Maternity & Child Health Review

MATERNITY, NEONATAL AND GYNAECOLOGY WORKSTREAM

Review of the Evidence for the Case for Change

1. INTRODUCTION

2. POPULATION HEALTH NEED
   2.1 North Wales Demography
   2.2 Impacts of Deprivation
   2.3 Maternal and child health in North Wales – key population health issues

3. ASSESSMENT OF CURRENT SERVICES
   3.1 Current Configuration
   3.2 Demand
   3.3 Access
   3.4 Births outside of North Wales

4. STANDARDS & EVIDENCE
   4.1 NHS Annual Quality Framework (AQF) 2011/12
   4.2 Population Health Need – Evidence Base
   4.3 Safeguarding Children & Young People
   4.4 Quality Standards
   4.5 Medical Workforce
   4.6 Nursing & Midwifery Workforce
   4.7 Financial

5. ASSESSMENT OF SERVICE GAPS
   5.1 Population Health Need
   5.2 Quality Standards
   5.3 Workforce
   5.4 Financial

6. CASE FOR CHANGE

7. CONCLUSION AND RECOMMENDATIONS
   7.1 Conclusion
   7.2 Recommendations

APPENDIX 1: WORK STREAM MEMBERSHIP

APPENDIX 2: GLOSSARY OF TERMS
1. **INTRODUCTION**

1.1. The imperative of delivering safe services, attaining national quality standards of care combined with the impact of challenges in the recruitment of staff, changes in employment legislation and planned changes in medical education have required the Health Board to undertake a review of current maternity, paediatric, neonatal and gynaecology services. The Health Board carries a legacy of services and facilities that in some cases may be preventing the improvement and development of interventions and care that is needed to improve the health of the population. The initial focus of the review has been to consider the current services and determine whether there is a case for change.

1.2. This and other reviews form part of the strategic direction of the Health Board which is using the Triple Aim\(^1\) to:
   - Improve the health of the population (prevention, early intervention and responsibility)
   - Enhance the patient/user experience including quality, access and reliability (focus and evidence base for greater gain)
   - Reduce or at least control per capita cost of care (value for money)

1.3. A Project Board has been established to co-ordinate the review. As these services are intrinsically inter-linked, it is acknowledged that the impact on each needs to be considered within the overall review process.

1.4. The Review Project Board established two clinically led work streams; one for Maternity, Neonatal and Gynaecology services and the other for Paediatric and Child Health services, with a view to identifying the evidence for a case for change. The membership of the Maternity, Neonatal and Gynaecology work stream is set out in Appendix 1. This report should be read in conjunction with the Paediatric and Child Health work stream report.

1.5. The work stream has been tasked with reviewing the evidence for the case for change for Maternity, Neonatal and Gynaecology services delivered to the North Wales population. In order to undertake this task, 6 task and finish groups were established to review and analyse the evidence, which would then feed into the next phase of the Review process. The identified groups were:
   - Population Health Need
   - Demand
   - Standards
   - Medical Workforce
   - Nursing Workforce
   - Economics

---

\(^1\) Betsi Cadwaladr University Health Board 5 year Strategic Framework
1.6. There are an increasing number of factors which are placing considerable pressures on existing services and will impact on the future sustainability of services. The initial task for this work stream has been to gather evidence to clarify whether there is a case for change in the structure and/or pattern of working in the current services, to ensure sustainability and the delivery of safe, high quality services expected of a modern health care provider.

1.7. This paper sets out the context for the case for change. The overriding aim of services is to improve health, provide safe services and deliver the best possible standards of care for children, young people and their families in North Wales. In this paper there is a clear focus on national policies and standards, addressing local population health need, demonstrating that the care provided is high quality, and making the best and most cost-effective use of resources.

1.8. National standards for Women’s, Children’s and family services set clear expectations for safety, efficiency and value for money. This paper seeks to establish the principles upon which safe and sustainable care can be provided. The review compared current services alongside these recognised standards.

1.9. National strategy provides a clear direction for health improvement through upstream prevention. It recognises that the burden upon acute hospitals is unsustainable and promotes the delivery of care closer to the patient’s home when it is safe and appropriate to do so. This is supported by the establishment of national targets within the Annual Quality Framework\(^2\) to reflect the requirements for workforce redesign, as well as meeting national guidelines and clinical policies. These aspects are all encompassed in the current assessment.

\(^2\) NHS Wales Annual Quality Framework 2011/12
2. POPULATION HEALTH NEED

2.1. North Wales Demography\textsuperscript{POP PROFILE}

2.1.1. North Wales has a population of 678,500 and covers an area of approximately 2,500 square miles. Each area within North Wales has contrasting needs, reflecting the rural and urban communities in the region. The population of North Wales is predicted to increase to over 700,000 by 2033.

2.1.2. The few densely populated areas in the region are situated around urban centres, such as Rhyl and Wrexham. Flintshire and Wrexham are the unitary authorities with the highest population density.

2.1.3. The general fertility rate has been slowly rising across North Wales since 2001/02. It is likely that this upturn has been largely driven by increasing birth rates among older women. Birth rates in the over 40 population are expected to increase until 2011 and then decline slightly but remain at levels higher than seen in 2006. The fertility rate in North Wales is higher than the Wales average but is following the same pattern.

2.1.4. Data shows that 20.8% of the population of North Wales is under the age of 18, compared with 21.2% in Wales as a whole.

2.1.5. Deprivation impacts significantly on maternal health and neonatal care. Rates of stillbirth, preterm birth, low birth weight, infant mortality, neonatal deaths, teenage pregnancy and admission to neonatal units are significantly higher in areas with high levels of deprivation.

2.2. Impacts of Deprivation\textsuperscript{POP PROFILE}

2.2.1 The Welsh Index of Multiple Deprivation (WIMD) is a geographically based deprivation measure and is derived from a broad range of factors, including income, employment, health, education, and access to services. It is well documented that areas of deprivation often have higher levels of need in relation to many different measures of health such as levels of smoking related diseases, injuries, alcohol and drug related diseases, teenage pregnancy and mental health issues.

2.2.2 A proportion of the North Wales population resides in areas of deprivation. 12% of Lower Super Output Areas (LSOA) within North Wales are in the most deprived fifth in Wales. Denbighshire contains three out of the top five most deprived areas in Wales, while Wrexham contains the second highest percentage of LSOAs in the most deprived fifth in Wales.

2.2.3. Lifestyle factors are linked to deprivation and are an important contribution to health inequalities. Rates of smoking and obesity levels have been shown to be higher in areas with high levels of deprivation.
Consumption of fruit and vegetables and levels of physical activity have been shown to be lower in areas with a high level of deprivation.

2.2.4 Deprivation impacts significantly on child health. Rates of infant mortality, child mortality, injuries and teenage pregnancy have been shown to be significantly higher in areas with high levels of deprivation.

2.3. Maternal and child health in North Wales – key population health issues

2.3.1. There is variation in maternal and child health outcomes across North Wales, with geographical variation in low birth weight (LBW) rates linked to areas of high deprivation. The LBW rate for North Wales is 5.5% compared to a Wales average of 5.8%. The LBW rate in the Middle Super Output Area (MSOA) area with the lowest rate in North Wales is 2.9% compared to 8.2% in the area with the highest rate. There are six MSOA areas in North Wales with LBW rates over 7.4% which is significantly higher than the Wales average.

2.3.2. There is variation in teenage conception rates in North Wales, and many teenage mothers and their children are at greater risk of suffering poor social, economic and health outcomes.

Conceptions and outcomes, numbers and rates per 1,000 females aged 15 to 17 years, North Wales - 2008

<table>
<thead>
<tr>
<th>Area</th>
<th>Number</th>
<th>Rates per 1,000 women aged 15-17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>England</td>
<td>38,783</td>
<td>40.5</td>
</tr>
<tr>
<td>Wales</td>
<td>2,578</td>
<td>44.3</td>
</tr>
<tr>
<td>Isle of Anglesey</td>
<td>58</td>
<td>41.5</td>
</tr>
<tr>
<td>Gwynedd</td>
<td>82</td>
<td>38.1</td>
</tr>
<tr>
<td>Conwy</td>
<td>93</td>
<td>43.4</td>
</tr>
<tr>
<td>Denbighshire</td>
<td>95</td>
<td>48.6</td>
</tr>
<tr>
<td>Flintshire</td>
<td>106</td>
<td>35.8</td>
</tr>
<tr>
<td>Wrexham</td>
<td>116</td>
<td>46.9</td>
</tr>
</tbody>
</table>

2.3.3. Smoking and obesity have a high prevalence in the population and can impact on rates of miscarriage, maternal death, neonatal deaths, admission to neonatal care and low birth weight.

2.3.4 In 2005, 37% of mothers in Wales reported smoking at some stage during their pregnancy or the year before and 22% smoked throughout their pregnancy. The highest rates of smoking were found in mothers aged less than 20 years and 20-24 years. Although this has improved in 2010 (33% and 16% respectively) mothers in Wales are more likely to smoke and less likely to give up than in other UK countries.

