West Midlands Strategic Clinical Network for Maternity and Children

Maternity Gap Analysis Final Report

November 2014
Project Report

Maternity Gap Analysis against National Priorities

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    Staffs, Shrops & Black Country Maternity & Newborn Network
    Central Newborn Network
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Executive Summary

The NHS England Business Case for 2014/15 states one of the national priorities in relation to maternity and newborn is to “reduce premature birth and stillbirths”. This priority directly correlates to Domain 1 of the NHS Outcomes Framework 2014-15 (DoH, 2013) “Preventing people from dying prematurely”. At the National Clinical Directors CCG forum in April 2014, Dr Jacqueline Cornish and Dr Catherine Calderwood detailed the areas requiring attention to meet these national priorities to reduce mortality and morbidity in perinatal care to include the following:

- Antenatal detection of Intra Uterine Growth Restriction (IUGR)
- Reduction in postpartum haemorrhage (PPH)
- Reduction in caesarian rates without clinical indication pre 39 weeks gestation
- Reduction in unexpected Term (>36 weeks gestation) admissions to neonatal units

The objectives of the gap analysis were primarily to:

- Identify what data capturing tools are currently in use across the region for maternity services
- Identify any variation or common areas of concern in line with the national priority areas; both across the West Midlands region and nationally
- Identify any existing or future planned initiatives and service developments (within CCGs, Maternity and Newborn Operational Delivery Networks (ODNs) and the Specialised Commissioning Team) to tackle the national priority areas

The approach to the project was to ensure all appropriate voices were heard and available data analysed. For this reason there was primarily a three pronged approach;

- Understand national and local data and initiatives
- Obtain quantitative and qualitative evidence from clinicians and commissioners
- Acquire patient experience and opinion

Obtaining data was the biggest challenge for this project. Identifying which data could be located from what source was a timely and difficult task with some data being grossly out-of-date, unavailable; or its validity questionable.

This report details the findings of the project and provides a number of recommendations to be considered by the organisation and Newborn Operational Delivery Networks in particular.
Recommendations:
The project team, with its direct partners have prioritised the following area for recommended ongoing work by the Maternity and Newborn Operational Delivery Networks:

- Scoping all current data collections, with particular attention to data and audit for Intra Uterine Growth Restriction (IUGR)

The West Midlands Strategic Clinical Network have selected a number of work streams for improvement focus on Phase 2. These are short-term pieces of work for completion before April 2015:

1. Bereavement care – scoping on current service provision/ variation
2. CTG Interpretation (perinatal) – training package and ‘fresh eyes’ buddy system
3. Reduced fetal movement – patient information

In addition to this, the SCN will provide support to other pieces of work contributing to the stillbirth and infant mortality agenda:

- Information provision to ODNs around C-Section and PPH variation, for ODN action
- Supportive/ collaborative role with Public Health England (PHE) and the Child Death Overview Panel (CDOP), to ensure joined up approach to reducing stillbirth and infant mortality

Recommendations for phase 3 of the maternity project, April 2015 onwards, would be:

1. A large scale project around the investigation and implementation of a shared data system
2. IUGR – Implement recommendations of North SCN work for National Care Bundle

The agreement of the SCN to move forward with Phases 2 and 3, along with the commitment of the ODNs to address their assigned recommendation, would see improvement work in line with the issues identified through national and local data, the clinical and commissioning stakeholder requests and also the patient priorities.
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Glossary

CCG  Clinical Commissioning Group
CDOP  Child Death Overview Panel
CQC  Care Quality Commission
CTG  Cardiotocography
FGR  Fetal growth restriction
HIE  Hypoxic Ischaemic Encephalopathy
IUGR  Intrauterine Growth Restriction
NNU  Neonatal Unit
ODN  Operational Delivery Network
PHE  Public Heath England
PPH  Post Partum Haemorrhage
RCOG  Royal College of Obstetrics and Gynaecology
RFM  Reduced Fetal movement
SCN  Strategic Clinical Network
SGA  Small for gestational age

Definitions

**Miscarriage** - born before 24 weeks completed gestation and which did not, at any time, breathe or show signs of life

**Stillbirth** – born after 24 or more weeks completed gestation and which did not, at any time, breathe or show signs of life

**Early neonatal deaths** – deaths under 7 days of life

**Late neonatal deaths** – deaths between 7 and 28 days of life

**Post neonatal deaths** – deaths between 28 days and 1 year of life
1 Background

“Still birth rates in the United Kingdom are among the highest of high income Countries” NHS England, 2014

The NHS England Business Case for 2014/15 states one of the national priorities in relation to maternity and newborn is to "reduce premature birth and stillbirths". This priority directly correlates to Domain 1 of the NHS Outcomes Framework 2014-15 (DoH, 2013) “Preventing people from dying prematurely”. At the National Clinical Directors CCG forum in April 2014, Dr Jacqueline Cornish and Dr Catherine Calderwood detailed the areas requiring attention to meet these national priorities to reduce mortality and morbidity in perinatal care to include the following:

- Antenatal detection of Intra Uterine Growth Restriction (IUGR)
- Reduction in Postpartum haemorrhage
- Reduction in Caesarian rates without clinical indication pre 39 weeks gestation
- Reduction in unexpected Term (>36 weeks gestation) admissions to neonatal units

In addition to the above, local anecdotal evidence suggests that there is regional variation in provision of therapeutic hypothermia (cooling) for term neonates with hypoxic ischaemic encephalopathy (HIE)

National Institute for Health and Care Excellence

Every year in the UK more than 1,000 otherwise healthy babies born at full term die or suffer brain damage caused by a lack of oxygen (hypoxia) at birth or during labour.

