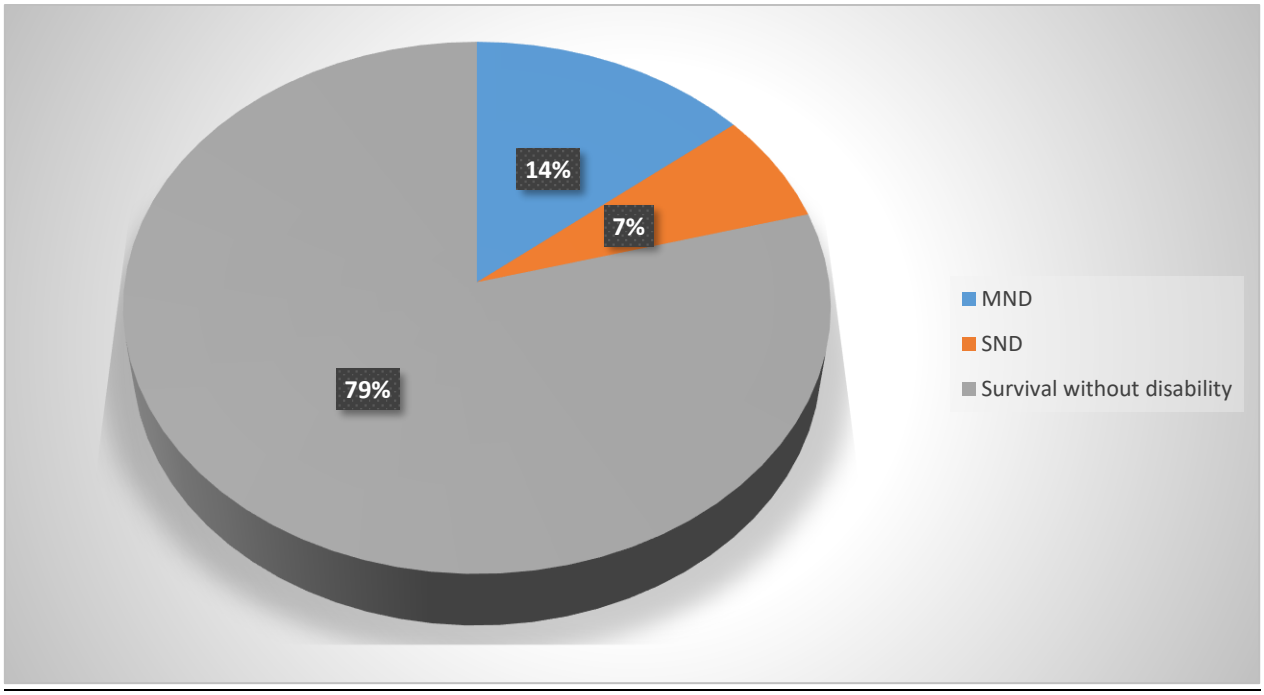


Death or disability by gestation compared to no. of NICU admissions (2006-2022) (n=1806)

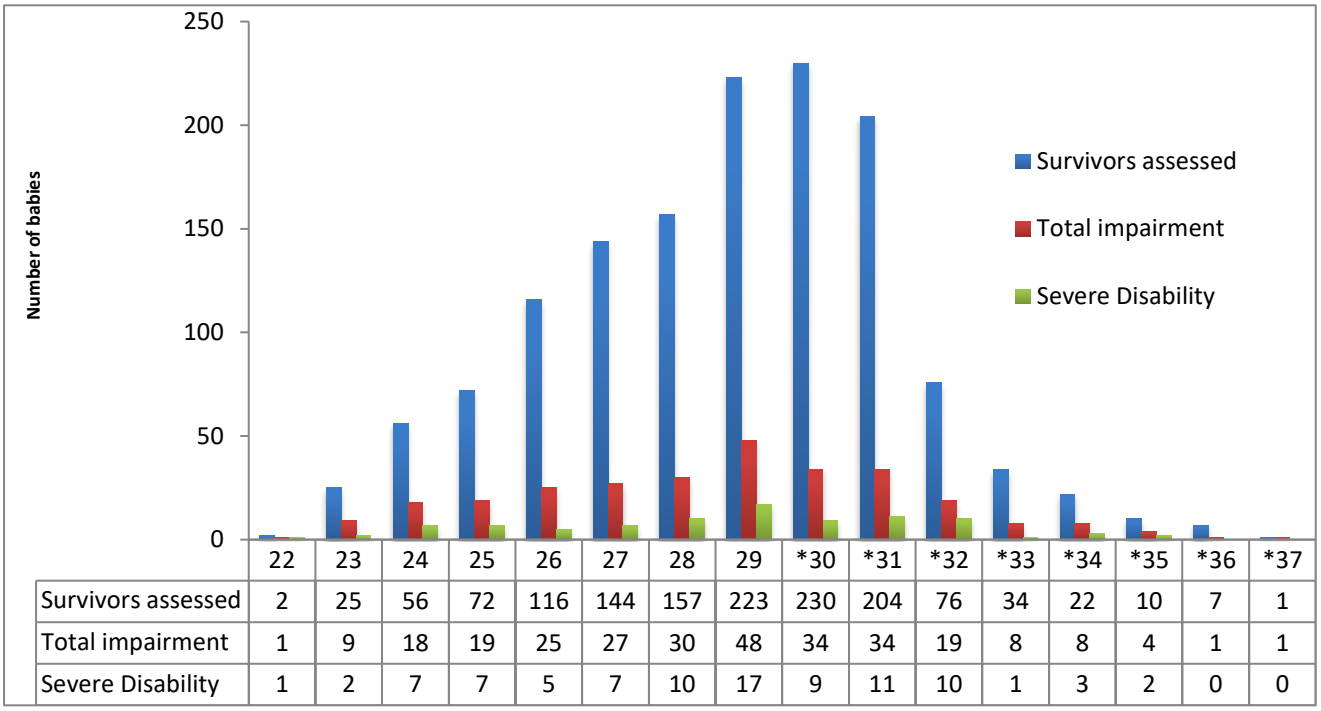


** Outcome for infants >31 weeks is only for those with birth weight < 1.5kg (2006-2017 era)*
Outcome for infants >29 weeks is only for those with birth weight < 1.5kg (2018-2019 era)

Disability in survivors assessed (n=1379)



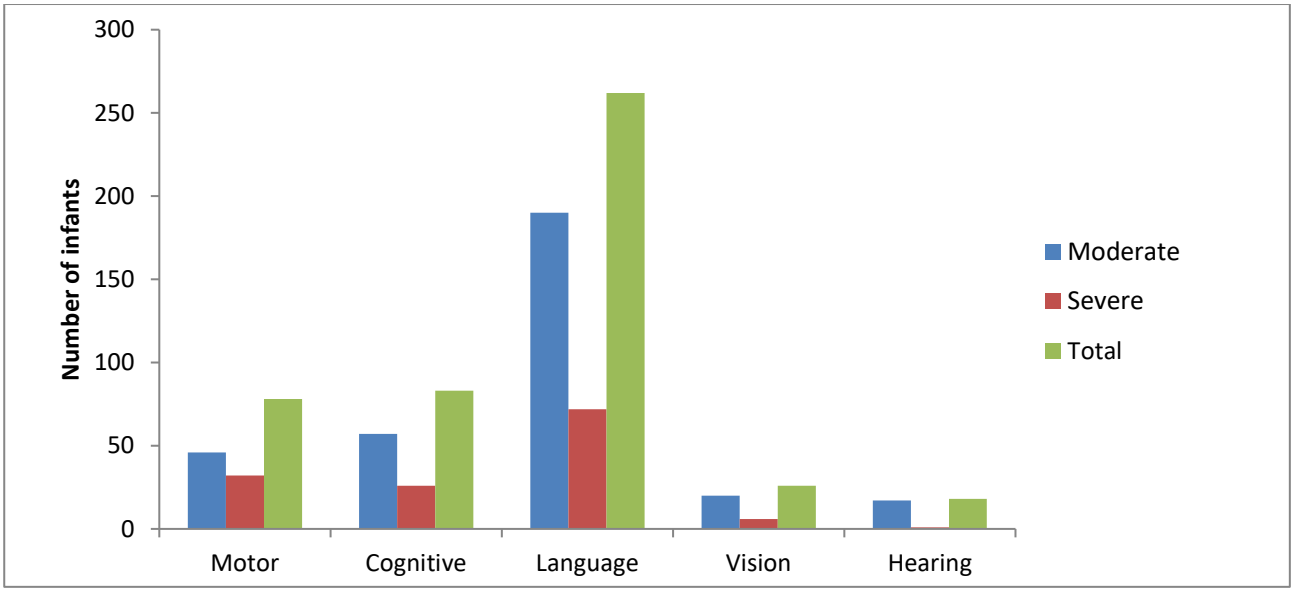
Disability in survivors assessed by gestation in weeks (2006-2022):



	22	23	24	25	26	27	28	29	*30	*31	*32	*33	*34	*35	*36	*37
Survivors assessed	2	25	56	72	116	144	157	223	230	204	76	34	22	10	7	1
Total impairment	1	9	18	19	25	27	30	48	34	34	19	8	8	4	1	1
Severe Disability	1	2	7	7	5	7	10	17	9	11	10	1	3	2	0	0

** Outcome for infants >31 weeks is only for those with birth weight < 1.5kg (2006-2017 era)*
Outcome for infants >29 weeks is only for those with birth weight < 1.5kg (since 2018)

Pattern of Impairment or Disability (2006-2022): (includes affection in multiple domains)



Other Health Outcomes in survivors assessed: (2006-2022) (n=1379)

System	Morbidity in survivors assessed - No. (%)	Description of significant morbidities identified (number of children)
Congenital malformations	91 (7)	Cardiac (30), hypospadias (12), micropenis, duplex kidneys, bilateral hydronephrosis, unilateral absent kidney(2), unilateral dysplastic kidney (4), amniotic bands, absent radius and thumb, clinodactyly, talipes equinovarus, left lung sequestration, CCAM, DDH (5), macrocephaly, craniosynostosis (2), unilateral hemifacial microsomia and microstomia, diaphragmatic hernia, nail patella syndrome, fetal alcohol syndrome, limb contractures, cleft lip and palate (2), choanal atresia, colobomas (2), morning glory disc anomaly, oesophageal atresia with fistula (2), exomphalos, vertebral anomalies, thyroglossal cyst
Respiratory	188 (14)	Hyperactive airway (wheezy), poor exercise intolerance, tracheostomy, pulmonary hypoplasia (3), thoracic dystrophy
Gastrointestinal and nutrition	135 (10)	Poor growth, GORD, special diet, short gut syndrome(2), gastrostomy/NG fed (21), lactose & CMPI intolerance
Neurology other than CP	37 (3)	VP shunt (5), seizures (22), absent left cerebellar hemisphere, Dandy Walker malformation, posterior fossa encephalocele with colpocephaly and absent septum pellucidum, corpus callosum, tethered cord, Chiari 1 malformation, cerebellar hypoplasia
Metabolic/endocrine disorder	3 (0.2)	Phenylketonuria, congenital hypothyroidism (2)
Genetic abnormalities	13 (1)	Uniparental disomy chromosome 6;14, Prader-Willi syndrome (3), KIF11 mutation, 13q mosaic deletion, Trisomy 21 (5), Wolf-Hirschhorn syndrome, myotonic dystrophy
Other visual impairment (not classed as moderate/severe)	96 (7)	Refractive errors requiring glasses but fully correctable , strabismus, nystagmus

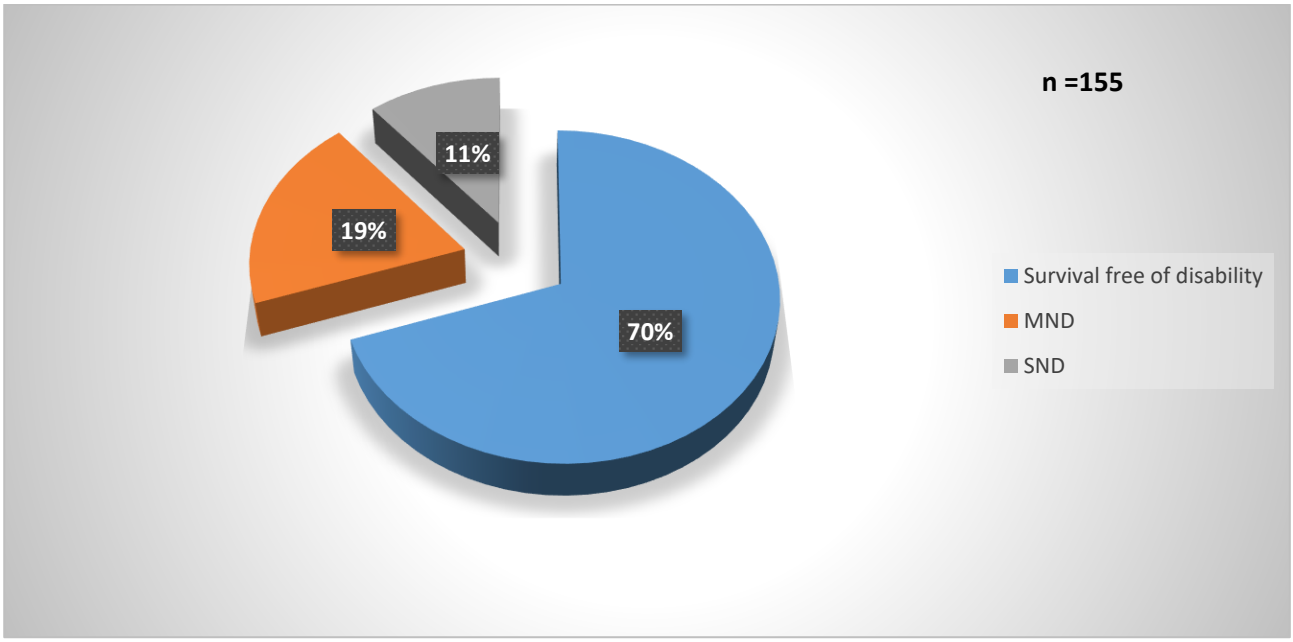
Involvement of specialist therapist at 2 years CGA (2006-2022):

- 536 children (39%) were considered eligible for referral to therapists
- 206 (15%) referrals to multidisciplinary Child Development Team (CDT)
- 317 (23%) referrals to Speech and Language Therapist (SALT)
- 89 (6%) referred to physiotherapist

Cumulative outcome (2006-2022): Extreme preterm (22-25wks)

Outcome (2006-2022)	Number (%)
Admitted for intensive care	**272**
Survived to discharge	179 (66%)
Survived at 2 years corrected age	177 (65%)
Information available (% of survivors)	**155 (88%)**
Death or Disability (MND +SND) at 2 years CGA (% admitted for intensive care)	143 (53%)
Total disability @ 2 years CGA (% of children assessed)	47 (30%)
Moderate Neurodevelopmental Disability (MND) (% of children assessed)	30 (19%)
Severe neurodevelopmental disability (SND) (% of children assessed)	17 (11%)
Survival free of Neurodevelopmental Impairment (% of children assessed)	108 (70%)