2.3.5 Rising levels of childhood obesity, high levels of smoking among teenage girls and alcohol use are important factors in the health of the next generation of mothers and could have a large impact on the future use of maternity and neonatal services.
2.3.6 Immunisation for Rubella and seasonal flu in North Wales currently fall below the required uptake rate to protect the population from outbreaks of serious infectious diseases. Immunisation is a highly effective and cost effective health care intervention.

2.3.7 Interventions to promote breast feeding are cost effective and can reduce demand on health care services. There is variation in breast feeding rates across North Wales. In some areas breastfeeding status is not recorded which makes comparison difficult.

2.3.8 Mental health status has a direct effect on maternal and child health outcomes.

2.3.9 Gynaecological conditions and cancers are more common in older age groups. The ageing population of North Wales will impact on the future incidence of gynaecological cancers and consequently the demand for gynaecological services.

2.3.10 24% of the general population in North Wales smoke and over half the population are obese. Lifestyle factors including smoking and obesity are important risk factors for some gynaecological cancers and conditions.

2.3.11 The target coverage for cervical screening in Wales is 80%. These targets are not currently being met. Cervical Screening Wales reports that the cervical screening take-up rate is low and falling in the 20-24 age group. Cervical screening and human papillomavirus vaccination are important preventative interventions, the uptake of which can have a direct influence on the demand for gynaecological services.
3. ASSESSMENT OF CURRENT SERVICES

3.1. Current Configuration

3.1.1. General

3.1.1.1. The acute elements of the services under review are based on historical service configurations, and currently operate from three District General Hospitals (DGHs) in North Wales; being, Ysbyty Gwynedd in Bangor (YG), Ysbyty Glan Clwyd in Bodelwyddan (YGC) and Ysbyty Maelor in Wrexham (YMW). These services are supported by a wide range of community-based teams, and all aspects of the service are considered in developing future models.

3.1.1.2. Obstetrics and gynaecology are inter-linked specialties, and have to deliver both elective and emergency care. In developing consultant-delivered services, precedence is given to the emergency workload which can, and does, impact on elective / planned work.

3.1.2. Maternity services:

3.1.2.1. The Women’s Clinical Programme Group is committed to maximising normal birth and to ensure that a range of options are available to women. North Wales currently has 3 acute-based consultant-led obstetric/gynaecology units, along with a network of home-from-home community-based midwifery-led units and an alongside midwifery-led unit.

3.1.2.2. It is recognised that, regardless of the place of birth, women and their newborn will be cared for by midwives. Midwives are expert professionals skilled in supporting and maximising normal birth. The role of the midwife is integral to models of care which promote normality, however, the role of the midwife, her function and scope, is established in statute. The midwife has a role in caring for all women in labour, irrespective of risk category - at home, in stand alone midwifery led units, alongside midwifery-led units and consultant led units. Accordingly the planning for staffing and skill mix levels need to reflect the local model of care, case mix, the needs of women, their families and service design. The totality of midwifery care has an impact on and implications for antenatal, intrapartum and postnatal provision within primary care and community settings, as well as in the acute sector hospital environment.
3.1.2.3. The current number of Delivery Room beds across the 3 DGH sites is:

<table>
<thead>
<tr>
<th></th>
<th>YG</th>
<th>YGC</th>
<th>YMW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current beds</td>
<td>8</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

(plus 2MLU)

3.1.2.4 In terms of antenatal and postnatal beds, the current allocation in North Wales is:

<table>
<thead>
<tr>
<th></th>
<th>YG</th>
<th>YGC</th>
<th>YMW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current beds</td>
<td>28</td>
<td>34</td>
<td>38</td>
</tr>
</tbody>
</table>

3.1.2.5 Current staffing numbers within midwifery are:

<table>
<thead>
<tr>
<th></th>
<th>YG</th>
<th>YGC</th>
<th>YMW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Time Equivalent posts (WTE)</td>
<td>86.31</td>
<td>93.08</td>
<td>98.00</td>
</tr>
</tbody>
</table>

3.1.3. Neonatal services

3.1.3.1. North Wales presently operates a network for neonatal care which includes its three district general hospitals and neighbouring English providers.

3.1.3.2. Currently all three district general hospitals in North Wales provide neonatal care. YGC and YMW hospitals both provide neonatal intensive care, whilst special care and a limited amount of high dependency care are provided at Ysbyty Gwynedd. Babies requiring neonatal surgery, neurosurgery or cardiac surgery are transferred to the regional centre in Liverpool from North Wales.

3.1.3.3. Neonatal care is traditionally divided into:

**Special care unit**
- Special care for local population
- Provide some high dependency services (with agreement from the Neonatal Network)

**High Dependency (Local Neonatal Unit)**
- Special care for local population
- High dependency care for local population
- Restricted volume of intensive care (as agreed locally)
- Transfer babies with complex or longer term need to a Neonatal Intensive Care Unit

**Neonatal Intensive Care Unit (NICU)**
- Larger units
• Whole range of Special, high dependency and neonatal intensive care
• Provide care for other networks as necessary
• May be sited with perinatal centres (Complex obstetric care).
• Each network should have at least one Neonatal Intensive Care Unit. Population size should be sufficient to make at least one NICU economically viable
• Each network should have specialised transport service to transfer babies to and from specialist support. North Wales has received funding to provide a 12-hour transport system, although this is not fully-operational

3.1.3.4 Current distribution of neonatal cots in North Wales is as follows:

<table>
<thead>
<tr>
<th></th>
<th>YG</th>
<th>YGC</th>
<th>YMW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Care</td>
<td>12</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>High Dependency</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Intensive Care</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

3.1.4. Gynaecology

3.1.4.1. Gynaecology services have to tackle significant challenges in delivering high quality care. Each of the 3 sites currently experience difficulties in running three parallel services, particularly as the emergency demands associated with obstetrics services take precedence. The Welsh Government requires all Health Boards to achieve performance and improvement targets set down in the Annual Quality Framework (AQF)\(^1\). This includes improvement in access times, achievement of patient activity targets.

3.1.4.2. Services elsewhere across the organisation are experiencing difficulties in meeting the demands placed upon them by gynaecology (e.g. ultrasound), and the availability, capacity, and delivery of these key support services will need to be a major consideration in generating future options.

3.1.4.3. In order to maintain a safe service, which encompasses appropriate nurse to patient ratios, gynaecology wards aim for a registered to unregistered skill mix of 65%:35%.

3.1.4.4. A Wales Audit Office Review of Ward Staffing, February 2010, acknowledged that Gynaecology nursing in North Wales is insufficiently staffed compared to the national average. A local staffing review, undertaken in May 2010 and March 2011 using the Professional Judgement Model (Telford 1979) also concluded that Gynaecology nursing is under staffed compared to service need. Across all 3 existing units, the budget for Registered staff is
Currently 46.38 WTE, a deficit of 13.62 WTE when compared to the national safe staffing standards.

3.1.4.5. On each of the gynaecology wards, a close working relationship has been established with breast surgery, fostering the concept of a women-specific surgical ward. However, each of the 3 wards are frequently occupied by patients from other specialties.

<table>
<thead>
<tr>
<th>Inpatient Bed</th>
<th>YG Ffrancon</th>
<th>YGC Ward 19</th>
<th>YMW Bonney</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays</td>
<td>18</td>
<td>20</td>
<td>27</td>
<td>65</td>
</tr>
<tr>
<td>Weekends</td>
<td>18</td>
<td>14</td>
<td>27</td>
<td>59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Occupancy</th>
<th>YG Ffrancon</th>
<th>YGC Ward 19</th>
<th>YMW Bonney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gynaecology</td>
<td>62</td>
<td>66.5</td>
<td>61</td>
</tr>
<tr>
<td>Breast</td>
<td>16</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>22</td>
<td>20.5</td>
<td>34</td>
</tr>
</tbody>
</table>

3.2. Demand

3.2.1. Maternity services

3.2.1.1. Within North Wales, the last 7 years has seen a 15% increase in births, with an overall increase in trend evidenced from 2007:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>YG</th>
<th>YGC</th>
<th>YMW</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>2091</td>
<td>*</td>
<td>2418</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>2059</td>
<td>2479</td>
<td>2588</td>
<td>7126</td>
</tr>
<tr>
<td>2008</td>
<td>1945</td>
<td>2509</td>
<td>2739</td>
<td>7193</td>
</tr>
<tr>
<td>2009</td>
<td>2169</td>
<td>2446</td>
<td>2648</td>
<td>7263</td>
</tr>
<tr>
<td>2010</td>
<td>2208</td>
<td>2402</td>
<td>2605</td>
<td>7215</td>
</tr>
</tbody>
</table>

* data not available

3.2.1.2. The number of maternity admissions across North Wales in 2009/10 was 13,850 which was a 20% increase compared to the 2006/07 total of 11,066.

3.2.1.3. The home-birth rate in North Wales is currently 2.2%. 

12th July 2012 – Final Document
3.2.1.4. Although the North Wales Caesarean Section rate of 24.9% is below the All-Wales average of 27%, there are significant variations in rates across the region, which need to be better understood.