One of the treatments that can help minimise the risk of this happening involves healthcare staff lowering the temperature of the baby shortly after birth, by cooling their body using a blanket or mattress filled with cooled air or fluid, or their head using a special cooling cap. Cooling slows down the rate of cell damage in the brain.

These five key areas contribute to infant mortality rates which remain variable around England ranging from 3.6-5.9 cases per 1000 births (ChiMat).

Infant mortality is the biggest cause of our life expectancy gap. Whereas a death aged 74 years is seen as 1 “year of lost life”, a death at age 1 would lose 74 years (75 years as the acknowledged bench mark). The most common conditions for the life expectancy gap in England are shown in the graph below (Fig 1) which demonstrates expected and preventable lost years and clearly shows a significant number of preventable lost years.
2 Objectives

The objectives of the gap analysis were primarily to:

- Identify what data capturing tools are currently in use across the region for maternity services
- Identify any variation or common areas of concern in line with the national priority areas; both across the West Midlands region and nationally
- Identify any existing or future planned initiatives and service developments (within CCGs, Maternity and Newborn Operational Delivery Networks and the Specialised Commissioning Team) to tackle the national priority areas

2.1 Scope

The project considered both midwife and obstetrician led services, and included the following Trusts and hospital sites:

1. Shrewsbury & Telford Hospital NHS Trust:
   - Royal Shrewsbury Hospital
   - Princess Royal Hospital, Telford
2. The Royal Wolverhampton NHS Trust – New Cross Hospital, Wolverhampton
3. University Hospital of North Staffordshire NHS Trust
4. Walsall Healthcare NHS Trust – Walsall Manor Hospital
5. Mid-Staffordshire NHS Foundation Trust – Stafford Hospital
6. Dudley Group NHS Foundation Trust – Russell’s Hall Hospital, Dudley
7. Heart of England NHS Foundation Trust:
   - Birmingham Heartlands Hospital
   - Good Hope Hospital, Sutton Coldfield
8. Sandwell and West Birmingham NHS Trust - Birmingham City Hospital
9. Wye Valley NHS Trust - Hereford County Hospital
10. Worcestershire Acute Hospitals NHS Trust:
    - Royal Alexandra Hospital, Redditch
    - Worcestershire Royal Hospital
11. Birmingham Women’s NHS Foundation Trust – Birmingham Women’s Hospital
12. Birmingham Children’s Hospital NHS Foundation Trust
13. George Eliot Hospital NHS Trust, Nuneaton
14. Burton Hospitals NHS Foundation Trust - Queens Hospital, Burton
15. South Warwickshire NHS Foundation Trust - Warwick Hospital
16. University Hospitals of Coventry and Warwickshire NHS Trust – University Hospital Coventry

NB: The 4 hospital Trusts/sites listed 13-16 are covered by Central Newborn Network. This project will only cover these four Trusts and not any of the other Trusts within that Network, as the other CNN Trusts sit within the East Midlands SCN.

It is acknowledged that United Hospital of North Staffordshire (UHNS) have changed their name during the term of this project. Throughout this report they are referred to as UHNS, as per their name at the point of initiation of this work.

3 Approach

The approach to the project was to ensure all appropriate voices were heard and available data analysed. For this reason there was primarily a three pronged approach;

- Understand national and local data and initiatives
- Obtain quantitative and qualitative evidence from clinicians
- Acquire patient experience and opinion

Understand national and local data and initiatives

National and local data was obtained through a variety of routes. Accessing data emerged to be the most problematic aspect of the project with much data not being available or being out-of-date.

Data was sourced via the following;

- Royal College of Obstetrics and Gynaecology
- Office of National Statistics
- NHS England
- Badger Data System
- Maternity and Newborn Networks
- NHS Trusts
- Clinical Commissioning Groups
- ChiMat
- West Midlands Perinatal Institute

Obtain quantitative and qualitative evidence from clinicians and commissioners

The project strived to involve as many clinicians and commissioners as possible from the beginning. The project was first discussed at the Newborn and Neonatal Networks Tripartite Meeting on 15th July 2014. Maternity Leads from each NHS Trust
were contacted to request local data. All attendees for the tripartite meeting and all Maternity Leads were invited to the Stakeholder meeting on October 1\textsuperscript{st} 2014 where recommendations from the data and patient experiences were discussed and debated.

**Acquire patient experience and opinion**

It was important for the project to acquire patient experience stories from all areas of the scope.

The project worked with the Patient Voice and Insight Lead at the SCN to obtain as many interested patients as possible. The project advertised the project to patients utilising a number of mediums including the Acute Hospitals, Charity organisations and support groups, Maternity and Newborn Networks and Social Media – including Facebook and Twitter.

Through collaboration and partnership working with the following list of organisations and groups, our requests for patient and family involvement reached hundreds of interested individuals:

- Bliss
- SANDS Stillbirth and Neonatal Death Society
- Action on Pre-Eclampsia
- Little Fingers
- Group B Strep Support
- Campaign for Safer Birth
- Maternity Services Liaison Committees
- Calmer Birth and Beyond
- Your Birth and Babies
- Cheerful Cherubs

In total we received full stories from 22 patients from the following areas within the scope of the project;

- Stillbirth
- Early Neonatal Death
- Fetal growth restriction
- Term admission to neonatal services
- Cooling

### 4 Challenges

Obtaining data was the biggest challenge for this project. Identifying which data could be located from what source was a timely and difficult task with some data being grossly out-of-date, unavailable; or its validity questionable. Data capture was made more complex with non-engagement for the project by some providers and CCGs. Although the project used a range of methods to engage both clinicians and commissioners it is apparent that some information is missing from this document.
With this challenge in mind, the data within the report must be perceived as the best data available during the project’s duration. It is acknowledged that some Trusts may dispute the data but the authors have decided to provide the data which stakeholders are currently being judged and benchmarked against.