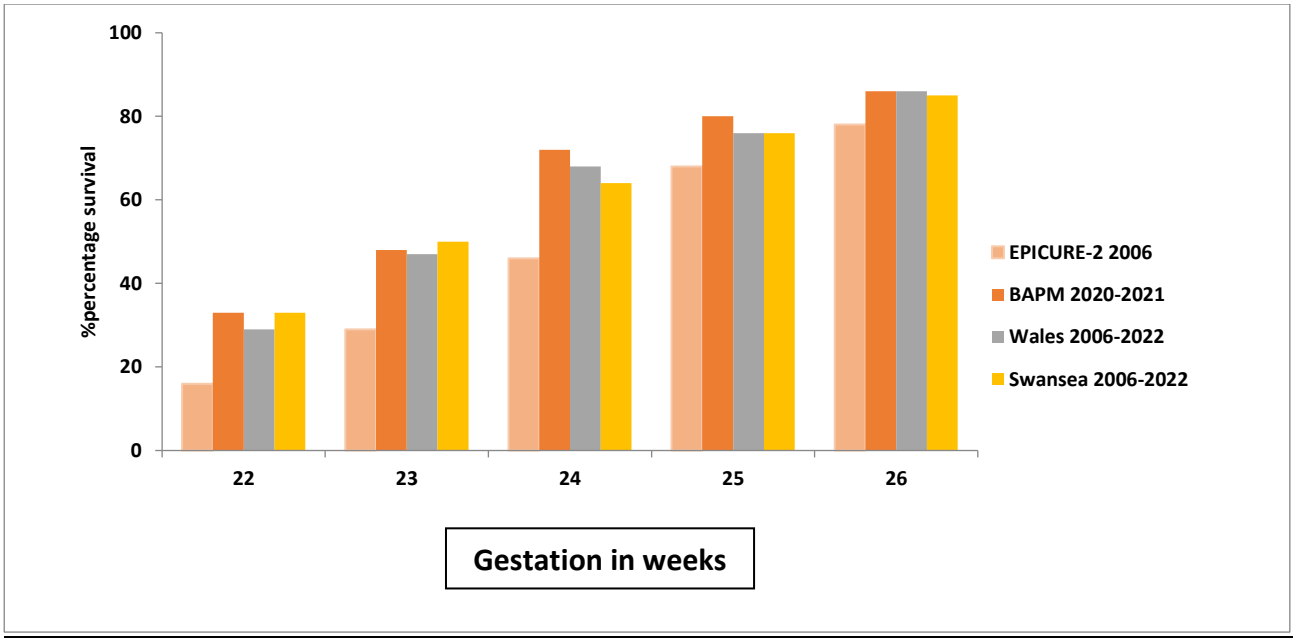
Cumulative outcome in survivors assessed in extremely preterm <26 weeks (2006-22)



Benchmarking

Outcome of extreme preterm babies admitted to intensive care in 2006-2022

Comparison of percentage survival by gestation at discharge (% admitted for intensive care)



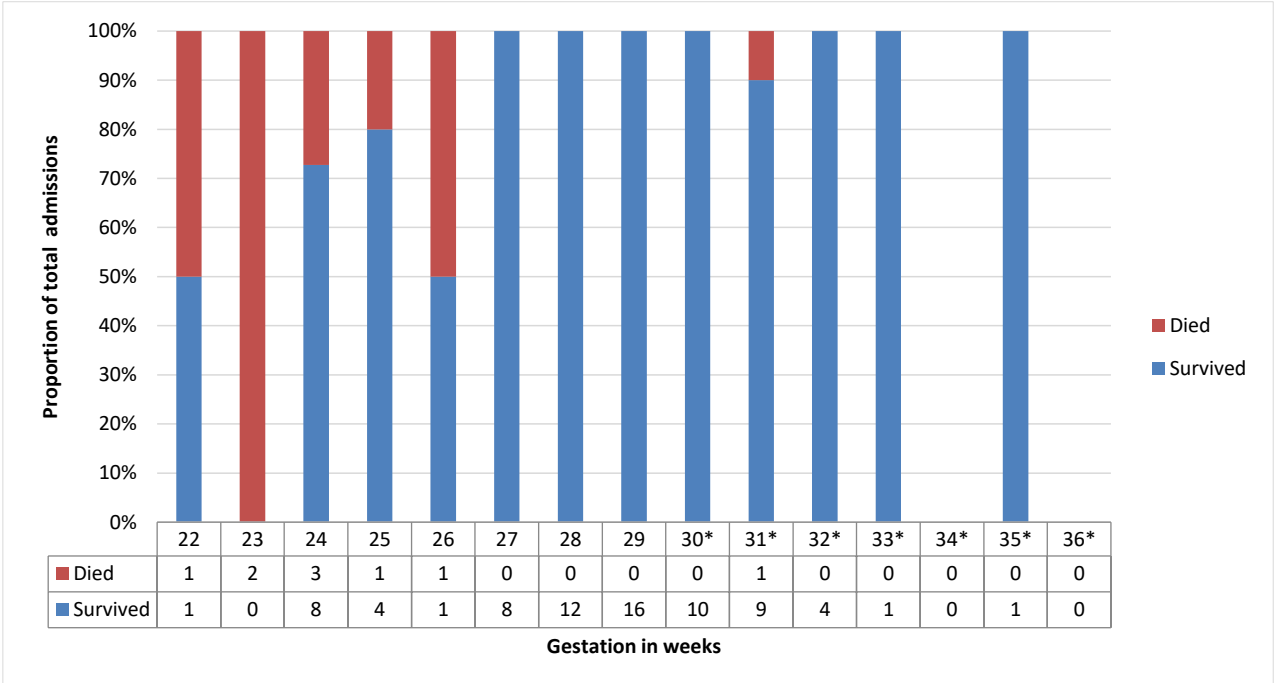
Comparison of long term outcomes of extreme prematurity in survivors assessed (2-4 years of age)

Outcome 22-26 weeks	Swansea 2006-2022	EXPRESS(Sweden) 2005-2007	EPICure 2 2006	NICHD 1998-2003
Time of assessment	23-26 months	30 months	27-48 months	18-22 months
Survival free of moderate/severe disability	70%	73%	75%	61%
Moderate disability	19%	26%	12%	26%
Severe disability	11%	24%	13%	14%

Health Outcome data for babies admitted for intensive care in 2022 (<30 weeks OR <1500gms)

Outcome	Number (%)
Admitted for intensive care	84
Survived to discharge	75 (89%)
Survived at 2 years corrected age	75 (89%)
Information available(% of surviving children)	**73 (97%)**
Death or disability at 2 years CGA (% admitted for intensive care)	28 (33%)
Total disability (MND + SND) at 2 years CGA (% of children assessed)	19 (26%)
Moderate neurodevelopmental disability (MND) (% of children assessed)	10 (14%)
Severe neurodevelopmental disability (SND) (% of children assessed)	9 (12%)
Survival free of neurodevelopmental impairment (% of children assessed)	54 (74%)

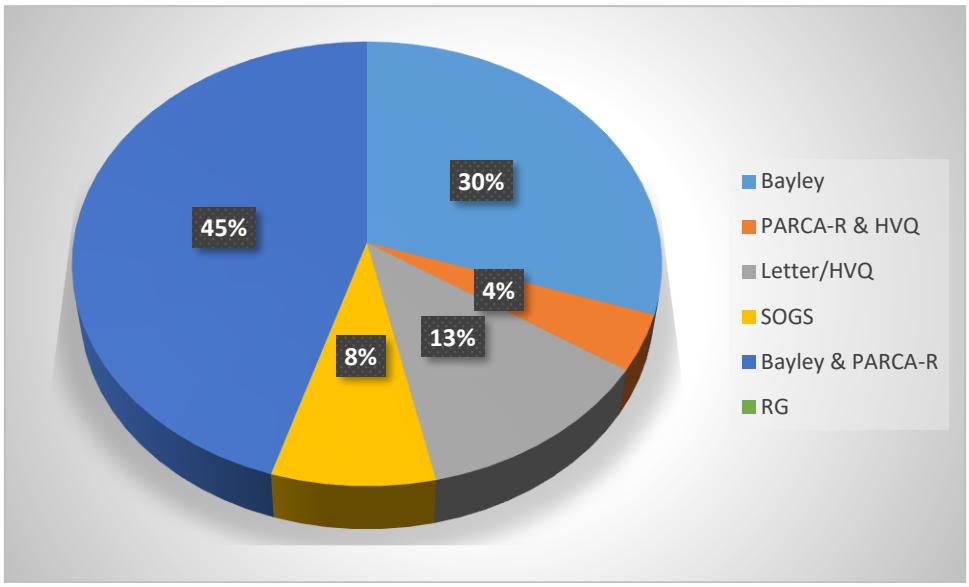
Survival at 2 Years by gestation (2022): n= 84



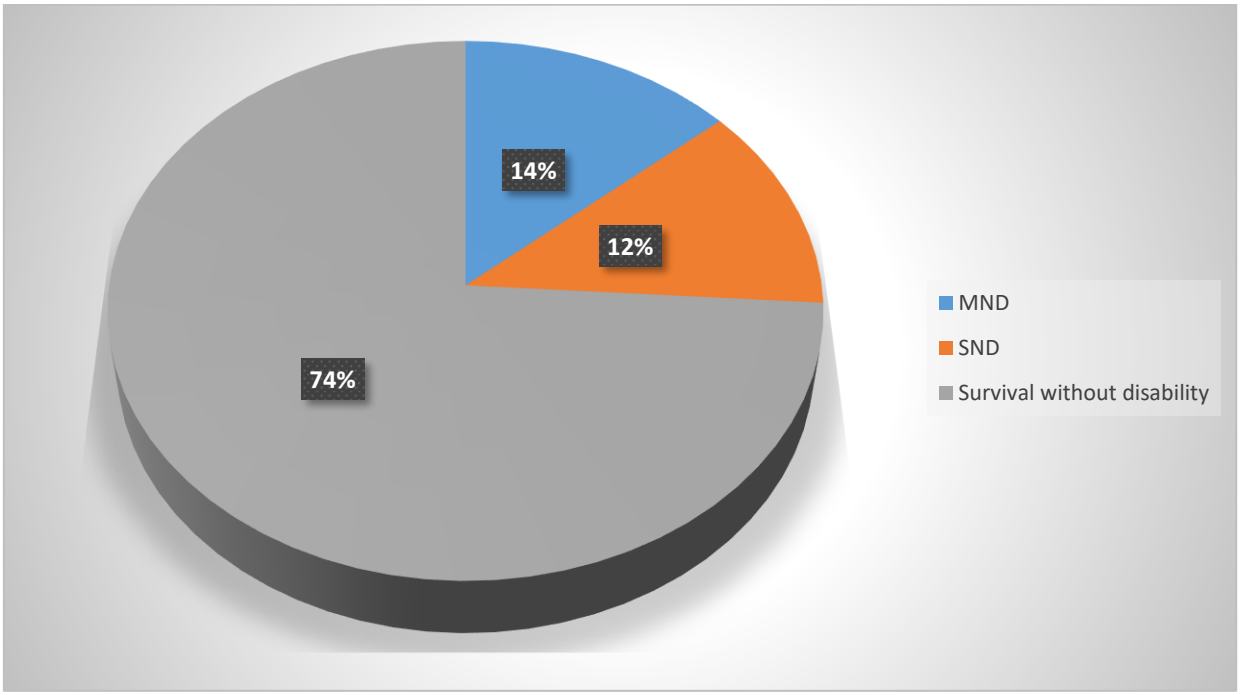
	22	23	24	25	26	27	28	29	30*	31*	32*	33*	34*	35*	36*
Died	1	2	3	1	1	0	0	0	0	1	0	0	0	0	0
Survived	1	0	8	4	1	8	12	16	10	9	4	1	0	1	0

** Outcome for infants >29 weeks is only for those with birth weight < 1.5kg*

Type of assessments (%) 2022: n=73



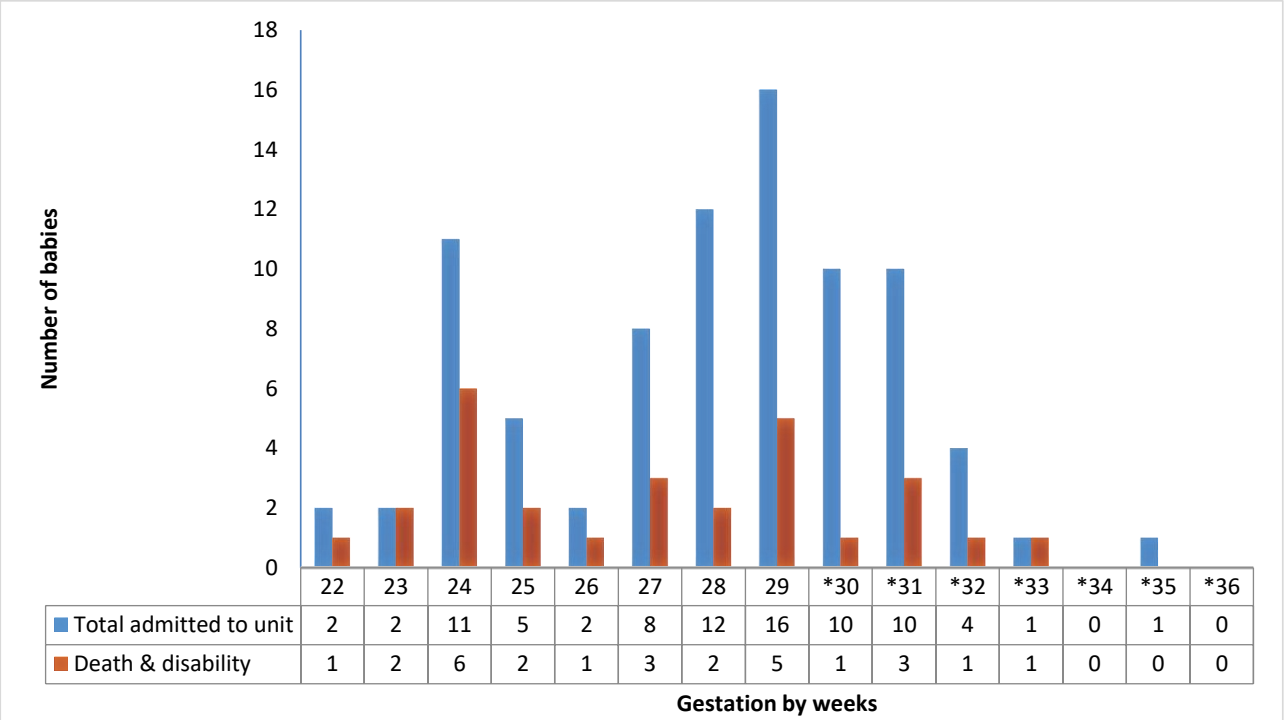
Outcome in survivors assessed at 2 years CGA (%) 2022: n=73



Outcome by gestation (2022):