![Caesarean Section Rates](image)

3.2.1.5. Obstetric units across North Wales closed on numerous occasions in 2010 due to lack of capacity and insufficient staffing

3.2.2 Neonatal services

3.2.2.1. A detailed review of neonatal capacity in Wales was undertaken in October 2010\(^3\). A snapshot of one day’s findings of this review for North Wales identified:

- An increasing birth rate
- Reduction in cots by 8.7% (mostly high dependency cots)
- Neonatal services are less well developed in North Wales than in the South. Although BCUHB is moving to establish an Intensive Care unit for North Wales, no unit in North Wales approaches compliance with the Wales Standards for medical staffing of an Intensive care unit
- On the day of the review, the overall capacity in North Wales on for Levels 1, 2 and 3 of neonatal care was higher (89.5%) than the recommended safe limit of 80%)
- There is a need for substantial re-designation (and appropriate nurse staffing) of existing Special Care cots to Intensive care and high dependency level
- High numbers of middle grade and junior grade posts remain unfilled (27% middle grade and 19% junior grade)

\(^3\) Neonatal Capacity Review – Feb 2011
• There are 27 neonatal consultants in Wales, but only one of these is in North Wales, although there is a vacant consultant post.

3.2.2.2. There have been frequent closures of neonatal units across North Wales, resulting in a significant number of transfers out of the region.

3.2.2.3 Reliable closure data for all 3 units is only available for 2010 during which time the units closed for a total of 3,672 hours. There were 35 total closures during this time, ranging from 10 hours to 552 hours. This was mainly due to insufficient staffing levels for nursing and medical staff, workload or lack of cot capacity. On 4 occasions both units with intensive care (YMW and YGC) were closed at the same time. This occurred during June, July, August and December 2010.

From the data we have, the neonatal units were closed for:

<table>
<thead>
<tr>
<th>Year</th>
<th>Hours Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>308</td>
</tr>
<tr>
<td>2008</td>
<td>849</td>
</tr>
<tr>
<td>2009</td>
<td>2621</td>
</tr>
</tbody>
</table>

The number of Intensive Care days required in the North Wales neonatal units has increased from:

<table>
<thead>
<tr>
<th>Year</th>
<th>Days Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2050</td>
</tr>
<tr>
<td>2008</td>
<td>2457</td>
</tr>
<tr>
<td>2009</td>
<td>2677</td>
</tr>
</tbody>
</table>

3.2.3 Gynaecology services

3.2.3.1. Day case activity is an important aspect of ensuring good quality service delivery for the benefit of patients. Each of the three sites has made progress in increasing gynaecology day case activity. However, local clinical assessment has highlighted the challenges of meeting the 72% Access target for day case. For example an assessment of local activity and case allocation by Obstetric & Gynaecology consultants in Wrexham led to 56% being identified by clinicians as an appropriate local target.
3.2.3.2 Current Performance against National Targets

<table>
<thead>
<tr>
<th>Metric</th>
<th>Access Target</th>
<th>BCU Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>waiting &lt; 26 wks for treatment</td>
<td>98%</td>
<td>99.1%</td>
</tr>
<tr>
<td>waiting &lt; 32 wks for treatment</td>
<td>100%</td>
<td>99.81%</td>
</tr>
<tr>
<td>average length of stay for Gynaecology elective care</td>
<td>2.8 days</td>
<td>3.2 days</td>
</tr>
<tr>
<td>average length of stay for Gynaecology emergency care</td>
<td>0.7 days</td>
<td>1.7 days</td>
</tr>
<tr>
<td>Admissions on Day of Surgery</td>
<td>56%</td>
<td>62%</td>
</tr>
<tr>
<td>new to review ratio</td>
<td>1.3</td>
<td>1.2</td>
</tr>
<tr>
<td>DNA new rate</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>DNA review rate</td>
<td>7%</td>
<td>8%</td>
</tr>
</tbody>
</table>

3.2.3.3 Gynaecology activity – outpatients:

<table>
<thead>
<tr>
<th></th>
<th>YG</th>
<th>YGC</th>
<th>YMW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>08/09</td>
<td>09/10</td>
<td>10/11</td>
</tr>
<tr>
<td>Gynaecology</td>
<td>4961</td>
<td>4998</td>
<td>4572</td>
</tr>
<tr>
<td>Colposcopy</td>
<td>555</td>
<td>643</td>
<td>607</td>
</tr>
<tr>
<td>Total</td>
<td>5516</td>
<td>5641</td>
<td>5179</td>
</tr>
</tbody>
</table>

** Data breakdown for 2008/09 not available

3.3 Access

3.3.1 Access to maternity care is a key consideration in the provision of services. Travel times across North Wales demonstrate the complexities of delivering services in a predominantly rural area:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Miles</th>
<th>Time (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ysbyty Glan Clwyd</td>
<td>Wrexham Maelor</td>
<td>33.3</td>
<td>47</td>
</tr>
<tr>
<td>Ysbyty Glan Clwyd</td>
<td>Ysbyty Gwynedd</td>
<td>32.7</td>
<td>37</td>
</tr>
<tr>
<td>Dolgellau</td>
<td>Wrexham</td>
<td>53.3</td>
<td>77</td>
</tr>
<tr>
<td>Dolgellau</td>
<td>Ysbyty Glan Clwyd</td>
<td>61.1</td>
<td>81</td>
</tr>
<tr>
<td>Dolgellau</td>
<td>Ysbyty Gwynedd</td>
<td>51.1</td>
<td>74</td>
</tr>
<tr>
<td>Barmouth</td>
<td>Bangor</td>
<td>59</td>
<td>88</td>
</tr>
<tr>
<td>Pwllheli</td>
<td>Bangor</td>
<td>30</td>
<td>54</td>
</tr>
<tr>
<td>Tywyn (Gwynedd)</td>
<td>Aberystwyth</td>
<td>32.8</td>
<td>54</td>
</tr>
</tbody>
</table>
3.3.2 Drive Time to any midwifery unit in Wales

Public Health Wales, Drivetime to Obstetric Services – Wales and Border 2010
3.4 **Births outside of North Wales**

3.4.1 Planning of services must take account of the number of births to North Wales residents that take place outside of North Wales. Similarly account must be taken of residents from other areas notably North Powys who chose to give birth within North Wales at YMW.

3.4.2 During 2009/10, there were 548 births at the Countess of Chester Hospital to North Wales residents, and a number of women from North Powys gave birth at Wrexham Maelor. Proposals are currently being formulated to bring 50% of the Countess of Chester’s welsh patients into North Wales, and to increase the provision of services for a greater proportion of the North Powys residents to give birth in North Wales. If these proposals are implemented, they will have a significant bearing on activity levels within North Wales; and will need to be considered as part of any options generated. The provision of services to areas bordering onto BCUHB needs to be factored into the long-term planning of these services. Similarly the health board will need to have regard to the impact of service reviews within bordering areas (i.e. Shropshire, Cheshire, Hywel Dda).
4. STANDARDS & EVIDENCE

4.1 NHS Wales Annual Quality Framework (AQF) 2011/12

4.1.1 The AQF emphasises the need for sustainable improvement, and highlights the climate within which the current NHS reforms and the current Review need to be undertaken: “The establishment of new integrated Local Health Boards creates an unparalleled opportunity to create integrated health services. We must think in terms of whole system working, of creating well-designed care pathways where patients receive joined up services at the right pace and the right time”.4

4.1.2. In considering the case for change and the potential re-configuration of services, the NHS in North Wales must consider the key aims of the 5-year programme set out in the AQF:
- do more to protect and improve health for all;
- create integrated services;
- deliver and sustain excellent services to meet the needs of patients and maximise clinical outcomes.

4.1.3 Although the AQF places less reliance on targets, it does highlight that: “It is far better that local organisations measure and manage themselves to make service excellence their prime aim, whilst adopting a policy of full transparency to their communities.”

4.1.4. A key consideration of the AQF is to ensure the full engagement of clinicians and to provide strong clinical leadership. This aspect will also be maintained within the current Review process.