5 Findings

5.1 Identify what data capturing tools are currently in use across the region for maternity services

Across the region a number of maternity data capturing systems are being utilised. Information was requested from all Trusts but only those Trusts who replied are included in the table below. Figure 2 provides a list of systems currently in use. Information was provided by the Trusts however during the stakeholder event, the accuracy of what information had been provided to the project was questioned.

<table>
<thead>
<tr>
<th>Trust</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart of England</td>
<td>Badger</td>
</tr>
<tr>
<td>University Hospital North Staffs</td>
<td>Badger</td>
</tr>
<tr>
<td>Worcestershire Acute</td>
<td>K2</td>
</tr>
<tr>
<td>Birmingham Women’s Hospital</td>
<td>K2</td>
</tr>
<tr>
<td>Wye Valley</td>
<td>Badger</td>
</tr>
<tr>
<td>University Hospital Coventry</td>
<td>Evolution</td>
</tr>
<tr>
<td>Sandwell and West Birmingham</td>
<td>Badger</td>
</tr>
<tr>
<td>Shrewsbury and Telford</td>
<td>Medway</td>
</tr>
<tr>
<td>Wolverhampton Royal</td>
<td>EuroKing (with intention to move to K2)</td>
</tr>
<tr>
<td>South Warwickshire</td>
<td>Badger (part implemented)</td>
</tr>
<tr>
<td>Mid Staffordshire</td>
<td>No system in Maternity</td>
</tr>
</tbody>
</table>

Figure 2: List of WM Trusts Maternity Systems as provided by the Trusts

5.2 Identify any variation or common areas of concern in line with the national priority areas; both across the West Midlands region and nationally

Infant Mortality

Infant mortality data from the Office of National Statistics states that stillbirths accounted for 0.5% of all births in 2011. Of the 3,707 stillbirths where gestational age was known, 65.6% were born pre-term with 38.5% of those being extremely pre-term, 24.1% being very pre-term and 37.4% were born moderately pre-term.

A fetus is considered viable at 24 weeks. Very few live births occur before this stage and infant mortality rates for the few babies born this early are extremely high. For babies born in 2011, 0.1% of live births occurred at less than 24 weeks; the infant mortality rate for these babies was 894.7 deaths per 1,000 live births. The majority of these deaths (92.4%) occurred during the early neonatal period (the first week of life).
There has been little change in the distribution of birth by gestational age since 2006, when the first Statistical Bulletin in this series was published. In that first bulletin, post-term (42 weeks and over) babies were reported in the same category as term babies; the report showed that 92.4% of babies were born at 37 weeks or more, compared with 92.8% in 2011.

The infant mortality rate for pre-term babies (between 24 and 36 weeks) born in 2011 was 25.4 deaths per 1,000 live births, 11% lower than the rate for babies born in 2006 (28.6 deaths per 1,000 live births). The infant mortality rate for babies born at term (1.5 deaths per 1,000 live births) was significantly lower than the overall infant mortality rate (4.1 deaths per 1,000 live births). Babies born post-term in 2011 comprised 4.1% of live births, and had an infant mortality rate of 1.7 deaths per 1,000 live births, slightly higher than the infant mortality rate for babies born in 2006 (1.5 deaths per 1,000 live births).

Still Births

Figure 3 depicts the stillbirth rates for the West Midlands in comparison to the England and Wales average for the period 2000-2009. It can be seen that throughout the nine year period, West Midlands stayed above the national average and this has been the case since 1963 when regional data became available.

*Figure 3: West Midlands stillbirth average 2000-2009 in comparison to England and Wales national average*
Figure 4 breaks down the regional average further for the period 2002-2009 into local areas. Whilst Birmingham’s stillbirth average remained the highest in the region between 2002 and 2007, there was a steady decline in cases, resulting in the Black Country having the highest rate of stillbirth in the region between 2006 and 2009. It is apparent whilst other areas have seen very little improvement in stillbirth numbers, Birmingham area have been able to make a dramatic rate difference from 5.5 to 4.2 in the seven year period.

Figure 4: Corrected (excluding major congenital abnormalities) rate of stillbirth by area 2002-2009 within the West Midlands

In 2012, the Perinatal Institute reported that for the first time in 50 years, West Midlands stillbirth rates fell below the national average (see fig 4). The Institute believe this to be due to initiatives around fetal growth restriction. It is anticipated (but not yet reported) that the rates have continued to remain below the national average. However, despite this, stillbirths remain the largest contributor to perinatal mortality.
Figure 5: Corrected (excluding major congenital abnormalities) rate of stillbirth by area 2002-2009 within the West Midlands

Perinatal Institute: Stillbirths in the West Midlands – 2011 Update, Sep 2012

Figures 6 and 7 provide the main groupings for stillbirths for years 2002-2009. It is apparent that fetal growth restriction was the most common cause of stillbirth for the entire period and the rate has not altered/improved over the time.

Figure 7: Causes of still birth 2002-9
West Midlands Perinatal and Infant Mortality 2008/9 Report, Perinatal Institute
Early Neonatal Deaths

Figure 8 shows the trend of early neonatal deaths in the West Midlands split down into regions between 2002 and 2009. It can be seen that whilst Birmingham, Arden and West Mercia have made improvements in their early neonatal death rates, Black Country and Staffordshire have made little improvement in their trend.

It is accepted that this data is now 5 years old and the project was unable to obtain more recent accurate, robust, verifiable data drilled down to areas within the West Midlands.