Gestational age at birth	22w	23 w	24 w	25 w	26 w	27 w	28 w	29 w	30 w	31 w	32 w	33 w	34 w	35 w	Total
Number of admissions for intensive care	2	2	11	5	2	8	12	16	10	10	4	1	0	1	**84**
% admitted and survived to discharge	50	0	73	80	50	100	100	100	100	90	100	100	0	0	**89**
No. of deaths between discharge and 2 years of age	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
% admitted and survived to 2 years corrected age	50	0	73	80	50	100	100	100	100	90	100	100	0	0	**89**
% of survivors where information available for outcome at 2 years	100	0	100	100	100	100	100	100	80	100	100	100	0	100	**97**
% death or disability (MND +SND) at 2 years CGA	50	100	55	40	50	38	17	31	10	30	25	100	0	0	**33**
% total disability @ 2 years CGA	0	0	38	25	0	38	17	31	13	22	25	100	0	0	**26**
% moderate neurodevelopmental disability (MND)	0	0	13	0	0	25	0	19	13	22	0	100	0	0	**14**
% severe neurodevelopmental disability (SND)	0	0	25	25	0	13	17	13	0	0	25	0	0	0	**12**

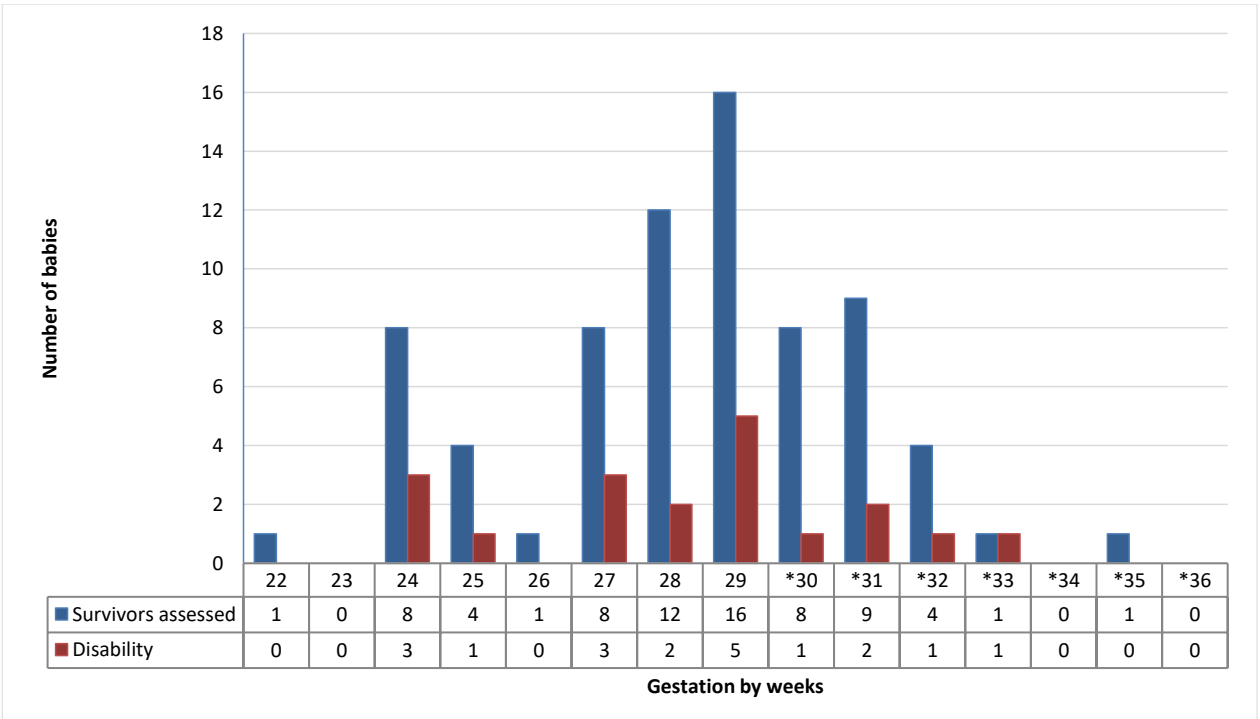
Outcome 2022: death or disability by gestation n = 84



	22	23	24	25	26	27	28	29	*30	*31	*32	*33	*34	*35	*36
Total admitted to unit	2	2	11	5	2	8	12	16	10	10	4	1	0	1	0
Death & disability	1	2	6	2	1	3	2	5	1	3	1	1	0	0	0

** Outcome for infants ≥30 weeks is only for those with birth weight < 1.5kg*

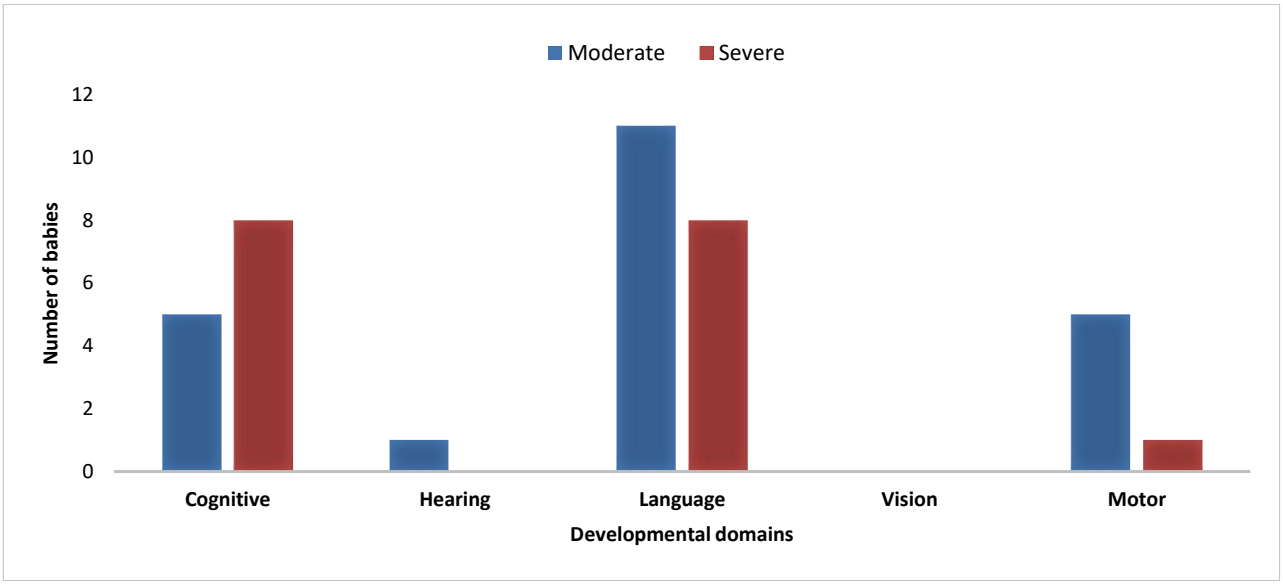
Disability in survivors assessed by gestation (2022): n = 73



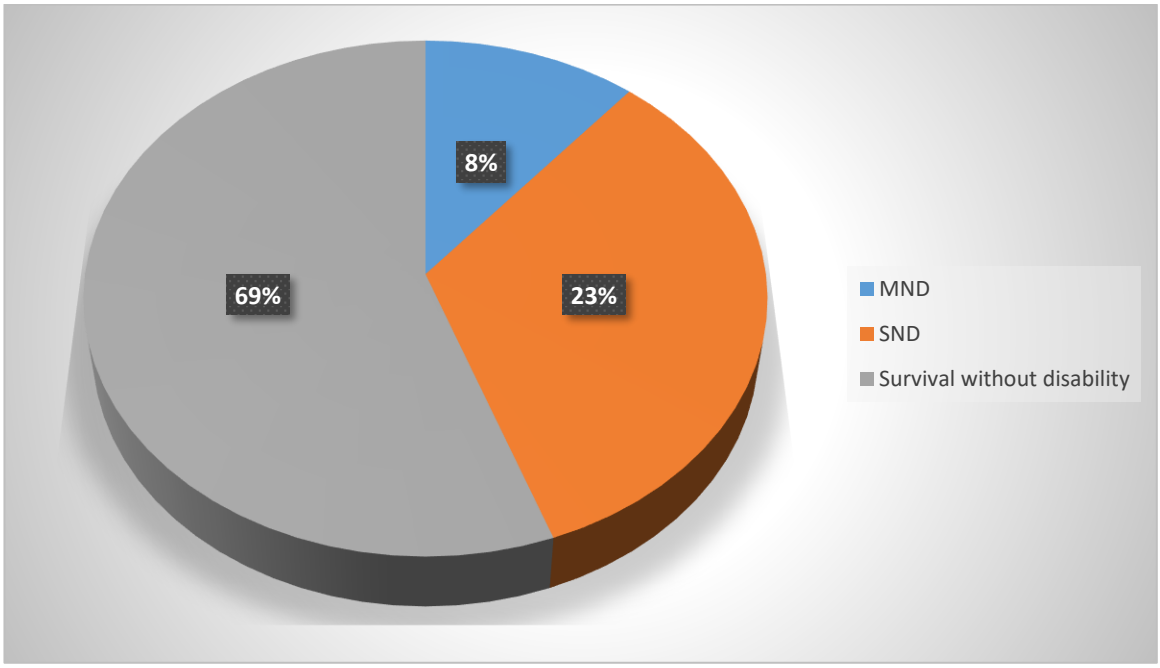
	22	23	24	25	26	27	28	29	*30	*31	*32	*33	*34	*35	*36
Survivors assessed	1	0	8	4	1	8	12	16	8	9	4	1	0	1	0
Disability	0	0	3	1	0	3	2	5	1	2	1	1	0	0	0

** Outcome for infants ≥30 weeks is only for those with birth weight < 1.5kg*

Pattern of Impairment or Disability (2022) (Some children had affection in multiple domains):



Outcome in survivors assessed in extremely preterm (22-25 weeks) (2022): n=13



Other Health Outcomes in survivors assessed: (2022) (n=73)

System	Morbidity in survivors assessed - No. (%)	Description of morbidities identified (number of children)
Congenital malformations	9 (12)	Cardiac (8), thyroglossal cyst (1)
Respiratory	12 (16)	Recurrent wheeze/asthma (11), oxygen therapy (1)
Gastrointestinal and nutrition	16 (22)	Special diet/milk (8), GORD (5), NGT feeds (3)
Neurology other than CP	6 (8)	Seizures (5), VP shunt (1)
Metabolic/endocrine	1 (1)	Congenital hypothyroidism
Genetic abnormalities	3 (4)	Trisomy 21 (2), myotonic dystrophy (1)
Other visual impairment (not classed as moderate/severe)	12 (16)	Refractive errors requiring glasses but fully correctable or strabismus

Involvement of specialist therapists at 2 years CGA (2022):

- 16 (22%) referrals to CDT
- 4 (5%) referrals to physiotherapist
- 13 (18%) referred to SALT
- Other referrals included: ophthalmology and audiology.

Conclusions

Over the last 16 years (2006-2022)

In <32 weeks or <1.5 kg birth weight infants

- 90% of infants admitted for intensive care survived to 2 years corrected age.
- Of the survivors, health outcome information at 2 years was available for 84%.
- 89% of outcome information was from standardised assessments.
- Amongst those admitted to our neonatal unit, a quarter (25%) of the infants either died or were disabled. Death was primarily seen in the 22-25 weeks 'gestation group (34% of admissions at 22-25 weeks).
- Of the survivors assessed, 8 out of 10 (79%) were free of moderate/severe disability.
- 68% of the survivors with disability had moderate and 32% had severe disability.

In extreme preterm infants (22-25 weeks 'gestation) – (2006-2022)

- 66% of the infants born between 22 and 25 weeks 'gestation and admitted to intensive care survived to discharge. For gestations at the margins of viability (22-23 weeks) almost half (48%) of the infants survive to discharge, rising to 64% at 24 weeks and 76% at 25 weeks.
- Of the survivors at 2 years 'corrected age, health outcome information was available in 88%.
- 53% of extremely preterm infants admitted for intensive care die or have moderate/severe disability.
- Of the survivors assessed, 70% of infants were free of moderate/severe disability.
- Of the survivors with disability, 64% had moderate and 36% had severe disability.

Spectrum of disability – (2006-2022)
- Language delay is the commonest domain of disability at 2 years corrected age, followed by cognitive and motor impairment.
- Respiratory morbidity is common affecting 14% of the assessed survivors.
- Approximately 1% had moderate/severe hearing impairment and 2% had moderate/severe visual impairment.

Benchmarking – (2006-2022)
Cumulative survival and long term outcomes were comparable to major studies undertaken in this population across the world.

<u>In infants born in 2022</u>

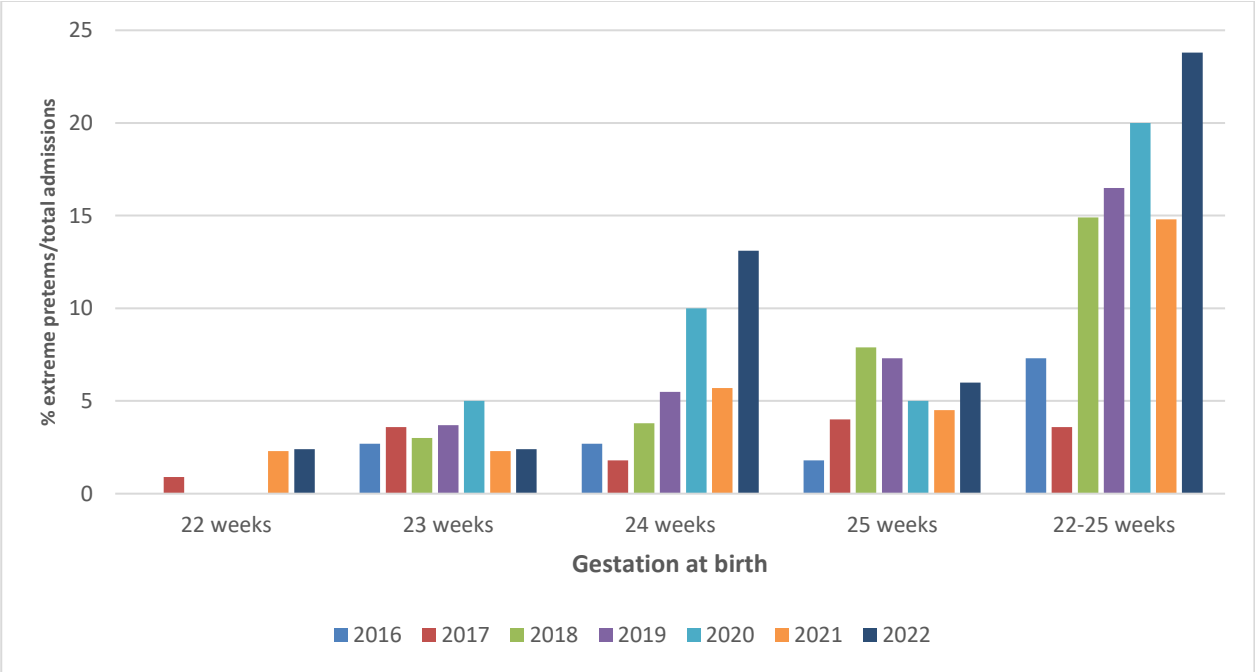
In <30 weeks or <1.5 kg birth weight infants
- 89% of infants admitted for intensive care survived at 2 years corrected age.
- Of the survivors, health outcome information at 2 years corrected age was available for 97%, which is very satisfactory.
- 1 in 3 babies (33%) admitted for intensive care either died or developed significant disability.
- Of the survivors assessed, 8 out of 10 (80%) were disability free.