4.1.5 In relation to the AQF and population health improvement, it is a primary responsibility of the boards of LHBs to identify inequities in health outcomes across their LHB area, to identify actions to close the gap and to deliver and report on those actions. This links clearly to the emphasis on achievement of the Child Poverty Targets - and the ongoing political imperative to reduce the gap in health outcomes.
- Deliver against the targets for which the organisation is responsible for within its local Children and Young Persons Plan, and especially those relating to child health, health inequalities and child poverty. More specifically, there should be demonstrable local progress with achieving the child poverty targets relating to infant mortality, low birth weight and teenage conceptions (LHBs to agree milestones by March 2011);

---

4 NHS Wales, Annual Quality Framework 2011/2012
4.2 Population health need – evidence base

4.2.1 In relation to population health need, a review of the published evidence reviews highlighted the following:

- Strengthening maternity services will benefit entire health care systems. Maternal and newborn care services are the cornerstone of public health services, and care of pregnant women can be the entry point of health services to the family and community\(^5\).
- Future maternity services should seek to reduce inequalities and inequities and improve outcomes.
- The importance of targeting services to address the specific needs of the population e.g. areas of high socio-economic deprivation where population outcomes are poorer.
- The need for services to invest in the early years (pre birth to 5 years) as the highest priority as one of the strongest themes arising from the evidence appraisal.
- The benefit in investment in core services to deliver early intervention in the early years, ensuring effective partnership working using family based approaches.
- The risks to maternal and child health from preventable factors such as maternal smoking and obesity and identify that maternity services can play an important role in improving the health and well being of individuals and communities\(^6\).
- Maternal age has risen in many areas of the western world and Wales appears to be following this trend. Fertility decreases with maternal age and the rate of chromosomal anomalies increases as does the risk of multiple births (as a consequence of infertility treatment).
- The public health role of the midwife is key to improving maternal health and this in turn ensures that women are more likely to stay on midwifery-led pathways for pregnancy and birth.
- Neonatal ill health is associated with many preventable risk factors including maternal smoking and obesity.
- Preventing premature / low birth weight births, mainly by pre-conception care and education, can bring huge savings in relation to neonatal services.

4.3 Safeguarding Children & Young People

4.3.1 Improved outcomes for children and their families can only be delivered and sustained when key people and bodies work together to design and deliver more integrated services around the needs of children, young people and families. That change needs to be led and managed at local level and supported nationally. The aim is to move to a position, both locally and nationally, where:

\(^5\) World Health Organisation
\(^6\) Strategic Vision for Maternity Services in Wales & Midwifery 20:20
• The well-being of children and young people is at the heart of the Welsh Assembly Government’s policy for children and their families as set out in *Children and Young People: Rights to Action (2004)*, which aims to make sure that all key people and bodies are working in partnership to achieve shared outcomes.

• Key local services are integrated, where appropriate, around the needs of children and young people, and children and young people are actively involved in developing and evaluating the services which are provided for them.

• Key people and bodies work well individually and together through universal, targeted and specialist services to safeguard and promote the welfare of children.

• Children and young people and their families receive effective support at the first sign of difficulties.

4.4 Quality Standards

4.4.1 One of the key considerations for the current review is an assessment of the national standards that apply to the services under review. The main standards referenced are:


• The Future Workforce in Obstetrics and Gynaecology in England and Wales – June 2009

• OAA & AAGBI Joint Guideline for Obstetric Anaesthetic Services 2005.

• All Wales Neonatal Standards (2008).

• Safer Childbirth: Minimum Standards for the Organization and Delivery of Care in Labour – October 2007. A collaboration of the RCM, RCA, RCPCH and RCOG.


• The Wales Deanery, Obstetric and Gynaecology Head of School Report – May 2010

• The Trainee Doctor, GMC 2011

• Safer Childbirth – Minimum Standards (2007)

• BAPM (British Association of Perinatal Medicine) 2001

• BAPM 2010

4.4.2 The Royal College of Obstetricians and Gynaecologists (RCOG) noted: “In order to ensure that childbirth in our hospitals is safe and to reduce the operative delivery rate, we need to invest in more frontline staff to provide one-to-one midwifery care and increased consultant presence.”

4.4.3 The National Assembly for Wales’ Public Accounts Committee concluded in February 2010\(^8\) that: “The planning of maternity services is undermined by the lack of coherent strategic vision and poor information about the cost and quality of service”.

4.5 Medical Workforce

4.5.1 Obstetrics and Gynaecology

4.5.1.1 Obstetrics and gynaecology comprises the care of the pregnant woman, her unborn child and the management of diseases specific to women. The specialty offers a wide range of sub-specialties, which include fetomaternal medicine, gynaecologic oncology, gynaecological urology, reproductive medicine and community gynaecology. The specialty includes a large amount of hands-on procedures both in obstetrics and gynaecology. The surgical work is varied and involves close cooperation with other specialties such as urology, colorectal surgery and oncology. The medical aspects of the specialty involve liaison with endocrinologists, renal physicians and cardiologists.

4.5.1.2 The majority of Obstetrics & Gynaecology is carried out by consultants practising both components of the specialty. In the most recent workforce census carried out by the Royal College of Obstetricians and Gynaecologists, 78.1\% of the consultants in post in England and Wales were practising both obstetrics and gynaecology, 8.5\% were solely practising obstetrics and 13.3\% solely practising gynaecology.

4.5.1.3 (RCOG, 2009). According to Safer Childbirth: Minimum Standards for the Organization and Delivery of Care in Labour, RCM, RCA, RCPCH and RCOG (October, 2007), the role of the consultant obstetrician on the labour ward is to ensure a high standard of care for women and their babies with complex medical or obstetric needs and to be available for the acute, severe and often unpredictable life-threatening emergencies which are a feature of obstetric practice. This is currently being achieved.

4.5.1.4 From a Wales Deanery perspective, smaller maternity units (less than 2,500 births per year) are a potential problem for the delivery of obstetric and gynaecology skills training for the workforce of the future.

---

\(^8\) National Assembly for Wales, Public Accounts Committee, Interim Report on Maternity Services, (February 2010)
4.5.1.5 Resulting from the concerns about the opportunities for training opportunities, there is a risk of future poor recruitment to North Wales.

4.5.1.6 One of the key considerations for future service configuration will be the requirement for consultant presence in each delivery suite. Since 1999\(^9\), there has been an acceptance that 40-hours per week Labour Ward cover is required from obstetricians at each of the current sites. Current guidance\(^{10}\) recommends that units providing between 2,500-4,000 births a year should provide 60 hours per week of consultant obstetrician presence.

4.5.1.7 The RCOG/NHS Litigation Authority recommendations for delivery suite cover are:

<table>
<thead>
<tr>
<th>Unit size (Number of deliveries / year)</th>
<th>Consultant presence aimed for (hours)</th>
<th>Sessions / year</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2500</td>
<td>40</td>
<td>520</td>
</tr>
<tr>
<td>2500 – 4000</td>
<td>60</td>
<td>780</td>
</tr>
<tr>
<td>4000 – 5000</td>
<td>98</td>
<td>1456</td>
</tr>
<tr>
<td>5000 – 6000</td>
<td>168</td>
<td>2652</td>
</tr>
<tr>
<td>&gt; 6000</td>
<td>168</td>
<td>2652</td>
</tr>
</tbody>
</table>

It is expected that, during the consultant’s session on the delivery suite they would have no other clinical commitments.

4.5.1.8 The requirements to provide 60-hour per week Labour Ward consultant presence for maternity units with over 2,500 births cannot be met within the existing configuration and workforce. Based on existing delivery patterns, Wrexham Maelor should be providing 60-hour consultant presence on its Labour Ward. Ysbyty Glan Clwyd and Ysbyty Gwynedd should be providing 40-hour cover.

4.5.1.9 Anaesthetics support to maternity services should meet national standards, which include:

- A duty anaesthetist should be immediately available for the delivery suite 24 hours per day.
- There should be 10 consultant anaesthetic sessions for every maternity unit.
- There should be a nominated consultant in charge of obstetric anaesthesia


\(^{10}\) Safer Childbirth: Minimum Standards for the Organisation and Delivery of Care in Labour, Royal College of Obstetricians and Gynaecologists; Royal College of Midwives; Royal College of Anaesthetists; Royal College of Paediatrics and Child Health, (October 2007).
• Arrangements should be in place in consultant-led units to ensure that a specialist anaesthetic service is available at all times during childbirth and that service should not have commitments to other parts of the hospital service, for example emergency general surgery or intensive care.

4.5.1.10 The standards set out in Standards for Maternity Care – Report of a Working Party, (RCOG, 2008), highlight the need to develop High risk pregnancy/Medical disorders clinics with multidisciplinary approach.

4.5.1.11 Need for service information and financial constraints. Shared care on call between maternity and adult Intensive Care Unit

4.5.2 Neonatal

4.5.2.1 The Children and Young People’s Specialised Services Project’s (CYPSSP) recently published Standards for Wales including the following:

Standard 1: Access to Neonatal Care: All newborn babies who require healthcare over and above the normal birth pathway have equitable access to the appropriate level of care in a timely manner.

Standard 2: Staffing of Neonatal Services: Neonatal services are staffed with appropriately trained, multi-disciplinary professional teams, according to the level of service that they provide.

Standard 3: Facilities for Neonatal Services, including Equipment: Appropriate, up to date and safe equipment and facilities are available to care for babies with neonatal care needs and their families.

Standard 4: Care of the baby and family/Patient Experience: The baby and the family receive holistic child and family centred care as close to home as possible, with ease of access to specialist centres when this is required.

Standard 5: Transportation: A transport service, staffed by trained personnel is in place 24 hours a day 7 days a week in all areas of Wales, to provide rapid and timely transport of neonates to and from appropriate services across the network and county boundaries. At the same time, safe care is maintained at the inpatients units.