Figure 8: Trend of for early neonatal deaths 2002-9 corrected (excluding major congenital abnormalities)

West Midlands Perinatal and Infant Mortality 2008/9 Report, Perinatal Institute

Gestational Age

The National Perinatal Epidemiology Unit have carried out a considerable amount of work regarding gestational age and the related mortality rates. A full term pregnancy results in the greatest chance of survival and the lowest chance of morbidity. The Office of National Statistics provisional 2011 data shows that for babies born at term (between 37 and 41 weeks gestation), the infant mortality rate was 1.5 deaths per
1,000 live births. In contrast, the infant mortality rate for pre-term babies (between 24 and 36 weeks) born in 2011 was 25.4 deaths per 1,000 live births, 11% lower than the rate for pre-term babies born in 2006 (28.6 deaths per 1,000 live births).

A paper written by the University of Health Science, Leicester and Public Health and Health Improvement\(^1\), discusses the challenges faced by pre-viability live births. National law does not require deaths to be recorded prior to 24 weeks, but there is national variation in the practice of this recording. Data shows that 20% of all recorded neonatal deaths in England are below 24 weeks gestation and as such, due to extreme immaturity, are unlikely to survive. The paper highlights significant variation in the recording of these extremely pre-terms (<24 weeks) as either early neonatal or late fetal loss.

Late Neonatal Deaths

From figure 9 it is seen that Black Country had a consistent rate of late neonatal death above the West Midlands average between 2002 and 2009. However both West Mercia and Arden areas have made significant improvements to their trend resulting in a 0.9% and 0.6% improvement between 2002 and 2009.

Figure 9: Table and graph corrected (excluding major congenital abnormalities) for late neonatal deaths

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More detailed data for each area of the West Midlands (published February 2012) can be found on the Perinatal Website via the following link: www.pi.nhs.uk/pnm/clusterreports/2010/index.htm

Antenatal detection of Intra Uterine Growth Restriction (IUGR)

Data derived from the West Midlands Perinatal Mortality Register, based on regional Perinatal Death Notifications, depicts Fetal Growth Restriction as the largest contributor to stillbirths between 2000 – 2009, accounting for 39% of stillbirths during this time. The rates of stillbirth due to FGR are seen to reduce between 2010-2011, dropping from a 2009 baseline of 2.28 to 1.79/1000 (22% reduction)*

There have been a number of initiatives by the 3 CCGs within the Birmingham and Solihull area in promoting a reduction in stillbirths as previously seen in figure 4. These initiatives have included an opt-out approach for CO2 monitoring at point of booking for all women; and subsequent referral to smoking cessation; along with the Community Growth Scanning Project (CoGS) in 2010.

The following excerpt from WMPI on the COGS programme from 2011 details a little of the process along with the perceived improvements:

“The Community Growth Scanning Project was commissioned by Birmingham PCTs in 2009/10 to enhance fetal growth scanning services in three Birmingham maternity units. Its need arose because of the low antenatal detection rates in Birmingham of fetal growth restriction, one of the main causes of perinatal mortality. Thus the principal purpose of the project was to improve the antenatal detection of fetal growth restriction

“The project engaged trained midwives to staff special clinics to undertake third trimester scans for referred mothers according to an agreed, evidence based protocol.

“Two of the 3 units (BWH and City) were able to implement the project according to the agreed protocol

“Analysis was undertaken using a single proportion/null hypothesis test where the pre-CoGS data was taken as the baseline, as well as a two proportion test without baseline. The results showed that

• the diagnosis of IUGR recognised and recorded in the antenatal notes increased from the baseline of 11.8% in 2009/10 to 26.1% in 2010/11 (1 proportion test: p<0.001; 2 proportion test: p<0.001);
• antenatal detection of IUGR on the basis of a record of IUGR in the notes or a record of a low estimated fetal weight also increased, from 27.1% to 33.5% (1 proportion test: p<0.01; 2 proportion test: p=0.05);
• these increases were mainly due to more serial scans being ordered and undertaken in pregnancies at increased risk of IUGR.
“It is evident that such a project demands profound changes in everyday practice concerning fetal growth surveillance, a central issue in antenatal care. Despite the relatively recent introduction of the new protocol, these preliminary results are already demonstrating significant improvements in IUGR detection.”

The above stands as a best practice area which should be encouraged to be shared throughout the entire West Midlands region.

Reduction in Postpartum Haemorrhage

Obstetric haemorrhage remains one of the major causes of maternal death in both developed and developing countries affecting 1 in every 180 deliveries. Postpartum haemorrhage (PPH) refers to an increased amount of vaginal bleed (over 500ml) between delivery and 12 weeks post birth (RCOG). Reducing major obstetric haemorrhage (more than 2.5 litres) has been identified as a priority by the National Clinical Lead for Maternity Services and evidence to support this priority was provided by two studies; the South East of England STOP Study which showed an eight fold rise in PPH between 1998-2010 (major obstetric haemorrhage) and the Scottish Confidential Audit of Severe Maternal Morbidity (2004-2010).

National data on PPH has only recently (August 2014) become available and utilised information from the National Reporting and Learning System (NRLS). The audit demonstrated that between 2010 and 2012 there were 21,698 incidents of PPH across England and Wales taking the following forms:

**Figure 10 – Incidence of reported PPH across England and Wales 2010-2012**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Reported as death</th>
<th>Reported as severe</th>
<th>Reported as moderate</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>16</td>
<td>167</td>
<td>2886</td>
<td>3069</td>
</tr>
<tr>
<td>2011</td>
<td>11</td>
<td>131</td>
<td>3164</td>
<td>3306</td>
</tr>
<tr>
<td>2012</td>
<td>14</td>
<td>127</td>
<td>3459</td>
<td>3600</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>425</td>
<td>9509</td>
<td>9975</td>
</tr>
</tbody>
</table>

NHS England 2014

It can be seen from figure 10 that there has been a steady increase in PPH incidence reporting over the three years however it is possible that this increase could be attributed to more reporting as opposed to more cases.