In extreme preterm infants (22-25 weeks 'gestational age)
- 13 out of 20 (54%) infants admitted for intensive care survived at 2 years.
- Additionally, 11 out of 20 (55%) of infants admitted for intensive care either died or had significant disability.
- Of the survivors assessed, 9 out of 13 (69%) were free of moderate/severe disability.

Executive summary:

Analysis of neurodevelopmental data of high risk preterm infants born since 2019 showed an increase in the percentage of infants who either died or were disabled (30-33%), compared to our total average of 25% since 2006. This was partly driven by the recent change in the target group of preterm infants, who are eligible to receive developmental follow-up. Since 2018 the group of more mature preterm infants born between 30 and 32 weeks 'gestation, who are expected to have better outcomes, are excluded from the dataset, unless their birth weight is <1500g. Following analysis of the differences in the population of high risk preterm infants admitted to our neonatal unit in the last 7 years, it became evident that there was an almost steady increase in the percentage of infants born between 22 and 25 weeks' gestation, which peaked at 24% in 2022. This group of extremely preterm infants contributes significantly to the risk of death or disability and was therefore the second driver for the observed change.

Percentage of extreme preterm infants (22-25 wks) compared to total admissions of high risk preterm infants (2016-2022)



With regard to the follow-up rate, since 2018 we are consistently achieving to record data for >90% of high risk preterm infants admitted to our neonatal unit. We have managed that by adapting our neurodevelopmental assessment pathway to include sending the PARCA-R in addition to a health questionnaire to parents who do not attend the 2-year neurodevelopmental appointment. Additionally, we increased our efforts to obtain relevant information from clinic letters of other health professionals, who follow-up children not brought to neurodevelopmental clinics for a formal assessment.

Neonatal Medication Group Report

Compiled by: Dr Oliver Walker, Consultant Neonatologist

The medicines working group was re-instigated in September 2021 to improve medicines prescribing and administration on the unit and respond to medicines related risks. Our neonatal pharmacist, Catherine Willson retired during 2024 after making an enormous contribution to the neonatal unit over many years. We were delighted to welcome Holly Breeze-Jones to the team as Catherine's replacement. For 2024 medicines group members were: Oliver Walker (neonatal consultant) Anne Willson (neonatal pharmacist), Holly Breeze-Jones (neonatal pharmacist) Lauren Davies (neonatal nurse), Jess Beynon (practice development lead nurse) and Babatunde Kayode-Adedeji (senior clinical fellow) we were joined by paediatric trainees placed on the unit.

The group met regularly during 2024. All the existing unit medicines monographs had been updated for clarity and to include example prescriptions in 2022. The group continued to assist the risk team in responding to medicines issues. Along with Jayne Sage (neonatal senior trainee & consultant) and Tier 1 doctors including Lauren Rushton, Mayank Pahuja and Ayo Adeleye, we developed the Safe Six project to improve prescribing on the unit. In concert with this project we also instigated regular month long medicines administration audits on the unit. This project completed in 2025 and the abstract was accepted for a Poster presentation at the 2025 British Association of Perinatal Medicine conference in Cardiff.

Regular training was delivered both during inductions but also at bespoke 'Coffee, Cake and Caffeine Citrate' prescribing workshops and we ran our first Medicines Escape room teaching session at the end of the year. Our ward pharmacists delivered weekly medication huddles (Druggles) and we continued to award 'Prescriber of the Fortnight' certificates to highlight and encourage good prescribing practice.

Perinatal Excellence to Reduce Injury in Premature Birth (PERIPrem) Cymru in Singleton Hospital 2024

Compiled by: Stephanie Cannell, Senior ANNP

PERIPrem Cymru is an all-Wales perinatal initiative launched in April 2023, incorporating 10 evidence-based interventions to reduce mortality and morbidity in premature infants who are born at less than 34 weeks gestation. nhswales365.sharepoint.com/sites/NXW_MNN/PERIPrem Cymru/Forms/

Each centre has a designated PERIPrem Cymru quad, comprising of a Consultant Neonatologist or senior Advanced Neonatal Nurse Practitioner, Consultant Obstetrician, Neonatal Nurse champion and a Midwifery champion.

Every aligned neonatal and maternity unit in Wales committed to implementing a care package of routine interventions which are continually benchmarked. In addition to the other units across Wales, Swansea data is benchmarked against the National Neonatal Audit Programme recommendations for optimal perinatal care and the British Association of Perinatal Medicine perinatal optimisation pathway. As Singleton Hospital is a direct referral centre for West Wales General Hospital (Hywel Dda UHB) and Princess of Wales Hospital (CTM UHB), a percentage of Swansea's PERIPrem Cymru data metrics, are influenced by out-born premature infants. Performance data on each intervention is collected on a monthly basis and submitted to NHS Wales Performance and Improvement and is available at PeriPremCymru_OptimisationToolDashboard_v1 - Power BI.

In 2024, 140 infants were admitted to the neonatal unit in Singleton hospital, who were born at less than 34 weeks gestational age (28.8%), which is slight increase from the previous year (26.5%). Of those 140 infants, 91% completed their PERIPrem Cymru bundle in Swansea.

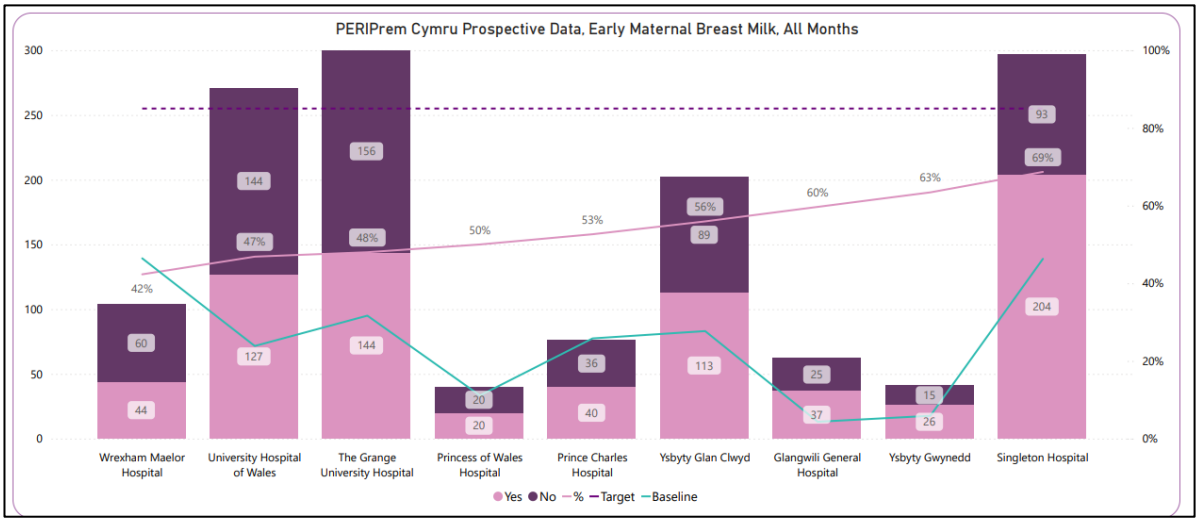
Babies born <34 weeks gestational age	**2024**	**2023**
Born in Singleton hospital	114	103
Born in referring centre	26	22
Total	**140**	**125**

PERIPrem Cymru bundle compliance

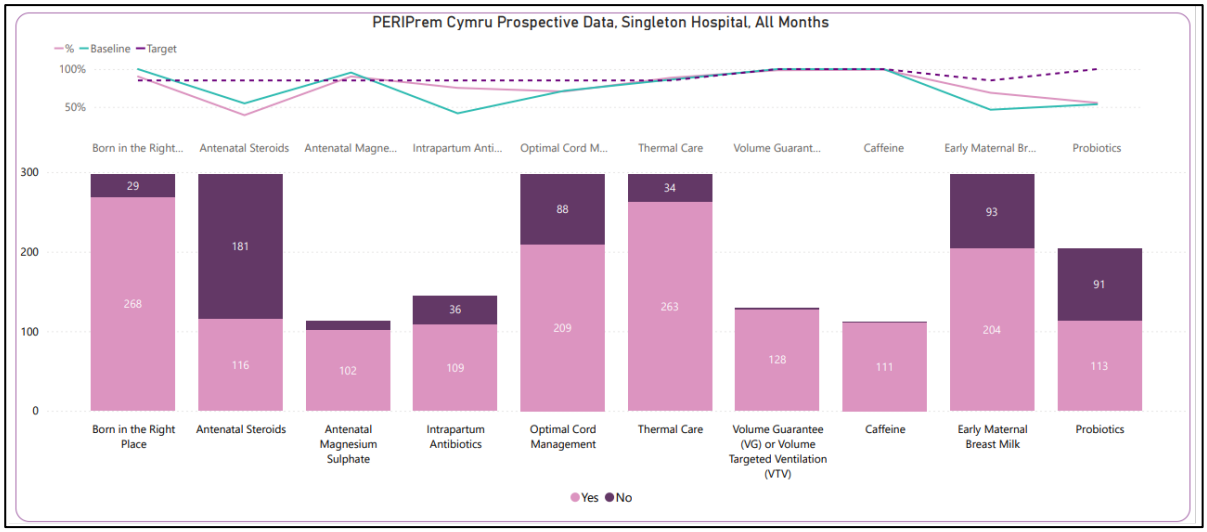
The PERIPrem Cymru optimisation score reflects where mothers and babies received all interventions for which they were eligible and there has been an increase in the optimisation score to 15% for 2024 when compared to the 13% in the previous year.

There has also been a significant improvement in Probiotic use from 28% in 2023 to 79% in 2024. This improvement is likely reflective of the recommencement of routine Probiotic use in August 2023 following a temporary cessation in late 2022.

Singleton hospital continues to be a positive outlier in early expressed breastmilk when compared to other units across Wales



Continual analysis of local data highlights changes in bundle compliance and in 2024, there were targeted interventions to raise awareness for early breast milk and thermoregulation. When compared to last year, similar performance rates have been sustained across the majority of interventions including optimal Magnesium Sulphate administration, optimal cord management and thermoregulation*



Includes data up until June 2025

Optimal antenatal steroid administration has been suboptimal throughout the last 2 years with percentages averaging between 40% and 50%. This is attributed to the challenges of predicting premature birth and the withdrawal of quantitative fetal Fibronectin point of care testing from production. Optimal antenatal steroid data is similar across all units in Wales. In 2024, Singleton

hospital collaborated with NHS Wales Performance and Improvement to become the lead centre for ‘proof of concept’ improvement work for optimising antenatal steroids, recognising the significant quality improvement work already achieved in this area in Swansea.

PERIPrem Cymru- supplementary information

All presented data graphs include data from January 2023 to June 2025.

PERIPrem Cymru education for new members of staff is undertaken within medical, nursing and midwifery induction programs. In 2024, this extended to third year midwifery students in Swansea University.

The Neonatal Nurse and Midwifery champions received 7.5 hours per week funding from NHS Wales Performance and Improvement until October 2024 when all funding was withdrawn.

Going forward the national oversight of PERIPrem Cymru will lie within the Maternity and Neonatal Safety Support Programme.

In 2025, there will be more focus on place of birth processes on a local and national level when infants are not born in the appropriate centre, with learning shared across the Welsh perinatal network. We also look forward to the PERIPrem Cymru recommendations for sustainability that are due to be published.

PART III

Team Reports

Community Nursing Report

Compiled by: Sarah Owens, Community Lead

The Community Neonatal Nursing Team plays a crucial role in supporting babies who have been discharged from the neonatal unit, ensuring a safe, effective, and smooth transition from hospital to home. Our team works diligently to provide each neonate in our care with the best opportunity to thrive within the nurturing environment of their family. Through a combination of expert advice, technical support, and ongoing care, we prioritise the health and well-being of each baby. Additionally, we offer emotional support to families, a service that, while difficult to quantify, is invaluable in promoting holistic well-being.

The team was first established following the Stroud Report in 1983, initially led by a Specialist Health Visitor. By 2000, the service was integrated into the Child Health Division of Swansea NHS Trust. Today, we operate as part of the Swansea Bay Children and Young People's Services.

Our base is located on the 2nd floor of the Children's Outpatients department in the West Ward Block at Singleton Hospital, Swansea.

We serve the geographical areas of Swansea, Neath & Port Talbot, with a service-level agreement to follow up on eligible neonates from the Bridgend locality. Since April 2019, the Princess of Wales Hospital in Bridgend has been part of Cwm Taf Morgannwg UHB, but the Swansea Bay University Health Board has maintained the service-level agreement to continue providing care for Bridgend residents.

Personnel

The service is led by a Band 7 Registered Paediatric Nurse with a Specialist Community Practitioner qualification (1 full-time equivalent). In March 2024, two additional Band 6 positions were increased to 22.5 hours per week each, following an agreement for extra funding under the service-level agreement with Cwm Taf. The team also includes a part-time Nursery Nurse (Band 4, 20 hours per week). All staff members bring extensive neonatal nursing experience to their roles.

Additionally, the team now includes three local CONI (Care of Newborn Infants) coordinators in 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
- Oxygen dependent babies.
- Any referral made by the Neonatal Consultant for babies with additional needs including babies with H.I.E and who require support with nasogastric tube feeding at home.

Discharge Planning - The Community Neonatal Team will organise:

- Discharge Planning Meetings for all babies who are eligible for an outreach service follow up.
- Ordering of specialised equipment and home oxygen.
- Liaise with other members of the multi-disciplinary team and outside agencies.

Follow-Up Care

Duration of Follow-Up:
The standard duration of follow-up is until 36 weeks corrected gestational age. Infants with ongoing medical needs are referred to the appropriate multidisciplinary teams for continued care and support.

Clinic Follow-Up

All infants eligible for neonatal outreach services, including those discharged home on oxygen, are seen in the established High-Risk Multidisciplinary Team (MDT) Clinics. These clinics are held weekly and include Consultant Neonatologists, Physiotherapist and other allied health professionals as required. They are supported by the Neonatal Outreach Team.

These clinics incorporate neurodevelopmental follow-up and include medication reviews for infants discharged on home oromorph programs.

Neurodevelopmental Follow-Up

Enhanced neurodevelopmental follow-up is offered to:

- All infants born before 30 weeks' gestation
- Infants with a birth weight under 1.5 kg
- Infants who experienced significant complications around the time of birth

The team closely monitors developmental progress in collaboration with Consultant Neonatologists and therapists. Infants requiring additional support are identified prior to discharge and referred to local therapy and support services as needed.

Assessments:

- **12 Weeks Corrected Age:**
  The first formal neurodevelopmental assessment is conducted at 12 weeks corrected age. This includes a video recording of the infant's general movements, usually taken by parents or carers with guidance from the Outreach Team. The video is assessed using the *Prechtl Method of General Movements*, which helps identify early signs of developmental

concerns and the need for further intervention. One member of the team is certified in this method and participates in a weekly review of assessment videos.