4.5.2.2 The All-Wales neonatal standards reflect the aspirations of the Toolkit for High Quality Neonatal Services11 outlined a series of staffing levels for a Level 3 Unit. These standards include:

---

• 24-hour availability of a consultant neonatologist whose principal duties, including out-of-hours cover, are to the neonatal unit;
• 24-hour cover of resident experienced support for sole cover of the neonatal service and associated emergencies;
• 24-hour cover for provision of direct care with sole responsibility to the neonatal service.
• It is recommended that there should be a minimum of a High Dependency neonatal unit wherever a consultant-led obstetric unit is located.

4.5.2.3 The All Wales Neonatal Standards (2008) stipulate that consultants working in a Level 3 (Intensive Care) unit should have their principal duties to the Neonatal Intensive Care Unit, and that there is a neonatal consultant on-call rota. In addition, a Level 3, Intensive Care unit has a separate middle grade staff rota and an SHO/SHO equivalent dedicated to the neonatal service.

4.5.3 Anaesthetics

4.5.3.1 In accordance with Standards for Maternity Care – Report of a Working Party, (RCOG, 2008), consultant obstetric units require a 24-hour anaesthesia and analgesia service with consultant supervision, adult high-dependency and access to intensive care, haematology blood transfusion and other district general hospital support services and an integrated obstetric and neonatal care service.

4.5.3.2 Similarly, the same report highlights that arrangements should be in place in consultant-led units to ensure that a specialist anaesthetic service is available at all times during childbirth and that service should not have commitments to other parts of the hospital service, for example emergency general surgery or intensive care.

4.6 Nursing and midwifery Workforce

4.6.1 Midwifery

4.6.1.1 Maternity care should be organised to provide a comprehensive, clinically-effective, safe, flexible, integrated, multi-disciplinary, seamless, and accessible service tailored to meet the needs of women and their families within a safe and secure environment.

4.6.1.2 There is a growing evidence base in support of ‘Woman-Centred Care’, which emphasises that women have control over the key decisions affecting the content and progress of their care and are supported to have as normal a pregnancy and childbirth experience
as possible. The key to the successful implementation of woman
centred care is midwifery-led care.12

4.6.1.3 Towards Safer Childbirth Minimum Standards for the Organisation
of Labour Wards13 acknowledged the central role of the midwife as
the expert autonomous practitioner in the care of women in normal
labour, and suggested that the number of midwives required to
provide care in the clinical area was dependent on workload
activity. This is now encompassed within Birthrate Plus
assessments.

4.6.1.4 The Royal College of Midwives (RCM) supports a minimum ratio of
1 midwife per 28 births per annum. Falling outside this ratio is a
strong indication that a service should undertake a thorough
workforce review. Towards Safer Childbirth (2007) suggested that
the number of midwives required to provide care in the clinical area
was dependent on workload activity. Birthrate Plus14 analyses
midwifery workforce requirements based on what women need
rather than what midwives do, identifying intrapartum case mix
categories and on-site measurement of all other aspects of
midwifery care. The Welsh Assembly Government (WAG), in April
2009, stipulated that as a priority each LHB should carry out a
Birthrate Plus assessment every 3 years and develop an
implementation plan to meet any staffing shortfall.

4.6.1.5. The Standards for Maternity Care – Report of a Working Party,
(RCOG, 2008) state that an experienced midwifery shift co-
ordinator should be available for each shift on the labour ward,
supernumerary to the staffing numbers required for one to one
care. It is also recommended that all Obstetric Units must have
1.0wte Consultant Midwife to 900 low risk women to support
normality, reduce medical intervention and caesarean section rates
(Standards for Maternity Care RCOG 2008).

4.6.1.6 A report commissioned by The Kings Fund, Staffing in Maternity
Services (Sandall et al 2011) concludes that there is a need for
minimum levels of staffing in maternity services, but that this should
include absolute numbers of staff and the effective deployment of
staff. The report recommends that models of midwife-led care
should be deployed across the service for low and medium risk
women. The Wales Audit Office Review of Maternity Services

12 Royal College of Midwives, Women Centred Care
ent

13 Towards Safer Childbirth: Minimum Standards for the Organisation of Labour Wards -
Report of a Joint Working Party, Royal College of Obstetricians and Gynaecologists & Royal
College of Midwives,  (1999).

14 Ball and Washbrook 1996
(2009) highlighted that where midwifery staffing levels fall below recommended levels, Local Health Boards should undertake an assessment of their staffing requirements for delivery of safe and high quality services.

4.6.1.7 In the Standards for Maternity Care – Report of a Working Party, (RCOG, 2008) report, the midwife is identified as the first point of contact to all women. Published evidence highlights that women classified as low or mixed risk, receiving midwife-led models of care were found to have reduction in regional analgesia, fewer episiotomies and instrumental births. They are less likely to experience antenatal hospitalisation, less likely to lose babies before 24 weeks gestation, and will experience shorter length of hospital stay. Midwife-led care increases the chance of having a spontaneous vaginal birth.

4.6.2 Neonatal

4.6.2.1. The British Association of Perinatal Medicine (BAPM) make recommendations for minimum staffing levels based on professional consensus:
- Intensive care: 1 nurse QIS (qualified in speciality) to 1 baby
- High dependency 1 nurse QIS to 2 babies
- Special Care Baby Unit (SCBU): 1 nurse to 4 babies- registered nurses and non registered clinical staff may care for these babies under the direct supervision and responsibility of a neonatal nurse qualified in speciality.

4.6.2.2 BAPM Standards state that day-to-day management of nursing provision within a Neonatal Unit should be undertaken by a senior nurse who has no clinical commitment during the shift.

4.6.2.3 BAPM Standards (2010), identified minimum staffing levels to be achieved for Neonatal Units
- Intensive care: 1 neonatal nurse to 1 baby
- High dependency: 1 neonatal nurse to 2 babies
- SCBU: 1 nurse to 4 babies

4.6.3 Gynaecology

4.6.3.1 The Royal College of Nursing (RCN) supports a nurse to patient ratio of 1:6 and report evidence of compromised care when the nurse patient ratio falls to 1:8. The Professional Judgement Model (Telford), a recognised workforce planning tool for nursing, assesses the staffing required to achieve minimum safe staffing levels with the objective of maintaining patient safety at all times. The nursing budget for Gynaecology services across the Clinical Programme Group is historic and is currently being reviewed in line with service developments to address the disparity between current service demand and staffing capacity. This is supported by the
findings of the Wales Audit Office Review of ward staffing (February 2010) that acknowledged staffing of Gynaecology nursing to be under-established compared to the national average.

4.6.3.2 Gynaecology nursing roles, through enhanced skills and advanced practitioner status, are expected to become increasingly integrated with the work of doctors, e.g. the role of the nurse colposcopist/hysteroscopist.

4.7 Financial Context

4.7.1 The financial context for the UK Public Sector is provided by the latest UK Government’s Comprehensive Spending Review (CSR) published in October 2010. This provided a policy lead in the protection of health services in cash terms (but not real terms) from the wider and more stringent public sector spending reductions. The CSR provided the framework for budgets for the devolved administrations for the three year period commencing in 2011/12.

4.7.2 In response to the funding provided by the UK Government, the Welsh Government published their budget in February 2011 detailing planned allocation income for Health Boards. Following this the Welsh Government detailed the annual allocation income for 2011/12 on 18th February 2011. This confirmed that core health spending would be protected in cash terms. In practice this means that Health Budgets have a real terms reduction when inflation and service pressures are required to be met from a fixed cash budget.

4.7.3 The BCU Health Board has a statutory duty to deliver a balanced budget in each financial year. The Health Board plans to do this by planning and redesigning services that maintain financial sustainability while having patient safety and service quality as a priority.

4.7.4 In order to deliver a balanced budget with inflation and service pressures, the Health Board has required a cash releasing savings target of 7.5% in 2010/11 and 6.1% in 2011/12. These targets reflect the current inflation and service pressures but also include an underlying deficit brought forward from legacy organisations which has been reduced to £20.3 million (1.75%) for 2011/12. The Health Board currently anticipates savings targets of a further 2.9% for 2012/13 and 3.6% for 2013/14.

4.7.5 While Corporate Departments have taken a larger share of the required savings, the Women’s Services CPG has a savings target of 9.0% for 2011-12. This includes new inflation and service pressures of 4.2% and a net recurrent deficit brought forward of 4.8%. The Women’s Services CPG had a 10% overspend in 2010-11, much of which is attributable to medical agency and locum costs and service pressures which will be addressed within this service review.
4 ASSESSMENT OF SERVICE GAPS

5.1 Population Health Need

5.1.1 Assessment of health need has highlighted variation in population health outcomes across North Wales including in low birth weight, infant mortality and teenage pregnancy rates and caesarean section rates. In order to achieve requirements of the AQF, improve population health outcomes and reduce inequity there needs to be a coordinated, systematic and evidence based approach to addressing key areas of health need and work in an integrated way with partners.