When PPH was reported with death of the mother, the causes fell within the following categories;

- Placenta accreta
- Disseminated intravascular coagulation
- Concealed pregnancy
- No antenatal care
- Placenta abruption
- Pulmonary Embolism
- Amniotic fluid embolism
- Pulmonary odema
- Cardiac arrest
Anecdotal evidence suggests that there is variance in the classification of PPH severity across England which is also apparent in the 2010-2012 audit. Figure 11 shows this variance (when recorded)

**Figure 11 – Classification of PPH severity 2010-12 (when recorded)**

<table>
<thead>
<tr>
<th>Amount of blood loss</th>
<th>Reported as death</th>
<th>Reported as severe</th>
<th>Reported as moderate</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1000mls</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1000-1499mls</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1500-2499mls</td>
<td>2</td>
<td>5</td>
<td>278</td>
<td>285</td>
</tr>
<tr>
<td>&gt;2500mls</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

From Figure 11 it is seen that a severe bleed can be reported from <1000mls up to >2500mls and a moderate bleed from 1000->2500mls which makes accurate data comparison difficult and hard to analyse.

**Figure 12: Classification of PPH across the West Midlands**

<table>
<thead>
<tr>
<th>Trust</th>
<th>Minor</th>
<th>Moderate</th>
<th>Major</th>
<th>Massive/Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Wolverhampton</td>
<td></td>
<td></td>
<td>1000-1500mls</td>
<td>&gt;1500mls</td>
</tr>
<tr>
<td>Mid Staffordshire</td>
<td>500-1000mls</td>
<td>1000-2000mls</td>
<td>&gt;2000mls</td>
<td></td>
</tr>
<tr>
<td>Heart of England</td>
<td>&lt;500mls</td>
<td>500-1500mls</td>
<td>&gt;1500mls</td>
<td></td>
</tr>
<tr>
<td>University Hospital North Staffs</td>
<td>500-1500mls</td>
<td></td>
<td>&gt;1500mls</td>
<td></td>
</tr>
<tr>
<td>University Hospital Cov and Warw</td>
<td>500-1000mls</td>
<td>1000-2000mls</td>
<td>&gt;2000mls</td>
<td></td>
</tr>
<tr>
<td>Shrewsbury and Telford Hospital</td>
<td>500-1000mls</td>
<td></td>
<td>1000-1999mls</td>
<td>&gt;2000mls</td>
</tr>
<tr>
<td>Birmingham Women's</td>
<td></td>
<td></td>
<td></td>
<td>&gt;2000mls</td>
</tr>
<tr>
<td>South Warwickshire</td>
<td>500-1000mls</td>
<td>1000-1500mls</td>
<td>&gt;2000mls</td>
<td></td>
</tr>
<tr>
<td>Wye Valley</td>
<td>500-1000mls</td>
<td>1000-1500mls</td>
<td>1500-2000mls</td>
<td>Clinical decision</td>
</tr>
<tr>
<td>Worcs Acute</td>
<td>500-1500mls</td>
<td>1500-2500mls</td>
<td>&gt;2500mls</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 13: Incidence of PPH in West Midlands**

<table>
<thead>
<tr>
<th>Trust</th>
<th>Period</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid Staffs</td>
<td>Jan 13-Sep 13</td>
<td>16 (1000-&gt;2000mls) Estimated 21 for 2013</td>
</tr>
<tr>
<td>Heart of England (to include BHH, GHH and Solihull)</td>
<td>2009/10</td>
<td>104 (&gt;1500mls)</td>
</tr>
<tr>
<td>HEFT (to include BHH, GHH and Solihull)</td>
<td>2010/11</td>
<td>136 (&gt;1500mls)</td>
</tr>
<tr>
<td>HEFT (to include BHH, GHH and Solihull)</td>
<td>2011/12</td>
<td>129 (&gt;1500mls)</td>
</tr>
<tr>
<td>HEFT (to include BHH, GHH and Solihull)</td>
<td>2012/13</td>
<td>136 (&gt;1500mls)</td>
</tr>
<tr>
<td>HEFT (to include BHH, GHH and Solihull)</td>
<td>2013/14</td>
<td>155 (&gt;1500mls)</td>
</tr>
<tr>
<td>University Hospital North</td>
<td>Jan 13 – Dec 13</td>
<td>112 (&gt;1500mls)</td>
</tr>
<tr>
<td>Trust</td>
<td>Year</td>
<td>PPH Cases</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>Staffordshire Royal Wolverhampton</td>
<td>2013/14</td>
<td>21 (&gt;1500mls)</td>
</tr>
<tr>
<td>South Warwickshire</td>
<td>Sep 13 – Aug 14</td>
<td>17 (&gt;1500mls)</td>
</tr>
<tr>
<td>Wye Valley</td>
<td>Sep 13 – Aug 14</td>
<td>20 (&gt;1000mls)</td>
</tr>
<tr>
<td>Walsall Healthcare Trust</td>
<td>2013/14</td>
<td>23 (&gt;2000mls)</td>
</tr>
<tr>
<td>Worcs Acute (to include WRH and Alex)</td>
<td>2013/14</td>
<td>77 (&gt;1000mls during vaginal delivery)</td>
</tr>
</tbody>
</table>

Figure 13 provides an indication of PPH incidence across 13 Trusts. Data was requested from all West Midlands trusts. Different severity of PPH has been captured making accurate analysis difficult. Across 9 trusts approximately 502 PPH cases are recorded annually.