- **2 Years Corrected Age:**
  At two years corrected age, infants in the enhanced neurodevelopmental pathway are assessed using the *Bayley III* developmental assessment tool. A Band 7 clinician, trained in Bayley III, conducts these assessments and supports the weekly clinic held at Singleton Hospital. Since 2018, this clinician also provides monthly support for neurodevelopmental clinics at the Princess of Wales Hospital in Bridgend.

Palivizumab Immunisation Clinics

Palivizumab (Synagis) is a monoclonal antibody used as a passive immunisation to prevent Respiratory Syncytial Virus (RSV) infection. It is recommended for infants at high risk of severe RSV illness, particularly those with chronic lung disease of prematurity or congenital heart disease.

The Community Neonatal Team organises and runs monthly immunisation clinics during the RSV season (typically October to February). Clinics are held at both Singleton and Princess of Wales Hospitals, usually over two days.

Changes Due to COVID-19 - In 2020, NHS Wales temporarily expanded Palivizumab eligibility to include all infants born before 34 weeks' gestation who were discharged home on oxygen, in response to the COVID-19 pandemic. This resulted in a significant increase in clinic demand, requiring three clinics per month: two at Singleton and one at Princess of Wales.

During the 2022–2023 RSV season, the program began early due to a surge in RSV cases starting as early as May. Clinics were scheduled in June, with immunisations beginning in July for all eligible infants.

For the 2023–2024 season, eligibility criteria reverted to pre-pandemic guidelines, reducing the number of eligible patients to levels consistent with those before 2020.

Home Oxygen

Baywater Healthcare is the contracted provider responsible for supplying and delivering home oxygen, including all associated equipment maintenance. The service is funded by the Local Health Boards.

Baywater Healthcare delivers oxygen concentrators, portable cylinders, and micro-flow meters directly to the family home and provides training for parents and carers. Parents and carers must demonstrate competency in managing home oxygen therapy before discharge to ensure the safety and well-being of the infant.

Oxygen delivery can be arranged up to 24 hours prior to discharge, allowing for smooth transition and adequate preparation.

Before ordering home oxygen supplies, written parental consent must be obtained, and a comprehensive risk assessment must be conducted to assess the suitability of home oxygen therapy.

Psychosocial Group

In June 2019, a weekly **Psychosocial Group** was established to identify and address the needs of families, ensuring that appropriate support mechanisms are in place prior to the discharge of their infant. This initiative focuses on improving communication between services to facilitate a safe, timely, and efficient discharge process for all infants who are medically fit for discharge. It also aims to provide families with the support they need to help their infant reach their full developmental potential.

The group evolved from an earlier initiative focused on improving discharge planning for infants in the Neonatal Intensive Care Unit (NICU). These weekly meetings remain a valuable tool for effective discharge planning and foster collaboration between the neonatal team and the broader multidisciplinary team.

Meetings are multi-disciplinary and typically held via **Microsoft Teams**, with the option for in-person participation at the Singleton site for team members when needed.

Caseload Activity 2024

Total Number of Babies Visited at Home in 2024: **127**

Gestational Age at Birth Breakdown

Gestational Age (weeks)	**Number of Babies**
22 – 22+6	1
23 – 27	12
27+1 – 30	39
Total <30 weeks	**52**
30+1 – 32	27
32+1 – 34	14
34+1 – 36+9	11
37+	23
Total >30 weeks	**75**

Detailed Breakdown of Caseloads

Infants Born <30 Weeks Gestation (52 babies)

- **Home Oxygen:** 21 babies
- **Additional Needs:** 1 infant was both nasogastric tube fed and oxygen dependent, another 1 was discharged home requiring nasogastric feeds.

Infants Born 30+1 to 32 Weeks Gestation (27 babies)

- **Automatically Met Outreach Criteria (birth weight <1500g):** 26 babies
- **Home Oxygen:** 1 baby (also met above criteria)
- **Additional Needs:**
    - 2 infant required NG tube support at home (1 was <1500g)
    - 4 infants were discharged under the early discharge with ngt pathway, (2 of whom already met outreach criteria for weight)
    - 1 infant needed support for stoma care.

Infants Born 32+1 to 36 +9 Weeks Gestation (25 babies)

- **Automatically Met Outreach Criteria (birth weight <1500g):** 9
- **Home Oxygen:** 3 babies (1 baby also met criteria for birth weight)
- **Additional Needs:**
    - 3 babies required **nasogastric tube feeds** at discharge, of which:
        - 1 baby with **Trisomy 21**,
        - 1 baby with a **Prader Willi** diagnosis
        - 1 baby with a diagnosis of **Russel-Silver**
    - 1 baby with **congenital hydrocephalus**, requiring follow-up and a VP shunt.
    - 1 baby was a Consultant request for extra monitoring
    - 1 baby with **craniosynostosis**.
    - 1 baby discharged on the **home oromorph program**.

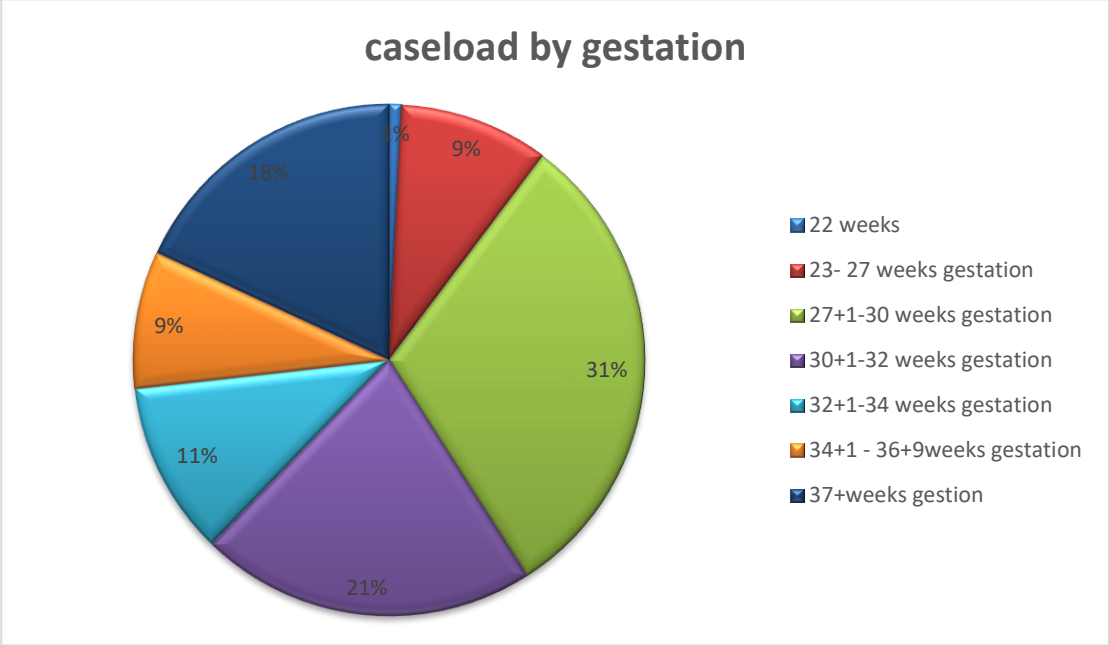
Infants Born 37+ Weeks Gestation (21 babies)

- **Home Oxygen:** 9 babies
- **Additional Needs:**
    - 3 babies required both **oxygen** and **nasogastric tube feeds**.
    - 10 babies were **nasogastric tube-dependent (**including 1 **NJ),** of which:
        - 2 were diagnosed with **Prader Willi**
        - 3 babies had a **Pierre Robin Syndrome** (PRS) diagnosis
        - 1 patient was diagnosed with **trisomy 21** with significant cardiac issues
    - 4 babies were referred for concerns about **possible developmental delay**:
        - 1 with **Holoprosencephaly**.
        - 1 with **ambiguous genitalia**.
        - 1 with **Lissencephaly**
        - 1 who suffered a **neonatal stroke**
    - 1 baby with **poor feeding and growth concerns** diagnosed with a **tracheo oesophageal fistula**.

Summary

- **Total babies seen for home visits:** 127
- **Babies requiring home oxygen:** 34
- **Babies under 30 weeks gestation:** 52
- **Babies over 30 weeks gestation:** 75

This breakdown provides an overview of the current caseload, including the specific care needs of infants based on their gestational age and medical requirements.



Number of Babies who received Palivizimab: 40

During the winter of 2024 **19** babies received Palivizumab at Singleton Hospital and **11** at Princess of Wales, Bridgend.

Coni Families: 2

Three members of the team are Coni-Coordinators for the Swansea area and attend yearly updates, now held virtually. They are arranged by the National Coni Co-ordinator who is based in the Lullaby Trust in London.

Safeguarding

In 2024 we had a total of **17** families with safeguarding concerns, not all were identified prior to discharge. Patients with safeguarding concerns will demand necessary extra visits and will usually include a range of meeting processes that depend on the level of safeguarding concerns. This will include Child Protection conferences, regular CORE groups or LAC reviews and regular formal report submissions. This year saw a significant rise in families with social concerns, double the number from last year.

Neonatal Outreach: 2024 Overview and 2025 Objectives

2024 Highlights

Following a disruption due to the Covid pandemic, 2023 marked the successful reintroduction of our **Neonatal Coffee Mornings**, a collaborative initiative made possible through our ongoing work with the **Family Integrated Care Project** and input from our experienced NICU parents. These monthly sessions, held on the first Monday of each month, have continued to gain popularity in 2024 and have become a valuable resource for families. The coffee mornings, a partnership between parents and the outreach team, continue to evolve. We've successfully incorporated guest professionals each month, providing different themes and topics to engage and support the families in attendance. The feedback has been overwhelmingly positive, with families finding the sessions invaluable for both support and education.

Our team is an active member of the **Neonatal Outreach Teams in Wales**, contributing to the **All-Wales Neonatal Network**. The **Neonatal Outreach Working Group** aims to establish a comprehensive, evidence-based outreach service across Wales, integrating care standards. While recent changes in the Welsh Network have temporarily impacted sub-group activities, we continue to stay connected through bi-annual online meetings. These meetings help maintain our support for neonatal outreach services and offer opportunities to share insights and learn from each other.

Additionally, our team is working closely with the wider neonatal Multidisciplinary Team (MDT) to enhance Family Integrated Care within the unit. With the appointment of a Discharge Planning Nurse in mid-2024, we are actively developing a standardised discharge pathway for all neonates. Early indications show that the presence of the discharge planning nurse has positively impacted the discharge process, ensuring smoother transitions and improved outcomes.

Our **annual Christmas Party**, a long-standing tradition, was once again a highlight, bringing together families and staff for a joyous celebration.

Objectives for 2025

Discharge Liaison Nurse
In 2024, we appointed a Discharge Liaison Nurse, a role that has already brought significant improvements to the discharge process. This role has helped relieve some of the planning burdens and streamline the steps leading up to discharge. As this role becomes more established, we expect further improvements in areas such as early discharge planning for babies on nasogastric tube feeds and a reduction in discharge delays. Ultimately, our goal is to create a more efficient and timely discharge pathway, ensuring babies can leave the hospital safely and as early as possible. This will not only improve the patient experience but also be more cost-effective and help optimise cot capacity.

Parent and Baby Coffee Mornings
We are eager to expand on the success of our **Parent and Baby Coffee Mornings**, providing a platform for group support, informal education, and health promotion. We will continue to work closely with neonatal Allied Health Professionals **(**AHPs**)** and veteran parents to facilitate these sessions in the community. We are exploring additional venue options to make these sessions

more accessible to families within our health board area. In the future, we hope to incorporate baby massage and baby yoga into our offerings, pending funding availability. The team is enthusiastic about expanding their skill sets to better support the needs of our patients and families.

CONI Pathway Improvements
Improving the **CONI (Care of the Newborn Infant)** pathway remains a key objective. We will continue to collaborate with the lead Consultant to enhance the recruitment process and ensure that all eligible babies are included in this important program.

BAPM Framework for Neonatal Outreach Services
At the end of 2024, the **British Association of Perinatal Medicine (BAPM)** introduced a draft framework for **Neonatal Outreach Services**, an ambitious and ground breaking initiative. We are excited about the potential of this framework and see it as an opportunity to further enhance our services. While implementing all the recommendations will require significant investment, we are optimistic that some can be adopted in a cost-effective way. Of the key recommendations outlined, we are pleased to report that there are only 3 areas which we are unable to support with our current outreach service, which operates five days a week. We are committed to continually improving and are eager to incorporate more of the framework's recommendations into our practice, ensuring the best possible care for our families.

Family Integrated Care

Compiled by: Dr Katherine Burke, Neonatal Consultant

Family Integrated Care really is 'work as normal' in our neonatal unit and efforts to further align our philosophy, care and practice with those things valued by families continued at pace in 2024. Breathing new life into the FICare group, we met monthly as a large multidisciplinary group in the ward 5 Cwtch to co-ordinate efforts around skin-to-skin, infant feeding, the provision of family space within our units, coffee mornings and family evenings, and many other things in between!

Much of this work was shaped by a shared ambition to move forward and work towards Silver accreditation in the Bliss Baby Charter, a benchmarking tool allowing us to assess our provision on parent priorities. Completion of this accreditation is a big aim for 2025!

Sibling area and Sensory Area

Determined not to let perfect be the enemy of good, we took over two spaces in the overflow area of Ward 5 and repurposed them as a sibling area and reading corner, where parents and families could step away from the clinical area and engage in play and reading. Opposite this, a space was reimagined as a sensory area, where infants and parents could spend time, with therapists also using this space for sessions away from the cotside. Much of this was made possible by generous donations from the Amazon Wish List – which was fantastic and allowed parents past and present to pick out things they would have enjoyed and valued during their time on the ward.

The space gets lots of use, and is highly valued by families and staff as a haven of normality! It serves so many purposes, as a place to decompress, meet with therapists, have conversations away from the cot side, and for siblings to blow off steam! It is very much still work in progress, but is a small step in our journey towards better provision for families in our care.

Extended access and visiting provision

Following the stop-start recovery from the covid-19 pandemic, we sought to reimagine our visiting policy for siblings and extended family as part of the recognition that parents highly value this extended support. Parents are now able to nominate two additional carers who can take part in cares, have skin to skin – anything the parents wish! It has been lovely to see babies out with Mamgu, aunties and other treasured family members. There has also been extended sibling visiting until 7pm, and again, it has been lovely to see so many families at the cotside all together.

Patient Stories

The work with patient stories has continued, providing a fantastic platform and means to communicate our work from the family perspective. Sue Edwards has made some beautiful videos with families, including one focussed on the sibling journey, and another on the role of music in the neonatal unit. As well as being extremely moving, these are a fantastic way to spread messages floor to board about the work on the unit and the care we provide.

Peer supporters

The peer supporters' group had new energy this year, providing support on the unit with so many activities, including a revamp of the parents' coffee room, helping with the reading and expressing supplies and providing a much needed ear to parents and families on the unit. They have been instrumental in helping establish the families evenings at Maggie's Cancer Centre, which provides an opportunity for parents past and present to meet with other neonatal families and staff. This evening is now held twice per year and well attended by families, siblings and friends of the unit, and is a highlight in the FICare team calender!