5.1.3 The population task and finish group recommended that future maternity, neonatal and gynaecology services should:
- Invest in core services to deliver early intervention in the early years, ensuring effective partnership working using family based approaches.
- Ensure there is systematic, coordinated approach to implementing evidence based interventions in relation to tobacco cessation, reducing levels of obesity, improving mental well being, teenage pregnancy and sexual health and ensuring target immunisation and screening uptake rates are achieved.

5.1.4 There is a growing evidence base in support of ‘Woman-Centred Care’, which emphasises that women have control over the key decisions affecting the content and progress of their care and are supported to have as normal a pregnancy and childbirth experience as possible. The key to the successful implementation of woman centred care is midwifery-led care.

5.1.5 There is variation in access to current gynaecology services across North Wales.

5.2 Quality Standards

5.2.1 An assessment of the current service status set against key recommendations provides an indication of the current North Wales status against these standards, and where future service options need to consider potential shortfalls.

5.2.2 Current services do not meet some quality standards – evidenced by the closures of neonatal units and greater than anticipated, closure of maternity units (7 times in 2010).

The current neonatal intensive care units in North Wales are frequently closed to admissions, compromising the network’s ability to provide...
the requisite level of care, indicating that the quality standards for neonatal services are not always achievable.

5.3 Workforce

5.3.1 Medical workforce

5.3.1.1. Obstetrics and & Gynaecology
Each of the acute DGH sites is supported by teams of Consultant Obstetricians and Gynaecologists. There is currently a variation in the distribution of consultant sessions across North Wales. This needs to be considered alongside population need and current demand. The Workforce Development Report (NLIAH & the Wales Deanery, November 2010) recorded that in terms of the distribution of medical staff, BCUHB had the smallest “medical staff : population” and “consultant : population” ratios in this specialty across Wales. According to the published evidence, BCUHB serves 22.77% of the all-Wales population, but has 18.72% of the all-Wales total Obstetric & Gynaecology medical personnel, and 17.82% of the Obstetric & Gynaecology consultants in Wales.

5.3.1.2 Concerns about the current system expressed by the Wales Deanery include:
- European Working Time Directive EWTD restrictions mean that hours are reduced.
- Obstetrics and Gynaecology do not fit into a Hospital at Night system of cross cover.
- Rotas for out-of-hours cover by trainees create problems of availability during the day and dilutes some of the training opportunities in small units. This can lead to problems with satisfying PMETB/GMC Generic Standards for Trainees & leads to a reduction in practical experience to maintain skills in the trainers.
- Smaller maternity hospitals are a potential problem for delivery of Obstetrics Skills Training.
- Acute Gynaecology fits in well with Obstetrics but Elective Gynaecology can be delivered on sites away from Acute Care.
- A certain number of surgical procedures are required to train and maintain skills and therefore, smaller units will have fewer procedures/patients per doctor and are therefore less likely to be sustainable for training purposes.
- In addition to any focus on obstetric and midwifery staff, the current consultant obstetric units do not meet the standards set by partner CPG’s (e.g. for anaesthesia and analgesia). The

15 Standards for Maternity Care: Report of a Working Party, (June 2008), Royal College of Obstetricians and Gynaecologists; Royal College of Midwives; Royal College of Anaesthetists; Royal College of Paediatric and Child Health http://www.rcog.org.uk/files/rcog-corp/uploaded-files/WPRMaternityStandards2008.pdf
inter-relations between each specialty therefore have to be considered in any re-modelling or enhancement of existing services, and has to be a key component in the overall model of care suggested to secure safe, high quality maternity services for North Wales. Current services are maintained through a reliance on locum and agency staff. As a long-term proposition this is not sustainable and could compromise quality and safety.

5.3.1.3 Neonatal

5.3.1.3.1 With regards to medical staffing levels in North Wales concerns were raised in June 2010 that that there was no dedicated consultant neonatologist in any of the three units (at that time); that there was not a separate middle grade rota, and that “the standard was not the same as in other units in South Wales”\(^{16}\).

The current staffing levels within North Wales are as follows:

<table>
<thead>
<tr>
<th>Level on Rota</th>
<th>YG</th>
<th>YGC</th>
<th>YMW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>1 Trust doctor</td>
<td>2 FY2 doctors</td>
<td>2 Trust doctors</td>
</tr>
<tr>
<td></td>
<td>1 FY2 doctor</td>
<td>2 GPVTS doctors</td>
<td>3 FY1 &amp; FY2 doctors</td>
</tr>
<tr>
<td></td>
<td>3 GPVTS doctors</td>
<td>2 Trust doctors</td>
<td>2 GPVTS doctors</td>
</tr>
<tr>
<td></td>
<td>1 ST1 doctor</td>
<td>8 ST1-2</td>
<td>5 ST1-2/FTSTA doctors</td>
</tr>
<tr>
<td></td>
<td>1 FTSTA2 doctor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total = 7</td>
<td>Total = 14</td>
<td>Total = 12</td>
</tr>
<tr>
<td>Tier 2</td>
<td>3 Staff grade/ Trust doctors</td>
<td>6 ST3-8 doctors</td>
<td>3 Staff grade doctors</td>
</tr>
<tr>
<td></td>
<td>2 ST3**</td>
<td>0.5 Associate Specialist</td>
<td>5 ST3-8** doctors</td>
</tr>
<tr>
<td></td>
<td>2 ST4</td>
<td>1 ST3 community**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 unfilled staff grade</td>
<td>doctor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total = 8</td>
<td>Total = 7.5</td>
<td>Total = 8</td>
</tr>
<tr>
<td>Tier 3</td>
<td>5 acute Consultants</td>
<td>5.8 acute Consultants</td>
<td>6 acute Consultants</td>
</tr>
<tr>
<td></td>
<td>1:5 weekday</td>
<td>1:5 on call</td>
<td>1:6 on call</td>
</tr>
<tr>
<td></td>
<td>1:6 weekends</td>
<td>(with prospective cover)</td>
<td>(with prospective cover)</td>
</tr>
<tr>
<td></td>
<td>(with prospective cover)</td>
<td>1 neonatologist 1:6 on call</td>
<td>1 neonatologist 1:6 on call</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table notes/definitions

- A Trust doctor is a direct employee of BCULHB (may be on a permanent or fixed-term contract).
- FY doctors are in training in the Wales Postgraduate Deanery Foundation Programme (number indicates in which year of training they are in the 2 year Programme).
- GPVTS = General Practice Vocational Training Scheme.
- ST doctors are in training in the Wales Postgraduate Deanery Specialty Training Programme in Paediatrics (number indicates in which year of training they are in the 8 year Programme).
- FTSTA doctors are in Fixed Term Specialty Training Appointments (usually for 6 or 12 months). They are appointed by Wales Postgraduate Deanery, and to the same standard, to fill any unoccupied slots in the Specialty Training Programme in (number indicates in which year of training the unoccupied post is in the 8 year Programme).
- Staff Grade and Associate Specialist doctors are direct employees of BCULHB on permanent contracts.
- FY1 doctors are not thought to be suitable to provide neonatal cover
- ** The Wales Postgraduate Deanery has recommended taking ST3s off the Tier 2 (middle grade) rota and putting them on the Tier 1 rota instead.

Currently the single neonatologist does 1:6 on call for neonatology alone. Other consultants provide the neonatal on call as well as that for general paediatrics on the remaining 5 out of 6 nights.

5.3.1.3.2. There is only one unit that has a separate neonatal Tier 1 rota (This is also currently struggling to be maintained due to staffing issues); none of the units have a separate Tier 2 neonatal rota; and all the consultants in Tier 3, apart from the single neonatologist, are primarily general paediatricians. The identified shortfall ranges from 0-15 posts for Tier 1 (SHO); 9 for Tier 2 (middle grade) and 5 consultant neonatologists (and additional general paediatricians with a neonatal interest for Level 2 units).

5.3.1.3.3 There is presently only one dedicated neonatal consultant in North Wales (appointed in August 2010). Attempts to appoint a second consultant have been unsuccessful for a number of reasons. Most of the general paediatric consultants cover neonates as part of their on call responsibilities.

5.3.1.3.4 There are presently 16 trainees on the middle grade rotas. They are from both the Welsh and Mersey Deaneries. A significant number of ST3 posts (old type SSHO) may be excluded from the middle grade rotas in the future. The Welsh Deanery is considering reviewing the number of trainees allocated to units across Wales, reflecting a concern related to the number of units across Wales in general; the effects of EWTD, and the quality of education and training. The RCPCH are supporting a consultant-delivered service. Advanced Neonatal Nurse Practitioners may provide a partial solution to junior doctor shortages, and in terms of maintaining medical rotas at different levels, ST3 doctors can be replaced by ST4’s who can then support the middle grade rota.

5.3.1.3.5 The Wales Postgraduate Deanery is unlikely to sustain the level of support to BCUHB in its present configuration as vacancies on medical rotas have impacted adversely on the quality of training. At an All-Wales level, future trainees will be allocated to units that can demonstrate the appropriate infrastructure to accommodate trainee needs.

5.3.1.3.6 For junior grades, the main concern is EWTD. Currently only one unit has a separate neonatal rota. The junior grade (tier 1) is not as significant a problem as for consultants and middle grades.