**Reduction in Caesarian rates pre 39 week gestation without clinical indication**

**RCOG, 2013, Patterns of Maternity Care in English NHS Hospitals**

For elective caesarean section, NICE recommends that, in uncomplicated pregnancies, these should not be carried before 39 completed weeks of gestation because of an increased risk of respiratory morbidity in newborns (NICE, 2011). Similar recommendations have been included in guidance from other countries (ACOG, 2007) and recent publications have provided further evidence on the relationship between the timing of an elective caesarean section and admission to neonatal intensive care (Zanardo et al., 2007; Hansen et al., 2008; Yee et al., 2008; Clark et al., 2009; Farchi et al., 2009; Tita et al., 2009). Moreover, recent population-based studies have also shown that long-term health and developmental outcomes for early term infants (37–38 completed weeks) are worse than those of full-term babies (Lindstrom et al., 2009; MacKay et al., 2010; Boyle et al., 2012).

Figure 14 shows all hospitals nationally performing elective caesareans before 39 weeks without clinical indication. The mean rate of elective caesarean section before 39 completed weeks of gestation was 30.3%. There was little difference in the mean rate between primiparous (27.9%) and multiparous (30.9%) women. 17 out of 163 (10%) hospitals are above the outer funnel. 22 out of 163 (13%) hospitals are below the outer funnel.
Figure 14 Funnel plot showing rates of elective caesarean section performed before 39 completed weeks of gestation without clinical indication, adjusted for maternal characteristics and clinical risk factors

![Funnel plot](image)

RCOG, 2013, Patterns of Maternity Care in English NHS Hospitals

Figure 15 provides an anonymised list of West Midlands Hospital Trusts and how their percentage of elective caesareans performed before 39 weeks gestation without clinical indication compares to the national average in 2011/12. It can be seen that out of the 17 West Midlands hospitals, 16 are performing the procedure and of those 10 are performing less than the national average with 2 trusts in the bottom 10th percentile in the country. However, three trusts stand out as being significantly higher than the national average and one of those trusts is in the highest 10th percentile nationally. Although the data is anonymised in this report, it is known that one of the 3 maternity and newborn networks within the West Midlands are in possession of de-anonymized data and all Trusts are already aware of their individual percentage.
Figure 15: % of elective caesareans performed before 39 weeks of gestation without clinical indication within West Midlands 2011/12.

<table>
<thead>
<tr>
<th>Hospital</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.6%</td>
</tr>
<tr>
<td>2</td>
<td>14.1%</td>
</tr>
</tbody>
</table>

National 10th percentile 16.9%

<table>
<thead>
<tr>
<th>National average %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 18.8%</td>
</tr>
<tr>
<td>4 19.5%</td>
</tr>
<tr>
<td>5 21.0%</td>
</tr>
<tr>
<td>6 22.2%</td>
</tr>
<tr>
<td>7 23.0%</td>
</tr>
<tr>
<td>8 27.1%</td>
</tr>
<tr>
<td>9 27.7%</td>
</tr>
<tr>
<td>10 29.9%</td>
</tr>
</tbody>
</table>

National 90th percentile 44.9%

<table>
<thead>
<tr>
<th>National average %</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 32.4%</td>
</tr>
<tr>
<td>12 32.7%</td>
</tr>
<tr>
<td>13 34.5%</td>
</tr>
<tr>
<td>14 41.3%</td>
</tr>
<tr>
<td>15 41.7%</td>
</tr>
</tbody>
</table>

RCOG data request, 2014

Appendix 2 provides a list of conditions which potentially justify elective caesarean before 39 completed weeks gestation (RCOG, 2013).

Reduction in unexpected Term (>36 weeks gestation) admissions to neonatal units

The Bliss Charity (bliss.org.uk) estimate that 1 in 9 babies born in the UK will spend a period of time in neonatal care. In 2011, 56% of admissions onto a neonatal unit were for babies born after 36 weeks gestation and this number increased to 58% by 2013. In 2010 it was reported that around 4% of all births after this gestation were being admitted for specialist care (NHS Atlas of Variation, 2010).

Figure 16 provides detail on the number of term admissions into neonatal care between 1 January 2011 and 31 December 2013 and what percentage this contributes for all neonatal admissions within a hospital Trust but also across the West Midlands. For example, it can be seen that Worcestershire Royal Hospital admits the lowest amount of term babies into neonatal care (39.34% of all in hospital neonatal admissions and this equates to 2.27% of all West Midlands admissions). At
the other end, 85.1% of Staffordshire General Hospital neonatal care admissions are for term babies which equates to 6.09% of all admissions in the West Midlands.