Plans for next year

- Work towards BLISS Baby Charter Silver Accreditation – to allow us to Benchmark our activities against the things families value
- Improve our provision of information for families through new resources to support FICare, including the FICare Folder
- Re-establish the nursing education on FICare through FICare study days, bringing the skills and knowledge so new staff can become FICare Champions!

Neonatal MDT Therapies Update

The main goals of the Neonatal therapy service over the past year have been to:
a) Provide high quality MDT assessment and developmentally supportive intervention to babies and their families, while on the neonatal unit.
b) To contribute to the improvement of parent/family experience while on the neonatal unit.
c) Development of Family Integrated Developmental Care practices.
d) To provide an outreach service to support families of high-risk babies in the early discharge period, to provide early intervention and support families through the transition from neonatal to Community services.

Neonatal Occupational Therapy Service and Projects:

Amanda Lawes , Neonatal Occupational Therapist, is appointed at 0.5 WTE to provide specialist assessment and intervention for the inpatient population, prioritising intervention for high- risk infants, parents struggling with well-being and babies with Neonatal Abstinence Syndrome. The Occupational Therapy provision has been reduced from 0.8 WTE to 0.6 WTE due to Amanda lawes gaining the position of Lead OT for Thames Valley and Wessex ODN. This has meant that there is currently no Occupational Therapy provision for the weekly neuro-devevelopmental follow-up clinic. Reduced hours for Community Outreach OT are currently being covered by Community Paediatric OT's from Neath and Swansea on a temporary basis (this service feeds in to the enhanced follow-up service.)

Amanda continues to chair the All Wales Neonatal AHP Forum, which is now functioning as an advisory body to the NHS Performance and Improvement. Amanda attends the Clinical Reference group to represent neonatal AHP's across Wales. She has led on AHP consultation for the Wales Performance and Improvement Service Specification and Wales Quality Statement.

Amanda represented Neonatal AHP's in the HEIW Perinatal Workforce Strategy Project along with Margaret Manton (Physio lead Cwm Taf). It is planned that Amanda will continue to contribute to phase 2 of the project which is to implement the Strategic Perinatal Workforce Plan.

Amanda is leading a QI project, along with Gabriella Morgan-Swinhoe (Feeding Lead) aiming to increase the percentage of babies in NICU having skin to skin in the first 24 hours to 70%.

Amanda is also a member of the QI team looking at assessment and management of Pain on the neonatal unit.

Amanda continues to volunteer for EI Smart to produce early intervention leaflets for parents of high-risk babies.

June 2024, Amanda presented a national webinar organised by NHS England showcasing the work of Neonatal Allied Health Professionals.

September 2024 Amanda presented a webinar in conjunction with Bliss 'Spotlight on Neonatal Occupational Therapy'. This can be accessed on the Bliss web site and new neonatal professionals are signposted to this resource to learn about the different Neonatal AHP roles.

October 2024 –Amanda presented at the N6 Nutrition study day 'Recognising Strress Cues and the Sensory Processing aspects of Feeding in the Neonatal Unit'

Amanda is on the committee of the national Neonatal OT Forum and facilitates national peer supervision sessions for neonatal OT's.

Neonatal Physiotherapy (PT) Projects:

- Ceri Selman, Neonatal Physiotherapy is appointed at a 0.5 WTE position. This role is divided into 0.3WTE as inpatient work and 0.2WTE as outpatient work (bridging the gap between the NICU and core service as well as offering Early Assessment and Early Intervention within our Enhanced Neonatal Neurodevelopmental Follow Up Clinic.
- Both Inpatient and Outpatient work has focused mainly on the infants at high risk of Neuro-developmental difficulties (as per NICE Guidelines) with a view to improving short-, medium- and long-term outcomes through neuroprotective measures and optimising opportunities for positive neurodevelopment.
- Other work has included initial management of orthopaedic and MSK presentations.
- Work has continued encouraging greater variability of developmentally supportive positions for babies on our unit through parent and nurse education.
- Ceri (PT) is now accredited to use the The Newborn Behavioral Observation (NBO) for babies at high-risk both on and off the unit as part of a holistic approach with this cohort. Funding for this training was achieved via Bursary award following a peer reviewed application process.

- Continued collaboration at an All Wales level through NeoPhysCymru (All Wales neonatal Physiotherapy clinical interest group, affiliated by the Chartered Society of Physiotherapists) has facilitated sharing of gold standard practices, peer support, feedback into National workforce development projects and continued benchmarking. An output of this group has been the writing of 'All Wales Guideline for Handling Neonates on the NICU'. This is in the process of being ratified.
- Introduction of the Hammersmith Neonatal Neurological Examination (inpatient) and Hammersmith Infant Neurological Examination (at 3 months GAC) was introduced as standard practice for high-risk babies prior to thier discharge home. This service development project was led by Ceri (PT) and Dr Tom Hixson, Consultant Neonatologist.
- The HNNE service development project was presented at BANNFU in London in November 2024 and a teaching video supports its standardized use for new Medics and ANNPs.
- Represented the Enhanced Neurodevelopmental Follow Up Team and presented alongside Dr Lucy Perkins, Sarah Owens and a Veteran Parent at the St. David's Day Association of Paediatricians, with emphasis on how we as a team support the first 1000 days for neonates.
- Ceri (PT) is an active member of the 'Prosiect Iaith' Improvement Group –with several Quality Improvement arms.
- Physiotherapy contributions to twice monthly Baby & Me sessions focus' on supporting parents to develop their confidence when handling and positioning their baby both on the NICU and at home.

Neonatal Speech and Language Therapy (SALT) Projects:

Leah Watson (Speech and Language Therapist, SALT) continues to appointed at a 0.5 WTE position and based on the Neonatal unit for 18.5 hours a week, providing specialist swallow assessments and co-producing feeding plans with parents/ carers and the MDT for neonatal inpatients.

Leah (SALT) attended a Flexible Endoscopic Evaluation of Swallowing (FEES) course in Cambridge in February 2024, alongside Dr Burke (Neonatal Consultant) and Mr Costello (ENT Paediatric Lead). Leah developed a draft standard operating procedure, eligibility criteria, report template and consent form for a pilot project for utilising FEES within Singleton Neonatal Unit. Leah observed some adult FEES in Morriston Hospital to develop her FEES competencies and has made links with SALTs in England who carry out Neonatal FEES in preparation for consensus scoring and case discussion within this niche area.
Leah (SALT) led on a Quality Improvement and service development projects, 'Wait for Green QI', focusing on baby-led bottle feeding to promote pleasurable and safe early suck feeding experiences for babies on the neonatal unit. This included the implementation of a tool to measure readiness and coordination skills when bottle feeding, alongside the Infant feeding Lead. During the Unicef BFI audit in December 2024, the area of safe bottle feeding, showed a significant improvement since the Neonatal unit's last assessment.

The other project being led by Leah (SALT) is the development and utilisation of a risk assessment and decision-making tool for use with babies who are showing feeding cues yet are on high flow respiratory support. The aim of the tool is to ensure that we are making

individualised, safe and developmentally informed decisions in regard to readiness and when to commence oral/suck feeding. This will be evaluated after a year of it being in use, in 2025.

The Royal College of Speech and Language Therapy used a neonatal patient story, devised by SALT in collaboration with a veteran NICU Mum, to tell the story of her baby's suck feeding journey and SALT's support. This was shared on the RCSLT social media sites on Dysphagia Awareness Day. Leah was presented with a certificate at a RCSLT celebration event in recognition of her contribution to the profession in Wales.
SALT secured some specialist supervision sessions from the Neonatal SALT in Betsi Cadwaladr in Ysbyty Glan Clwyd. A task and finish project to support Leah to meet her Consultant level - Royal College SALT competencies within Neonatal Dysphagia, this continued until Spring 2025.

Neonatal Psychology

We now have an embedded Neonatal Psychology service as up until this point, the Psychology provision was limited and provided by a Consultant Clinical Psychologist within the wider Child Psychology division and was not an embedded or substantive post.
Dr Jess Seddon, Principal Clinical Psychologist, commenced in post for 18.75 hours/ week (0.5 wte) on 22nd October 2024.

- She has been establishing the Psychology service since then, with an initial focus on reviewing the referral pathway for parents/carers of babies admitted to the neonatal unit (Working across NICU, HDU & SCBU).
- Focus of offering support to babies and their families (Directly to parents/carers around adjustment & coping/ supporting with health anxiety, psycho-education covering topics such as attachment/ bonding within a neonatal context, birth trauma awareness, loss/bereavement support and signposting, psychologically informed neonatal care , both at cot side and indirectly through liaison/ consult, supporting and attending the weekly Psychosocial meeting and liaising with other services such as PRAMS and working jointly with AHP colleagues, nurses and the medical team to support babies and families

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- The Neonatal Psychology team also support the staff on the neonatal unit and this area of the service is in it's early development. Jess initially focussed upon liaising and connecting with other Neonatal Psychologists across the UK to share best practice and ideas regarding the staff support provision and offerings in place. It is hoped that the next year will be focussed upon formalising the offering to neonatal staff (e.g. offering 1:1 staff support sessions following particular incidents or when they are struggling emotionally with the impact of the work, smaller staff post-event team reflections (PETRs), whole unit staff reflective practice or exploring staff drop-ins, developing resources for staff. This will also involve identifying opportunities to support the wider staff team as part of new staff inductions, including training and teaching in relevant subject areas, such as psychologically-informed neonatal care, attachment and bonding, supporting those experiencing health anxiety/ birth trauma/ loss / adjustment and coping with the neonatal ward environment etc.
- At present, there is no capacity for the neonatal psychology service to offer community follow-up support to families following a baby's discharge home. However, it is recognised that this would likely be of benefit to families in future, with increased capacity.

Joint MDT Projects by neonatal therapy team:

1. In 2024, we completed a Neonatal AHP data capture for the period of April- July to gain understanding of the depth and breadth of Neonatal AHP services (limited to OT/PT/SLT). We also highlighted gaps and shortfalls of AHP services to inform current position on the SBUHB risk register. We presented this information to our Heads of services and Consultant Neonatal Lead.

In summary our data capture showed:

- 165 babies received individual specialist Ax by an AHP over this 4 month period
- Overall inpatient contacts by AHPs was 409 over this 4 month period
- 206 MDT ward round contacts carried out on SCBU by AHPs
- The data capture highlighted significant gaps in WTE compared to national recommendations for inpatient and outpatient care.
- Relating to this there persists a lack of cover for AL/ sickness/ study leave/ non-working days.
- Parent feedback from this data capture period included:

"All the early input that XXX has received has definitely had a significant impact on his development. And all the NICU babies would benefit from all the help we have been so lucky to have." (in relation to Therapies Team).
"Initially we weren't confident in holding and handling our child but by discharge, through the support of the unit we felt more than confident in looking after our child."

"I would say there should be many NICU support groups set up for after discharge (from the point of discharge) to 2 years (possibly 0-12 months, then 12-24 months) supported by individuals with specialist knowledge. A Nurturing, healing and informative environment, giving advise about how to help the babies with physio, speech and language, OT and breastfeeding support, is what the focus should be within these. Tea, biscuits and chats. There is a huge gap for this at the moment."

"The whole team are amazing!" *(Therapies Team).*

- Feedback from the wider MDT and staff included:

"Those parents are like different people today after chatting to you…that's down to what you did."
"Your input has been extremely important and priceless to our patients. Please continue to work closely with us!"
"Just that it's great to have therapist intervention at this stage for our babies"
"You all do an amazing job and are an asset to the NICU team"
"A much needed addition to the neonatal team"

- And, for PT follow up clinic:

"The clinics are very time efficient as you see everyone in one place, at the same time. It's a very relaxed and friendly atmosphere and avoids building anxiety from attending lots of different appointments".

"After neurological uncertainties were identified for my son, the therapists' expertise has been invaluable as a family. We have learnt so much about infant development which helped our confidence. They made us feel so relaxed and involved as parents".

2. Facilitate early intervention play sessions at the monthly parent coffee mornings.
3. Contribute to Fi Care meetings and action plans.
4. Participate in weekly MDT ward rounds.
5. Ad-hoc Baby and Me Parent sessions for inpatients.
6. Weekly THUDDLES (Therapy-Huddles) – providing bite size information and good practice sharing based on current hot topics.
7. Continued provision of in-house Nurse training – for New Nurses, HDU and ITU levels as well as cot side skills share session.
8. Contributing to the teaching and training programme for New Doctor Training.
9. NICU Parent Veteran evenings – we support play and early intervention ideas.
10. We collaborated at an All-Wales level for the Perinatal Workforce Strategy to benchmark our services and highlight local and national gaps as AHPs.
11. We contributed as a Team towards the 'Review of AHP Teams in Neonatal Care: Rapid Review of Evidence In partnership with Evidence Centre, HTW, Health and Care Research Wales, March 2024.
12. We regularly attended the Wales Neonatal AHP and Psychology Forum.
13. We supported the Kangaroo Care-athalon Day May 15th.

Transitional Care Report

Compiled by: Dr Oliver Walker, Consultant Neonatologist

The transitional care unit (TCU) at Singleton Hospital was established in January 2021. TCU is a seven bedded unit located between the post-natal ward (PNW) and special care baby unit (SHIPS). BAPM (British Association of Perinatal Medicine) level transitional care (TC) is provided to infants on both TCU and PNW.

The TCU reopened at the start of 2024 having been closed from August 2023 to December 2023 for replacement of external cladding on the building. TC activity data is regularly fed back to the wider perinatal team at perinatal forums however data analysis was paused during 2024 for lack of administrative support. However, during2024 the lead neonatal nurse for SCBU took on the role of a transitional care liaison neonatal nurse regularly attending the post-natal ward/ transitional care huddle and providing support for maternity staff caring for babies on transitional care.

Singleton TCU admission criteria broadly follow those outlined by BAPM. Staffing is shared with the 18 bedded PNW. Combined TCU/PNW staffing comprises two midwifes (three if there are more than 16 mothers present on the unit), one nursery nurse, one maternity care assistant (without out of hours or cover for leave) and one health care support worker. In-hours medical cover comprises a Tier 1 doctor or ANNP dedicated to both PNW and TCU. A Tier 2 doctor (occasionally Tier 1) or ANNP who additionally covers SCBU and a consultant responsible for TCU, PNW and SHIPS.

The TCU team were heavily involved in the development of the network service specification for transitional care during 2024 and we look forward to implementing its recommendations in future years.

PART IV

Educational Report

Departmental Education Programme

Compiled by: Dr Kayode Babatunde, Neonatal Specialty Doctor

Resuscitation Council UK Neonatal Life Support Courses

The provision of quality, uniform resuscitation and supportive care in the first minutes of life is crucial in achieving the best outcomes for newborn infants of all gestations, born across different settings. The all-Wales Neonatal Standards define the need for all staff attending deliveries to be trained in neonatal life support.

This training is provided through the Resuscitation Council UK course in Neonatal Life Support, with provider status lasting for 4 years. The first course in Swansea was held in October 2012, and our provision has remained steady. In 2024, we delivered four courses in Swansea Bay UHB, training 80 individuals. In addition, we supported the delivery of two courses in Hywel Dda UHB, training 48 health professionals. As part of our continuing efforts to build sustainability for our courses in South West Wales, a significant number of nurses, midwives and medical staff have been trained as instructors.