5.3.1.3.7 The All-Wales neonatal standards reflect the aspirations of the Toolkit for High Quality Neonatal Services which outlined a series of staffing levels for a Level 3 Unit. These are not currently not achievable within the medical workforce in North Wales.

5.3.2 Midwifery workforce

5.3.2.1 A Birthrate Plus assessment undertaken in 2009 across North Wales revealed the following:
- deficit in midwifery posts of 16.66 WTE
- deficit in support posts of 3.92 WTE
Consequently, based on these figures the Health Board is currently not compliant and the service is 16.6 WTE midwives short of the Birthrate Plus recommended levels.

5.3.2.3 Funds were secured from the Health Board in 2010 through an internal ‘invest to save’ scheme to introduce a 10% skill mix into midwifery through developing the role of the maternity support worker (MSW). On completion of the MSW training, the shortfall in the required midwifery posts will reduce to 12.89 WTE. An additional savings targets to the midwifery budget for 2011/12 will further compromise the service’s ability to attain Birthrate Plus compliance.

5.3.2.4 There are sufficient Labour Ward shift leaders to cover all North Wales sites, but not all areas afford super-numary status.

5.3.2.5 There is disparity across the CPG in regard to working arrangements, with some units employing midwives in advanced practice to integrate with the work of doctors, and others remain with the traditional medical model.

5.3.2.6 The Women’s Services CPG does not employ a Consultant Midwife in any capacity, with no immediate strategic plan to introduce this role.

5.3.2.7 It is recommended good practice that midwives are not deployed to the scrub role in the Obstetric theatre. However, there is variation in service models in relation to the role midwives have in the recovery of patients following surgery is being addressed but has yet to be resolved.

5.3.2.8 In the Standards for Maternity Care – Report of a Working Party, (RCOG, 2008) report, the midwife is identified as the first point of contact to all women. This has been achieved in some areas in North Wales but is patchy across BCUHB. For example in some parts over 80% are seeing the midwife as the first point of contact; in other areas it is below 50%.

5.3.3 Neonatal nursing workforce

5.3.3.1 BAPM Standards recommend that individual neonatal networks undergo defined workforce planning to determine the number of neonatal nurses at all levels required to support service demands.
5.3.3.2 The analysis of the All-Wales Neonatal Capacity Review undertaken in 2010 by the Wales Neonatal Network identified that the North Wales has the lowest nurse staffing ratio (123 deliveries per neonatal nurse in comparison with a mean Wales average of 104 deliveries per nurse). Nurse staffing numbers within the Network have a profound effect on available capacity and timely access to high acuity care for high-risk newborn infants. This is a key factor in the number of closures experienced by the neonatal units in North Wales.

5.3.3.3 The Neonatal Capacity Review concluded that if there is an intention to continue providing critical care (Intensive Care and High Dependency) services to newborn infants in North Wales, there is a need for appropriate nurse staffing. North Wales is 23.5% under-resourced against the Wales Neonatal Nurse Staffing Standards for current cot numbers.

5.3.3.4 Current assessment of nurse staffing following the All Wales Neonatal Standards for nurse staffing ratios, taking into consideration the application of cash releasing efficiency schemes (savings) to all budget lines during the last financial year reveal an overall deficit in budgeted whole time equivalent nursing posts across North Wales:
- Registered nurse posts: 41.17 WTE
- Support posts: 8.0 WTE

5.3.4 Gynaecology nursing workforce

5.3.4.1 Gynaecology Nursing: a nurse patient ratio of 1:6 is recommended by the Royal College of Nursing (RCN). Recent assessment of nurse staffing across the 3 Gynaecology wards using the Professional Judgement Model (Telford) reveal nurse – patient ratios vary between 1:6 and 1:9. The overall deficit in budgeted whole time equivalent nursing posts across the 3 Gynaecology wards: 8.49 WTE registered nurse posts and 8.52 WTE support posts.

5.3.4.2 The nursing budget for Gynaecology services across the Clinical Programme Group is historic and is currently being reviewed in line with service developments to address the disparity between current service demand and staffing capacity. This is supported by the findings of the Wales Audit Office Review of ward staffing (February 2010) that acknowledged staffing of Gynaecology nursing on all three sites is under-established compared to the national average.

5.3.4.3 There is disparity of roles responsibilities across the Clinical Programme Group in terms of nurse provision for the Early Pregnancy Assessment Units/Emergency Gynaecology Units that are integral to the ward environment. The advanced nurse practitioner role is also inconsistent, with established nurse colposcopist posts developed in Ysbyty Gwynedd and Ysbyty Glan...
Clwyd, with proposals to develop this service at Ysbyty Maelor Wrexham.

5.4 Financial

5.4.1 A financial summary is shown as follows:

- The financial position for the Women’s Services CPG at year end 2010/11 was an over spend of £2.5m out of a budget of £25.4 million (10%).

- Over 95% of the Women’s Services CPG budget allocation relates to pay. Hence the review will focus on the rationalisation and organisation of staff resources to deliver safe, high quality services to patients.

- A significant element of the pay overspend in 2010/11 (£1.2 million – 19.3%) reflected the use of agency and medical locum staff in covering sickness and vacancies in the current pattern of services.

- Other budgetary overspends reflect savings targets to be achieved and service demand pressures across Nursing and non pay budgets.

- A number of opportunities can be progressed to repatriate non specialist services from the Countess of Chester Hospital and Liverpool Women’s Hospital. There is scope to provide additional and effective obstetric and gynaecology services locally within North Wales for those patients currently required to travel to English providers.

5.4.2 The CPG has concluded that without significant investment in the current pattern of services, service delivery will need to be improved and achieved through service rationalisation and reconfiguration. This will ensure that the future service pattern can manage the service demand effectively with service quality and patient safety as the priority.
6. CASE FOR CHANGE

<table>
<thead>
<tr>
<th>Area</th>
<th>Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Health Need</td>
<td>The health of mothers, children and families across North Wales can be improved. People’s health varies according to where they live in North Wales. Low birth weight, infant mortality, teenage pregnancy and caesarean section rates all vary in this way. Demographic changes are making an impact on the way maternity, neonatal and gynaecology services are provided. The birth rate is rising, older women are having children and there’s an increase in complex cases and in women and babies with ill health. The delivery of services in future needs to take account of these changes. Evidence from research into the different ways these services are provided across the world shows how to improve population health and reduce inequity. There needs to be a coordinated and systematic approach to addressing people’s health needs which learns from this evidence. This approach should integrate work between colleagues in primary care, secondary care and partners, particularly local authorities. Scientific evidence highlights the importance of targeting services to address specific population needs and to improve population outcomes. The evidence also highlights the population benefit that results from maternity services focusing on care led by midwives. Such care should be organised to provide a flexible, appropriate, clinically effective and accessible service which responds to the needs of women. The current system does not always meet national quality standards and is therefore unsustainable. For example, both neonatal units and maternity units have to be closed regularly. The current neonatal transport service does not meet recommended standards for a 24 hour service. The ability to access gynaecology services varies across North Wales. There are a number of factors involving the medical workforce which are having a considerable impact on the delivery of maternity, neonatal and gynaecology services. For example, the European Working Time Directive (EWTD) limits the amount of time staff can work in a week, radically changing the hour’s doctors. Other factors include staff shortages, unsustainable training rotas, the move to consultant delivered care and the conflicting demands of emergency care and the care of planned hospital admissions.</td>
</tr>
</tbody>
</table>
The health system in North Wales is unable to meet national standards relating to labour ward cover by consultants. There’s a reliance on locum and agency staff. The neonatology service on occasions is understaffed by doctors. The current configuration of services will be increasingly difficult to sustain in terms of the availability of medical staff.

**Nursing Workforce**

Within the current configuration, the service is unable to meet RCN recommended staffing levels at all times for general inpatient care for gynaecology nursing.

Present neonatal nursing staffing levels do not allow all available cots to be staffed at all times. North Wales has a staffing shortfall compared to the Wales Neonatal Nurse Staffing Standards for current cot numbers.

**Midwifery workforce**

The current system is unable to meet the standards set out by Birthrate plus – a national standard for midwifery staffing. There is a shortfall of nearly 17 WTE midwifery posts in North Wales.

The current pressures on resources and workload are having an impact on service delivery. For example, there is variation in the delivery of interventions by trained staff to improve public health. There are not enough labour ward shift leaders to cover all North Wales sites.

**Financial**

Betsi Cadwaladr University Health Board has a statutory obligation to plan and manage services within the allocation income it receives.

To achieve a break-even position the Health Board has a savings target of 6.1% per cent for 2011-12, with further savings required through the planning period.

With the current service pattern, the Women’s Services CPG had a 10 per cent overspend in 2010-11, much of which was attributable to medical agency and locum costs and service demand pressures. This is addressed within the service review to achieve sustainable services that have service quality and patient safety as a priority.

Some maternity and neonatal services currently provided in Alder Hey and the Countess of Chester Hospitals can now be delivered locally in North Wales in future. North Powys residents could also benefit from receiving services from Wrexham rather than travelling to English providers.