Figure 16: West Midlands term admissions into neonatal units 2011-13

<table>
<thead>
<tr>
<th>Provider Name</th>
<th>N</th>
<th>&gt;=37 weeks</th>
<th>% of hospital neonatal admissions</th>
<th>% of all WM neonatal admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEXANDRA HOSPITAL</td>
<td>252</td>
<td></td>
<td>47.46</td>
<td>0.90</td>
</tr>
<tr>
<td>GEORGE ELIOT HOSPITAL</td>
<td>184</td>
<td></td>
<td>40.17</td>
<td>0.66</td>
</tr>
<tr>
<td>GOOD HOPE HOSPITAL</td>
<td>836</td>
<td>63.62</td>
<td></td>
<td>3.00</td>
</tr>
<tr>
<td>HEREFORD COUNTY HOSPITAL</td>
<td>359</td>
<td>56.89</td>
<td></td>
<td>1.29</td>
</tr>
<tr>
<td>PRINCESS ROYAL HOSPITAL</td>
<td>384</td>
<td>66.32</td>
<td></td>
<td>1.38</td>
</tr>
<tr>
<td>SANDWELL GENERAL HOSPITAL</td>
<td>11</td>
<td>100.00</td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>STAFFORDSHIRE GENERAL HOSPITAL</td>
<td>1696</td>
<td>85.10</td>
<td></td>
<td>6.09</td>
</tr>
<tr>
<td>WARWICK HOSPITAL</td>
<td>638</td>
<td>65.50</td>
<td></td>
<td>2.29</td>
</tr>
<tr>
<td>CITY HOSPITAL</td>
<td>1515</td>
<td>59.27</td>
<td></td>
<td>5.44</td>
</tr>
<tr>
<td>MANOR HOSPITAL</td>
<td>692</td>
<td>50.29</td>
<td></td>
<td>2.48</td>
</tr>
<tr>
<td>NEW CROSS HOSPITAL</td>
<td>1050</td>
<td>53.63</td>
<td></td>
<td>3.77</td>
</tr>
<tr>
<td>ROYAL SHREWSBURY HOSPITAL</td>
<td>1346</td>
<td>57.23</td>
<td></td>
<td>4.83</td>
</tr>
<tr>
<td>RUSSELS HALL HOSPITAL</td>
<td>796</td>
<td>49.56</td>
<td></td>
<td>2.86</td>
</tr>
<tr>
<td>WORCESTERSHIRE ROYAL HOSPITAL</td>
<td>631</td>
<td>39.34</td>
<td></td>
<td>2.27</td>
</tr>
<tr>
<td>BIRMINGHAM HEARTLANDS HOSPITAL</td>
<td>1918</td>
<td>61.47</td>
<td></td>
<td>6.89</td>
</tr>
<tr>
<td>BIRMINGHAM WOMEN'S HOSPITAL</td>
<td>2264</td>
<td>59.25</td>
<td></td>
<td>8.13</td>
</tr>
<tr>
<td>UNIVERSITY HOSPITAL COVENTRY</td>
<td>676</td>
<td>41.99</td>
<td></td>
<td>2.43</td>
</tr>
<tr>
<td>UNIVERSITY HOSPITAL OF NORTH Staffs</td>
<td>615</td>
<td>45.15</td>
<td></td>
<td>2.21</td>
</tr>
<tr>
<td><strong>Total % of term babies</strong></td>
<td></td>
<td></td>
<td></td>
<td>56.95</td>
</tr>
</tbody>
</table>

From the above table it can be seen that there is much variance in term admissions to neonatal care across West Midlands. The biggest contributors to this group are;

- Sandwell General Hospital
- Staffordshire General Hospital
- Good Hope Hospital
- Birmingham Heartlands Hospital
- Warwick Hospital
- Princess Royal Hospital, Telford
- Birmingham Women’s Hospital
- City Hospital, Birmingham

In total, between 1 January 2011 and 31 December 2013 term admissions made up 56.95% of all admissions to neonatal care across the West Midlands. This figure is slightly under the national average which was 56.6%, 58.3% and 59.8% in 2011, 2012 and 2013 respectively (NHS England, 2014). Figure 16 depicts the hospitals over the national average for 2013 in red.

When it comes to overall neonatal admissions, the hospitals with the most neonatal activity are:
- Birmingham Women’s Hospital
- Birmingham Heartlands Hospital
- Staffordshire General Hospital
- City Hospital, Birmingham

Of all term admissions across the UK, 57% are attributed to five medical conditions and is demonstrated in figure 17 below:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Disease</td>
<td>30.1%</td>
</tr>
<tr>
<td>Hypoglycemia</td>
<td>9.6%</td>
</tr>
<tr>
<td>Infection</td>
<td>9.1%</td>
</tr>
<tr>
<td>Jaundice</td>
<td>5.2%</td>
</tr>
<tr>
<td>Asphyxia</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

_NHS England, 2014_

It is believed up to 10% of term admissions in the categories above are avoidable; and early detection and management could prevent an in-patient stay (Addenbrookes Hospital, Cambridge).

On average, a one night stay in a neonatal unit costs in the region of £1200 (Whittington Hospital, London) and therefore reducing avoidable admissions would result in a significant cost saving to the NHS and an improved birthing experience for families.

The above West Midlands data in relation to Term Admissions is provided by NHSE England Patient Safety Team. It is noted that the data relates to the number of infants admitted to neonatal care (% all infants admitted to neonatal care) by gestational age category (completed weeks), admission year, and provider NNU, 01 January 2011 to 31 December 2013 (England & Wales). Diagnoses are free text and ICD codes extracted from the National Neonatal Research Database (NNRD).

Data were extracted from the NNRD for infants whose first admission to neonatal care occurred between 1 January 2011 and 31 December 2013.
Transitional Care (TC)

NHS England Term admissions report states “Due to variation in admission policies across neonatal units a location of care filter was applied based on a field, “Location of Care”, completed daily by neonatal unit staff. This enables differentiation between infants who had some care on a neonatal unit from infants who received neonatal care at a location other than a neonatal unit (transitional care ward; post-natal ward; other obstetric area; missing).”

The project team are aware that a filter on location of care may well skew the above datasets. Separate work carried out by WMSCN on Neonatal Transitional Care confirms that 58% of West Midlands units have a separate defined area for the delivery of Transitional Care, outside of the Neonatal Unit. Of the 8 units that have no designated area for TC, 4 of those are delivering care on the Postnatal Ward (but coding as TC), 2 are admitting to NNU/SCBU and 2 units are doing a combination approach. These factors could see to affect the Location of Care field completed on Badger for analysis within the Term Admissions data.