We continue to make good use of the training facilities at Philips Parade Training Centre – a practical setting which enables us to deliver the course in a sustainable way. We remain enormously grateful to the Resuscitation Service at Swansea Bay UHB, and our instructors from within and beyond the health board, who sacrifice their time so generously. In addition, we continue to develop our faculty locally to support other RCUK courses, including the generic instructor course (to provide the next generation of instructors) and the advanced resuscitation of the newborn infant course (to support the development of advanced skills in newborn care).

Multiprofessional Neonatal Emergency Training (MoNET)

This is a standardised, all Wales training programme for neonatal services, aimed at enhancing teamworking across the perinatal sector and improve outcomes for babies and families. Some of our medical and nursing staff have been trained as faculty in the faculty development programme which took place in October 2024. The local faculty, currently eleven in number, is set to roll out this training programme in Swansea Bay UHB from January 2025.

Education Programme in the NICU

The education programme at Singleton is a real collaborative effort, capitalizing on the energy, experience and enthusiasm of the whole multidisciplinary team. The GMC survey, in addition to our in-house feedback processes, continue to provide governance and assurance with respect to the quality of the educational experience in our unit. We maintain our high ranking for the quality of clinical supervision, and the supportive environment we provide for doctors in training. In terms of overall satisfaction, our unit remains in the top three units in Wales for paediatric trainees. We are immensely proud of our reputation, and recognise the relationship between the trainee experience and education and the ability to provide a safe, sustainable workforce for neonatal care, within and beyond our unit. Trainees often apply for further specialist training in

neonatal medicine having worked in our unit, and many resident doctors, request to return here to complete further core training.

Weekly teaching sessions, held on Tuesday and Thursday afternoons, are open to the whole neonatal multidisciplinary team and provide teaching on a variety of subjects relevant to neonatal care. Teaching sessions are led by various cadre of medical as well as allied health professionals. We also regularly benefit from the expertise of external resource persons. Furthermore, we hold regular sessions to enhance safe prescribing, these has led to a reduction in drug errors in the unit.

As part of our morning 'huddles', we have the weekly 'druggle' and 'thuddle'. In the former, the Pharmacist provides concise up to date information around safe prescribing and in the latter, our wonderful AHP team provide brief updates and information on relevant interventions and assessments.

The weekly journal club continues to go from strength to strength, providing an avenue for medical staff to develop the requisite skills needed to summarise and critically appraise scientific papers. Beyond these benefits, we engage in robust discussion on the relevance and applicability of scientific research to our practice. In some cases, we have inculcated these findings into our practice.

In a bid to continue to improve the quality of care we provide, we now hold regular quality improvement days, with focus on methodology and providing updates on ongoing projects in the department.

Simulation training is consistently rated highly by staff across the multidisciplinary team. Weekly sessions are held on Wednesday, facilitated by a core team of medical and nursing staff and involving the whole multidisciplinary team. The dedicated simulation space in Ward 5 has provided an opportunity to provide protected space for scenarios, as well as comfortable space for debriefing. Feedback for the sessions is excellent and it is brilliant to see participants grow in confidence in response to the opportunity to develop and refine skills in resuscitation, stabilisation and communication.

Ultrasound teaching is now a part of the weekly programme as we look to improve our point of care ultrasound skills and provide more opportunities for bedside teaching. These sessions, led by the trio of Drs Maha Mansour, Rachel Morris and Sreedhara Nittur cover a range of topics, from functional echocardiography, lung ultrasound and assessment of central line placement.

Inter-Departmental meetings

In our bid to enhance learning and improve quality of care, we have continued to hold regular meetings with other departments. These include the quarterly perinatal meeting with obstetric colleagues to review patient care and identify areas of improvement. We also strive to hold the neuroradiology meeting biennially with our radiology colleagues with a view to improving the use and interpretation of various imaging modalities and linking radiologic findings to real life outcomes. Furthermore, the Morriston-Singleton meeting has been revived to explore the care of discharged babies from Singleton NICU who present in Morriston Hospital within weeks of discharge.

The consultant body at Singleton Hospital neonatal unit all contribute to educational and clinical, supervision of resident doctors, as well as, formally mentoring other professionals including Advanced Neonatal Nurse Practitioners (ANNPs) and postnatal ward midwives. The team have strong links with Swansea University Medical School with several consultants having formal roles within Swansea University Medical School. These include Dr Sujoy Banerjee as Head of Clinical Placements, Dr Arun Ramachandran, admissions Lead for GEM and Dr Katherine Burke, Clinical Placement Support Tutor, Swansea GEM Programme. All the Neonatal Consultants have signed the Wales Deanery Educational Supervision Agreement, and are committed to providing high level Educational Supervision, and to keep up-to-date with the Deanery and GMC recommendations. Contributions to teaching outside the unit are too many to mention, but include the NIPE, pharmacy and Physician associate courses within the university.

Nursing Professional Development Report (January – December 2024)

Compiled by: Professional Development Team – Sr Jessica Beynon

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Introduction

Neonatal Services demands extensive training requirements for both its registered and unregistered staff. These requirements are decided by the following organisations

- British Association of Paediatric Medicine 2011 (BAPM)
- All Wales Neonatal Standards 2nd Edition 2013
- Swansea Bay University Heath Board SBUHB (Swansea Bay University Health Board)

The Standards for attainment and training requirements are assessed, coordinated and where possible delivered by the Continuous Professional Development Team CPD (Continuing Professional Development) within neonatal services.

The neonatal team works in conjunction with the other CPD teams within Children's Services, Singleton Delivery Unit, the Welsh Neonatal Education network and is supported by Corporate Education through the Health board

Staff training compliance is assessed and recorded monthly via the NHS Wales Health and Care Monitoring System. Internally the CPD teams within Childrens services populate a current internal database.

The following report is an annual assessment of the training delivered and coordinated within Neonatal Services between Jan 2024 and December 2024

Childrens Services Mandatory Training provision

In 2024 Childrens Mandatory Training provision was face-to-face training with larger groups of participants from across Children's Services. The topics delivered were based on an agenda in line with government and health board guidelines. The focus of 2024 was to ensure that participants gained their mandatory safeguarding hours for a three-year period as specified by the Safeguarding Children and Young People: Roles and Competencies for Healthcare Staff Intercollegiate document. This was facilitated and delivered by the Safeguarding Specialist Nurse for Paediatrics and Neonates who specify that nurses need to complete the equivalent of a minimum of 8 hours' education, training and learning related to safeguarding/child protection over a 3-year period

2024 Programme subjects identified

- Safeguarding People Level 3 Training
- DASHRIC Awareness

- Referral process with Social Services
- Awareness of competency document for Nursing Staff

All new recruits complete the Health Boards electronic online mandatory training during their induction programme.

All staff currently working within the Health Board are expected to **maintain 100% compliance** with their **electronic learning** as defined by the Health Board Policy. Neonatal nurse Mandatory and Statutory E-learning for 2024 was recorded at 94.30%.

Neonatal Registered Staff Attendance

66 Nurses attended out of 88* available staff **=75%**
*There were several nurses who were not available due to sickness, birth-related leave, and internal secondment.

Neonatal Nurses Skills Day

This protected study day was delivered by the Professional Development team in each individual specialty within Children's Services for both Registered Nurses and Nursery Nurses.

The Neonatal Nurses Programme 2024

- Medication Management
- PKU Update
- Non-Invasive Management – whats new and changes
- NLS (Neonatal Life Support) Update
- Breastfeeding Update Training
- Topic of the month – learning from incidents
- Aseptic Non-Touch Technique Training and assessment
- Univers QI

Neonatal Registered Staff Attendance

64 Nurses attended out of 88 available staff **=72%**
*There were a number of nurses who were not available due to sickness, birth-related leave, and internal secondment.

Ongoing staffing issues, 3 skills days out of 12 were cancelled due to roster challenges and unit acuity.

Due to the ongoing staffing issues resulting in nurse cancellation from study days, this remains on the Health Board Risk Register for enhanced monitoring.

Hand Hygiene Updates

All nurses have undertaken the Swansea Bay Infection Control hand hygiene update in line with health board guidelines. The hand hygiene updates have been undertaken in a ward-based environment to maintain 100% compliance of handwashing. This is managed by the CPD Lead

and Ward Manager with responsibilities for Infection Control along with a team of ward-based trainers.

Aseptic Non-Touch Technique (ANNT)

Aseptic technique is a core nursing, Aseptic Non-Touch Technique' (ANTT®) is used as a safe and effective practice framework for aseptic technique for all aseptic clinical procedures. The Welsh Government has directed healthcare organisations to 'roll-out' ANTT competency training to all relevant staff within their organisation. The principles of ANTT align with the principles of prudent healthcare. The need for asepsis, especially in invasive procedures and wound management, is evidenced in the epic3 Guidelines. Within Neonatal Services, this has been applied in the following ways. All nursing staff have completed the mandatory Welsh Government E-learning module, supported by a DOPS assessment of all nursing staff's technique, which has helped reduce Central Line-associated blood stream infections (CLABSI).
The DOPS assessment was undertaken during 2024 and all available staff have completed a DOPS assessment – ESR compliance 90.53% Assessments 84.51%.

Neonatal Life Support Training (NLS) 2024

The All-Wales Neonatal Network Standards (2013) recommend attendance at a Resuscitation Organisation Neonatal Life Support Day on a four yearly basis. This day is currently delivered in Swansea between three and four dates during a year. The number of candidates that could attend NLS are currently 20, and these places are filled by midwives, neonatal nurses, and medical personnel. An annual update has been given to nurses and nursery nurses on their annual skills day. This update is delivered by a qualified NLS instructor.

NLS compliance 2024

Singleton Swansea = 71/71 = 100% of available staff
*There were several nurses who were not available due to sickness, birth-related leave, and internal secondment.

Dates for 2024 for NLS were undertaken in May, July and September.

Qualified in Speciality (QIS) Status

The All-Wales Neonatal Network Standards (2013) require 70% of nurses working within the speciality to attain QIS status. The Neonatal Modules are conducted via the University of Wales Swansea. These modules are offered to staff at both a level 6 (degree) and level 7 (masters) and have 20 CAT points awarded on successful completion of the module. In 2023, the format of the modules adjusted slightly the candidates will complete both the HDU and ITU modules back-to-back, allowing for an academic break to become QIS within 34 weeks. In 2023 5 candidates completed the HDU module, completed one at level 7 and four at level 6 – all candidates passed their modules. The intensive care module commenced in September 2023. All candidates undertook the module at level 6 and all five successfully passed. Both modules successfully passed means that the nurse is defined as 'Qualified in Speciality' (QIS)

Module 1

Singleton 60/78*= 76%
*There were several nurses who were not available due to sickness, birth-related leave, and internal secondment

Module 2

Singleton Swansea = 51/78* = 65%

*There were a number of nurses who were not available due to sickness, birth-related leave, and internal secondment

Current Recommendations are that 70% of Neonatal Nurses are required to be QIS. The QIS percentage has increased slightly this year due to successful recruitment into the Neonatal Nursing Team.

QIS status 2024

Four nurses completed the HDU module 1
Five nurses have completed the ITU module 2

Nursery Nurses

This unregistered workforce attend Mandatory training and an allocated annual Skills day delivered by the CPD team. The Neonatal services employ 3 Band 4 Nursery Nurses. The neonatal nursery on ward 5 has successfully opened and is staffed with a combination of both staff nurses and nursery nurses. The study day for nursery nurses in 2024. All available nursery nurses completed the study day which consisted of the following topics.

- Safeguarding Update
- Cue based feeding
- NLS Update
- Positioning
- Breastfeeding Update
- Neonatal Energy Triangle Practicalities
- Blood glucose training/PKU
- Patient Stories/ communication
- Documentation Awareness

Degree Level Study

One nursery nurse has been successfully completed Adult Nursing Part time 4 years (BSc Programme) via Swansea University and qualified in September 2023

Master's Level Study

Master's degrees 2024

There were no candidates undertaking master's degrees in 2024

NEST P.G. Certificate (Enhanced Practitioners role)

While this was offered at a master's module within Neonatal Services in Swansea Bay University Health Board with the University of Wales Swansea. There has been limited interest by the Neonatal Nursing team, so the programme has been placed on hiatus for the year of 2024 and will be reviewed in 2025.

Master's in Advanced Practice (Advanced practitioners' role)

This course is undertaken at Southampton University and the study commitment is for either 1-year full time or 2 years' part time. Following qualification these nurses work as part of the medical team at differing grades dependent on experience. There are 7 Advanced Practitioners currently working as part of the medical team, and one nurse is undertaking the Advance Neonatal Nurse Training full time.

Ward Based Projects

New Staff Induction

The new Registrants have accessed elements of the new registrant corporate induction programme where applicable. The neonatal services currently offer a five supernummery induction programme aims to equip new nurses with the specific skills and training to enable a smooth transition to work within the specialty. Additional study days have been provided once a month and have included lectures on Neurology, Respiratory, Cardiovascular, Fluid Management, Common Neonatal Conditions, and the Deteriorating Patient. There is also a practical-based day with new skills like admission/ non-invasive support/equipment set up.

Clinical supervision

Clinical supervision is a regular and formal agreement to engage in a professional working relationship, facilitated by [a] supervisor to support [a] supervisee to reflect on practice, with the aim of developing quality care, accountability, personal competence and learning" (Cassedy, 2010) This has been a mandatory part of the new registrant's induction and is undertaken by the CPD lead. These are undertaken on a virtual platform and are offered on a one-to-one basis following staff requests.

Ventilator Training Update

An update session for all nurses who are not QIS trained to update knowledge and skills. All these staff nurses have been provided with a competency document and must attain 60 practice hours of caring for a ventilated patient with the support and supervision of the wider nursing team.

Topic of the month

This has been developed by the CPD lead and CPD team as a way of learning from clinical risks identified through the risk management structure. The session is undertaken by the CPD team for one week every month facilitated and delivered cot sized to the nursing team. This is a way of disseminating learning from identified risk and ensuring that good practice and evidence-based knowledge can prevent this from re-occurring in the future. Initial indicators for the period from 2024 showed that on average 76% of the nursing staff received face to face updates, the topic of the month was also shared via staff's email, via a poster display and a QR code which generated the information held in the poster

Administration of Oral Medication

All new registrants are expected to undertake the Health Boards oral medication competency document within the first six months of being employed within Neonatal Services.

Administration of IV medication

Access to IV medication administration training is provided promptly, and specialist mentor support available, staff are allocated as courses allow.

Safeguarding

All nurses working within the specialty require the attainment of level 3 safeguarding

A Ward manager with responsibility for safeguarding has been identified and works in conjunction with Clinical Nurse Specialist for Safeguarding (Paediatrics).

Domestic Abuse – Ask and Act project

The Welsh Government Violence against Women Domestic Abuse and Sexual Violence (Wales) Act 2015 charged public services, under section 15, with a responsibility for establishing a targeted enquiry approach. The CPD lead continues to deliver training for all staff in Singleton Delivery Unit. Neonatal Nursing Staff will have a three yearly update on the Mandatory Day in 2025/2026, supported by the CPD Lead.