These opportunities are a major consideration in developing improved services which are clinically sustainable and financially secure. They will be a key part of the options generated by the review process.
7. CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

The conclusion of the work stream is underpinned by a number of key drivers for change. The most notable include:

1. **Improving population health**: A more systematic and coordinated approach to addressing population health and implementing practice based on scientific evidence is required to reduce inequities and to improve health for women, children and families in North Wales.

2. **Improving safety and quality**: Actions are required to improve the safety of services and patient experience and to make sure the achievement of quality standards can be sustained. This includes aspects relating to the medical, nursing and midwifery workforce.

3. **Sustainable skilled workforce**: Actions are required to achieve workforce stability including compliance with workforce standards, retaining training capability and developing appropriate skills.

4. **Cost Effectiveness**: Actions are required to ensure that services are cost effective and financially sustainable.

The findings of the work of the clinically led Maternity, Neonatal and Gynaecology work stream conclude that there is a clear need for a change to the way that existing paediatric and child health services are delivered across North Wales.

Variation in service delivery, outcome indicators, public health data and problems with safely staffing and maintaining compliance with standards for high risk specialties indicate that maintaining the status quo is not in the best interest of the population.

Clinical Governance is a primary driver which will ensure that safety is not compromised.

The work stream has concluded that change is needed in order to ensure good governance and specifically to:

- improve the health of children, young people and families across North Wales;
- ensure the delivery of services which are safe, which are informed by and learn from scientific evidence and which meet recognised national policies and standards.
- enhance our patient’s experience including quality and reliability of care.

These reasons for change are consistent with the health board’s ‘Triple Aim’ objective, which through better population outcome and patient experience also ensures that services provide good value for money and are sustainable.

Partnership working between the NHS and its partner organisations, notably local authorities and the voluntary sector is essential.

7.2 Recommendation

The Project Board for the review of Maternity, Neonatal, Paediatrics and Gynaecology therefore recommends that the work stream proceeds to generate and review options which address the needed changes.
APPENDIX 1:
Maternity, Neonatal and Gynaecology Work stream members:

Geeta Kumar, Clinical Lead, Women’s CPG (East) – Chair.
Nik Abdullah, Surgical CPG representative
Ian Barnard, Consultant Paediatrician, (Central)
Gail Barton-Davies, Service Manager, Children & Young People CPG (West)
Christine Bell, Consultant Anaesthetist (Central)
Nigel Bickerton, Chief of Staff, Women’s CPG.
Lesley Bolton, Clinical Lead, Women’s CPG (West)
Mo Cain, Inpatient Midwifery Manager/Deputy Head of Midwifery (Central)
Michael Cronin, local Clinical Director, Children & Young People CPG (West).
Jenie Dean, Trade Union Representative
Debbie Edwards, Assistant Head of Midwifery, (East)
Sian Evans, Senior midwife (West)
Liz Fletcher, Clinical Nurse Manager, Children & Young People CPG (Central)
Fiona Giraud, ACOS (Nursing/ Midwifery), Women’s CPG.
Palghat Gopalakrishnan, Consultant Neonatologist (Central).
Chris Jones, Planning Manager, BCUHB
Heledd Jones, Head of Inpatient Services, Women’s CPG
Sharn Jones, Head of Outpatient Services, Women’s CPG
Siobhan Jones, Locum Consultant, Public Health Wales
Derek Klazinga, Clinical Lead, Women’s CPG, (Central)
Paula Knight; Service Manager, Children & Young People CPG (East)
Simon Leeson, Consultant Obstetrician/Gynaecologist (West), Joint Chair of Project Board.
Nick Nelhans, Consultant Paediatrician (East)
Gail Pettifor-Jones, Gynae Manager, Women’s CPG
Aled Pleming, Consultant Obstetrician/Gynaecologist, Labour Ward Lead (Central)
Gareth Roberts, Consultant Anaesthetist (West)
Glynne Roberts, ACOS (Operations), Women’s CPG
Victoria Scott-Knight, Consultant Anaesthetist (East).
Kalpana Upadhyay, Consultant Obstetrician/Gynaecologist, Labour Ward Lead (East)
APPENDIX 2
GLOSSARY AND ACRONYMS

All Wales Neonatal Nursing Standards – refers to a document published by Welsh Assembly Government – which sets out guidelines for All Wales Neonatal Standards for Children and Young People’s Specialised Healthcare Services, including standards for staffing.

Annual Quality Framework 2011/12 (AQF) was issued under the ministerial letter EH/ML/002/11 and outlines the requirements of the NHS Wales for the year ahead.

Antenatal. Relates to the period of pregnancy

Alongside midwifery-led unit is used to describe a free-standing midwifery-led unit which is co-located alongside a consultant-led obstetric unit.

Child Poverty Targets relate to the The Child Poverty Act 2010 which set targets to meet in order to attempt to eradicate child poverty by 2010

Chromosomal anomalies are a change in the normal structure of chromosomes which often results in physical or mental abnormalities.

Clinical Programme Group (CPG) acts as advocates within Betsi Cadwaladr University Health Board for individual clinical specialities. CPGs are responsible for cost profiles, use of resource and efficiencies based on evidence and best practice. CPGs account for changes in technology and practice and deal with local operations as well as strategic development.

Consultant Midwife. A midwife with additional midwifery training who provides specialised advice to mothers, their families and colleagues as well as performing the standard role of a midwife. Midwife consultants will also teach and train other midwifery staff and students and can undertake specialist research.

Deanery. The Wales Deanery is responsible for commissioning, overseeing and monitoring the provision of education and training for doctors and dentists in postgraduate training posts in the NHS across Wales. The Deanery also helps to oversee the provision of Continuing Professional Development for General Medical and Dental Practitioners across Wales.

Early Pregnancy Assessment Units are specialist units that manages early pregnancy problems such as vaginal bleeding and abdominal pain. We see women in the first 18 weeks of pregnancy

Emergency Gynaecological Units – are a rapid access, one-stop service to see and assess emergency gynaecology referrals
Episiotomy. A surgical incision made in the area between the vagina and anus (perineum)

Instrumental birth. An operative procedure that should be undertaken with tested effective anaesthesia.

Intrapartum care. The management and delivery of care to women in labour

Lower super output area. (LSOAs) describe a geographical area which contains approximately 1000 - 1500 people. There are 1896 LSOAs in Wales.

Maternity, Neonatal and Gynaecology. Secondary care services provided in the acute hospital-based and community setting for:
- Maternity - the period for which a woman is pregnant or has just given birth
- Neonatal - newborn babies during the period immediately after birth
- Gynaecology - dealing with the health of the female reproductive system

Middle Super Output Areas (MSOAs) describe a geographical area which contains an average population of 7,500 and a minimum of 5,000. There are 413 MSOAs in Wales and 96 in the BCUHB area

Nurse Colposcopist - A nurse who is trained, competent and certified to perform colposcopy in accordance with specified training standards

Postnatal. Relates to the period following childbirth.

Primary care refers to services provided by GP practices

Professional Judgement Model (Telford 1979). A report to develop standards which relate to the workload in nursing and the corresponding staff requirements

Regional analgesia. The use of anaesthetic to render a specific area of the body insensitive to surgery or other instrumentation.

The Kings Fund is a charitable foundation in England.

ACRONYMS

BAPM British Association of Perinatal Medicine

BCUHB Betsi Cadwaladr University Health Board

DGH District General Hospitals

EWTD European Working Time Directive

MSW Maternity Support Worker
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHDU</td>
<td>Neonatal (High Dependency) Unit</td>
</tr>
<tr>
<td>NICU</td>
<td>Neonatal Intensive Care Unit</td>
</tr>
<tr>
<td>O&amp;G</td>
<td>Obstetrics and Gynaecology</td>
</tr>
<tr>
<td>PMETB</td>
<td>Postgraduate Medical Education and Training Board</td>
</tr>
<tr>
<td>RCA</td>
<td>Royal College of Anaesthetists</td>
</tr>
<tr>
<td>RCM</td>
<td>Royal College of Midwives</td>
</tr>
<tr>
<td>RCOG</td>
<td>Royal College of Obstetricians and Gynaecologists</td>
</tr>
<tr>
<td>RCPCH</td>
<td>Royal College of Paediatrics and Child Health</td>
</tr>
<tr>
<td>SCBU</td>
<td>Special Care Baby Unit</td>
</tr>
<tr>
<td>YG</td>
<td>Ysbyty Gwynedd / Gwynedd Hospital</td>
</tr>
<tr>
<td>YGC</td>
<td>Ysbyty Glan Clwyd / Glan Clwyd Hospital</td>
</tr>
<tr>
<td>YMW</td>
<td>Ysbyty Maelor Wrecsam / Wrexham Maelor Hospital</td>
</tr>
</tbody>
</table>

The **Welsh Government (WG)**: is the devolved government of Wales formally known as **Welsh Assembly Government** (WAG) Welsh Government was officially opened by the Queen on the 13th May 2011.