Continuing CPD Projects/ Work Streams

MoNET

The Welsh National Multi-Professional Training Programme (MoNET Wales) was implemented by Neonatal Service Groups across Wales from October 2024. MoNET Wales has been designed by the Welsh Risk Pool to standardise training in neonatal services in Wales following the publication of the Maternity and Neonatal Safety Support Programme and to address the findings from the Improving Together for Wales Report 2023. The programme is designed to be delivered and attended by the multi professional team. Themes from presentations will be incorporated into simulation-based learning. This multi-professional programme will involve all members of both the neonatal nursing and medical teams. Six nurses have been identified and completed MoNET faculty training. The training dates are due to commence in 2025 and will require some adjustment to existing study leave requirements to accommodate this request from Welsh Government.

ANTT

The CPD Lead is currently involved in Quality Improvement Initiative to reduce Central Line Infection rates (CLABSI) which has required the introduction of a new audit tool to audit amount of time central lines are accessed, this has been introduced alongside education session about ANTT for all staff nurses prior to undertaking their IV's. This has been completed in 2024 and will remain on a three yearly rolling programme.

Clinical Education

Cot side support is available for all new members of staff.
Extra support is available for all nurses who request to expand their clinical knowledge.

Blood Transfusion update (2/3yearly)

This update has been delivered to all neonatal nurses who have attended the Skills days by face-to-face training, and this has been supplemented with completion of the online training module provided by the ESR Framework
All staff who are new to neonatal services will have an assessment undertaken by the transfusion practitioners and then an assessment by one of the two ward-based blood transfusion assessors

Ventilation cot side education and support

Is available for nurses who are progressing into the ITU arena along with academic support for staff working with ventilation

Medicines Management
This is an ongoing issue, which entails regular updates from the CPD team alongside ongoing audits on medication management.

Infection Control
Support with hand washing training and the audit of care bundles continues.

Simulation Training
A practice development nurse continues to support simulation-based learning with identified learning outcomes for the nurses who participate in simulation training.

Projects for 2025
Continuation of QIS modules
Induction Training for new registrants
Ask and Act Training
Ongoing Medicine Management including results from quality improvement project
Ventilation study days for band 5's
Topic of the Month
Clinical Supervision
TRIM Supporter
MoNET Wales – Pilot group and National Role out.

 # Cassedy P (2010) *First Steps in Clinical Supervision*. Maidenhead: Open University Press.

Singleton Neonatal Team - achievements 2024-2025

National Awards

UK MUM Awards (Maternity Unit Marvels) 2025 – Baby Lifeline Family nomination award – Joint Winner; Excellence in Neonatal Care

BAPM Gopi Menon Award 'Outstanding Individual' - Winner 2024 – Sujoy Banerjee

BAPM Gopi Menon Award 'Outstanding Individual' - Nomination 2024 – Lucy Perkins

Practice Assessor of the Year (Child) 2024 – HEIW/SBUHB – Lora Alexander

Patient Choice Award 2024

Sujoy Banerjee

PAFTAs 2024/5

Winner – International Medical Graduate of the year – Kayode Adedeji

Nominations

Paediatric Nurse of the Year – Kaleigh Thomas

ST1-3 of the year – Mayank Pahuja; Marwah Saleh; Alice Johnson

ST4-5 of the year – Lizzie McVittie

International Medical Graduate of the year – Mayank Pahuja

Allied Health Professional of the year – senior ANNP Steph Cannell 2024 and 2025

National Leadership roles:

PeriPrem Cymru – National Neonatal Lead – Lucy Perkins

Executive member of Association of Paediatric Palliative Medicine and co-author of BAPM Framework: Recognising Uncertainty: an integrated framework for palliative care in perinatal medicine – Lucy Perkins

National Neonatal Lead for HEIW Perinatal Workforce Plan 2024/25 – Arun Ramachandran

Kate Burke – Member of the BAPM Airway Working Group and co-author of the Framework

Research and Quality Improvement

Publications:

- Blundell P, Abood L, Chakraborty M, Banerjee S. Intervention at an early threshold for post-haemorrhagic ventricular dilatation in preterm infants: a systematic review and meta-analysis. World J Pediatr. 2024 Aug;20(8):774-786. doi: 10.1007/s12519-024-00827-w.

- Webb J, Elliott S, Watkins WJ…..Banerjee S…Chakraborty M. A New Formula for Estimating Insertion Length of Umbilical Catheters in Neonates: An Observational Study. Journal of Neonatology 2025; 39(1):30 –36. DOI: 10.1177/09732179241234515

Multicentre Research:

- NeoGASTRIC – PI Sujoy Banerjee, Kate Burke
- FEED1 – PI Jamie Evans
- ENHANCE – PI Arun Ramachandran
- SURFSUP – PI Lucy Perkins, Kate Burke
- HIE Connect – PI Kate Burke

Presentations:
Quality Improvement Projects

UNIVERS – Using Non-Invasive Ventilation for Early Respiratory Support

Lucy Deacon and team

Oral presentation at BAPM Conference 2024

Accepted for JENS Alicante 2025

Oral presentation at the All Wales QI day February 2025

Optimising Antenatal Steroid administration

Tom Hixson and team

Poster presentation at BAPM Conference 2024

Iaith – preferred language

Elin Cosgrove, Lucy Perkins

Oral presentation at All Wales QI day February 2025

Wales Improving Care of the Acute Neonate (WICAN)

Zoe Howard, Kate Burke and team

Poster presentation at BAPM Conference 2024

Innovative methods to support breastfeeding education in the NICU

Zoe Howard and team

Poster presentation at BAPM Conference 2024

Other Presentations / Posters

- Unmasking the hidden specialties in the GEM curriculum – GEM National conference 2024, Warwick University – Geraint Morris and Sujoy Banerjee
- "Introduction to the HINE & HNNE to complement enhanced neurodevelopmental follow-up: what, how and when?" – Tom Hixson and Ceri Selman, BAANFU (BAPM) Conference 2024
- Prophylactic Hydrocortisone (PH) Use in Preterm Babies: Seeking Consensus on a Standardised Approach for Wales - Elin Cosgrove, Kate Burke, Lucy Perkins; BAPM Conference poster 2024

All Wales Maternity and Neonatal Network Presentations / Guidelines

Skincare in the micro-preterm infant – Steph Cannell, Gemma Davies

CHANTS infusion guidelines – Steph Cannell

Part V

Appendix

Appendix A

Categories of Care 2011

INTENSIVE CARE

General principle

This is care provided for babies who are the most unwell or unstable and have the greatest needs in relation to staff skills and staff to patient ratios.

Definition of Intensive Care Day

- Any day where a baby receives any form of mechanical respiratory support via a tracheal tube
- BOTH non-invasive ventilation (e.g. nasal CPAP, SIPAP, BIPAP, vapotherm) and PN
- Day of surgery (including laser therapy for ROP)
- Day of death
- Any day receiving any of the following

    - Presence of an umbilical arterial line
    - Presence of an umbilical venous line
    - Presence of a peripheral arterial line
    - Insulin infusion
    - Presence of a chest drain
    - Exchange transfusion
    - Therapeutic hypothermia
    - Prostaglandin infusion
    - Presence of a replogle tube
    - Presence of an epidural catheter
    - Presence of silo for gastroschisis
    - Presence of external ventricular drain
    - Dialysis (any type)

HIGH DEPENDENCY CARE

General principle

This is care provided for babies who require highly skilled staff but where the ratio of nurse to patient is less than intensive care.

Definition of High Dependency Care Day

Any day where a baby does not fulfil the criteria for intensive care where any of the following apply:

- Any day where a baby receives any form of non-invasive respiratory support (e.g. nasal CPAP, SIPAP, BIPAP, HHFNC)
- Any day receiving any of the following:

    - Parenteral nutrition

- Continuous infusion of drugs (except prostaglandin and/or insulin)
- Presence of a central venous or long line (PICC)
- Presence of a tracheostomy
- Presence of a urethral or suprapubic catheter
- Presence of trans-anastomotic tube following oesophageal atresia repair
- Presence of NP airway/nasal stent
- Observation of seizures/CF monitoring
- Barrier nursing
- Ventricular tap

SPECIAL CARE

General principle

Special care is provided for babies who require additional care delivered by the neonatal service but do not require either Intensive or High Dependency care.

Definition of Special Care Day

- Any day where a baby does not fulfil the criteria for intensive or high dependency care and requires any of the following:

    - Oxygen by nasal cannula
    - Feeding by nasogastric, jejunal tube or gastrostomy
    - Continuous physiological monitoring (excluding apnoea monitors only)
    - Care of a stoma
    - Presence of IV cannula
    - Baby receiving phototherapy
    - Special observation of physiological variables at least 4 hourly

TRANSITIONAL CARE

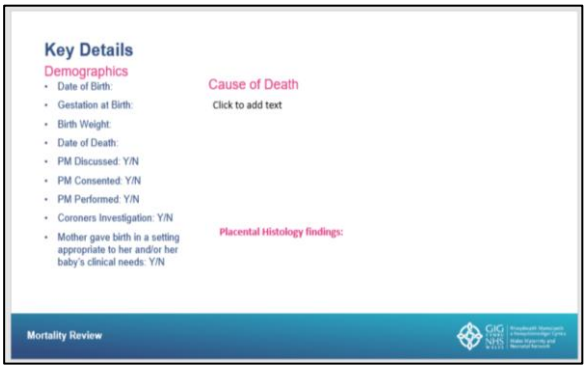
General principle

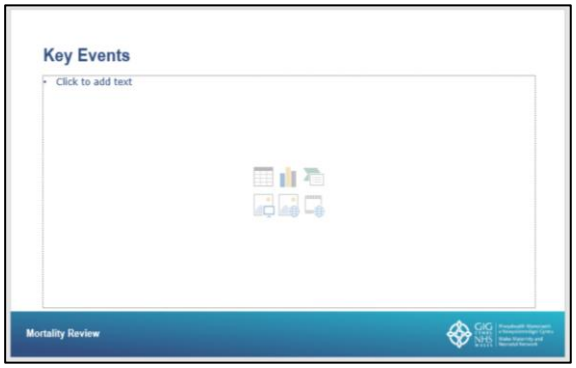
Transitional care can be delivered in two service models, within a dedicated transitional care ward or within a postnatal ward. In either case the mother **must be resident with her baby and providing care**. Care above that needed normally is provided by the mother with support from a midwife/healthcare professional who needs no specialist neonatal training. Examples include low birth-weight babies, babies who are on a stable reducing programme of opiate withdrawal for Neonatal Abstinence Syndrome and babies requiring a specific treatment that can be administered on a post-natal ward, such as antibiotics or phototherapy.

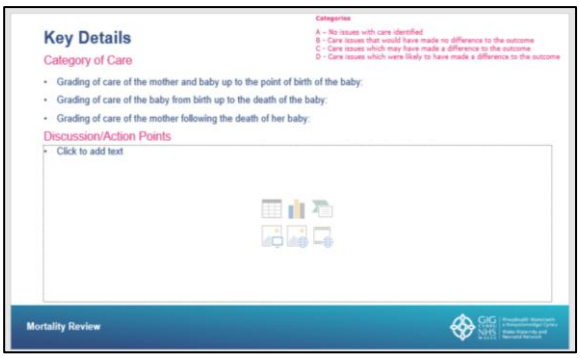
BAPM Categories of Care – August 2011

Appendix B

Mortality Review Slides







Appendix C

Singleton Hospital Medical Staff

Consultants	Sujoy Banerjee, Amit Kandhari, Vanessa Makri, Maha Mansour, Sree Nittur, Geraint Morris, Arun Ramachandran, Joanna Webb, Lucinda Perkins, Jamie Evans, Oliver Walker, Katherine Burke, Matt Pickup. Jayne Sage
Registrars (ST4 – ST8 trainees and international fellows)	Babatunde Kayode-Adedeji, Kanchana Gamage, Namita Shanbag, Mabel Thu, Thomas Hixson, , Gehan Ali, , , Lloyd Abood, Anna Wasden, Ahmed Eissa, , Lucy Deacon, Mabel Thu, Elin Cosgrove, Lyabo Aduke Oyibo, Ahmed Abdeinaem Mohamed Attalla, Megha Jagga, Lizzie Mcvittie, Amrtha Paulose
ANNPs	Gemma Davies, Stephanie Cannell, Susan Edwards, Samantha Willis, Rachel Tregoning, Rhiannon Cronin, Laura Hatcher
Junior Doctors (ST2 – ST3 trainees and international fellows)	Sai Prasad, Zoe Johnspn, David Jones, Omer Adelrahmen, Emily Davis, Huba Elhassan, Cheryl Spooner, Sophie Logan,Shady Bedir, Zahid Khan, Nibras Yaseen, Loren Rushton, Gala Dicasillati, Mohamed Elzoghby, Adeleye Ayowade, Alice Johnson, Mayunk Pahuja, Pratibha Joseph,Wei Jun, Georgia Moran, Marwah Saleh

Singleton Hospital Nursing and Support Staff

Band 8	Helen James
Band 7	Sian Barry, Jessica Beynon, Sarah Davies, Rachel Dykes, Marcia Halfpenny, Lisa Harris, Rhiann Jago, Allison Lewis, Sarah Owen, Claire Price, Gail Smith.
Band 6	Llinos Adams, Lora Alexander, Flo Auro, Sian Burgess, Karen Davies, Lauren Davies, Megan Evan Thomas, Elen Griffiths, Gemma Harcoombe, Laura Hatcher, Sara Hughes, Grace Lewis, Gabriela Morgan-Swinhoe, Karenza Morse, Claire Nulty, Melanie Nuque, Rhianne Perriam, Catrin Phillips Laura Sutherland, Joanne Thomas, Kaleigh Thomas, Meg-Anne Thomas, Annwen Vaughan-Roge Deborah Verbeck, Bethan Ward, Marie Whiles, Louise Wilcox, Georgia Brennan.
Band 5	Colsuma Aktar, Gemma Leach, Leeba Abraham, Chinju Aneeshkumar, Leigh Bainbridge, Joecelyn Bermudez, Sharon Birch, Paige Buckmaster, Divya Devadas, Madushi Dissanayaka, Olivia Dudley, Bianca Egnaczak, Sophie Evans, Alex Evans, Linimol George, Ashna George, Nimisha George, Nicole Globio, Catrin Johnson, Hrudya Joseph, Vyshnavi Konduru, Sangeetha Kuarian, Sam Lakiss, Jodie Morgan, Ceri Morris, Rosie Oliver, Joyce Penaroyo, Blossom Pittard, Colette Powell, Raji Raju, Laura Rees, Leah Rees, Sophie Rees, Anni Saarinen, Anjana Salibi, Laura Smith, Naomi Smith, Sujithra Swamy Dhas, Shelina Tarafder, Anu Thomas, Mary Wheatley, Alys Williams, Jazmine Williams, Siobhan Williams, Keziah Wilson, Bec Woodroff, Karthika Yedukumar, Sari Sasidharan, Soumya Sebastian.
Band 4	Erica Lewis, Emma Renshaw, Angela Thomas. Cheryl Tobin.
Band 3	Susan Stuckey, Paul Hodson
Band 2	Alyson Lewis, Kim Vickers, Sainabou Ceesay, Ashleigh Ham, Julia McHugh.
Database Officers	Merin Joseph