Provision of therapeutic hypothermia (cooling) for term neonates with Hypoxic Ischaemic Encephalopathy (HIE)

Heartlands, New Cross and UHNS have all been undertaking an audit on cooling provision – the data for which was presented at the Joint Network (SSBC and SWM) Perinatal Mortality meeting, held at Birmingham Women’s Hospital on Friday 17th October 2014. Birmingham Women’s Hospital are also keen to include their data in the audit, although this was not presented during the meeting.

Additionally, information around cooling activity can be found in the newborn network annual reports. The number of babies cooled outside of criteria has been analysed but has not been available to the report in the time available.

Dr Melanie Sutcliffe, Consultant Neonatologist, presented 2010-2014 cooling data for Staffordshire, Shropshire and Black Country Maternity and Newborn Network at the Joint Perinatal Mortality Meeting. The network covered cooling activities from New Cross Hospital, University Hospital of North Staffs (UHNS) and Shrewsbury and Telford (SaTH). Data for 2013/2014 shows that New Cross had cooled 28 babies, UHNS report 12 and SaTH report 7 babies cooled – a total of 47 babies across the network. This total increases incrementally over the 4 year period— with previous network totals of 22 in 2010/11, 25 in 2011/12 and 44 in 2012/13.

Dr Sutcliffe also reports that of the 47 babies cooled in 2013/14, 30 of these were from with their own network, 14 from SSBC, 3 from Central Newborn Network and 1 from Trent Perinatal Network.

Southern West Midlands Maternity and Newborn Network report 28 babies receiving therapeutic hypothermia at Heartlands Hospital during 2013-14, with 10 of these being transferred before discharge, 13 being discharged home and 5 babies dying.
The two networks will continue the work to identify variation and possible solutions.

5.3 Identify any existing or future planned initiatives and service developments (within CCGs, Maternity and Newborn Operational Delivery Networks and the Specialised Commissioning Team) to tackle the national priority areas

National and Local Initiatives

Post Partum Haemorrhage – London Strategic Clinical Network

London Strategic Clinical Network have worked collaboratively with all of the London providers of maternity care to agree criteria and a dashboard in relation to post partum haemorrhage. The first step in the project has ensured all future data collected is comparative and provides an accurate snapshot of the services provided in the region. In addition, a toolkit has been devised by a multi-disciplinary working group to provide simple and timely guidance to the workforce on maternity units. The toolkit was launched on 9th September 2014 and should be available on the NHS England Patient Safety website.

Post Partum Haemorrhage – UK Audit and Research Collaborative in Obstetrics and Gynaecology: a Trainee led initiative

In September 2014 a perspective audit took place across the UK in relation to the increasing number of PPH incidences. Results of the audit are to be shared at the National Trainees Conference on November 27-28th 2014.

Reducing Still Births Care Bundles – NHS England

On 17 March 2014 a multi organisational meeting was held by NHS England to identify work being done on maternity care and establish national priorities. Many organisations were represented at that meeting including government and its agencies, royal colleges and the charity sector. Still birth reduction was the top of the list of priorities for most of the organisations present.

A care package approach is being utilised to address this priority with a number of elements that are specific and defined to achieve the overall aim. When implemented as a package, evidence shows that greater benefits are achieved at a faster pace than if those improvements had been implemented as individual components (NHS England, 2014).

The areas currently being developed nationally for the Saving Babies’ Lives: A Care Package for Reducing Still Birth are as follows;

SWMMNN 2014 annual report also states “Although UK TOBY Register produced a clinical protocol for the systematic implementation of cooling therapy throughout the UK and there are no significant side effects of treatment one has to be pragmatic in offering the treatment outside the clinical criteria in view of both the limited resources available and the scanty evidence of any benefits.” This highlights some of the current drivers to address this area of neonatal care.
Element 1: Smoking Cessation

Element 1 is joint-led between NHSE and Public Health England with an aim of implementing the usage of carbon monoxide testing and increasing referral to smoking cessation services.

Element 2: Awareness of fetal movement

The focus of element 2 is to raise awareness to women of the importance of reporting reduced fetal movement RFM and ensuring providers have up to date best practice processes in place.

Element 3: Surveillance during pregnancy to detect fetus’ which are small for gestational age (SGA) or fetal growth restriction (FGR)

There is still an amount of dispute between clinicians on how to increase the detection rate of SGA and FGR and further work in this area by NHS England is currently underway.

Element 4: Protocol for monitoring/interpreting CTG during labour

Element 4 is focussed on 2 main areas. Firstly the implementation that every professional reading a CTG monitor should have passed appropriate training on an annual basis and secondly a buddy system should be introduced to ensure a ‘fresh pair of eyes’ approach is utilised during on-going monitoring.

Element 5: Leadership model for escalation where concerns about fetal wellbeing are identified

As covered in Element 2

Further elements to consider
- Offering Induction of Labour at term + 7 days
- Social deprivation
- Chronic maternal conditions
- Obesity
- BME: reducing the case load for midwives who have a high BME population so as to be able to respond to the specific (often social) needs of this group.

Outputs from the meeting held on 11th August 2014 are provided in Appendix 1 as an update from the 6th October 2014 is not currently available.

Maternity Dashboards

The creation of a maternity dashboard is a project being undertaken by several Strategic Clinical Networks across England however the South East and South West SCN have made the most progress to date. A virtual group is to be established composed of SCN staff from across the country to enable the sharing of best practice, ideas and solutions to challenges. In the West Midlands region, maternity dashboards are the responsibility of the Maternity and Newborn Networks who acknowledge a need to develop such a tool. Of the three local newborn networks,
Staffordshire, Shropshire and Black Country Newborn Network are the most progressed in the development of their local tool however all are adhering to the national dashboard.

Local Initiatives

CCGs

All Clinical Commissioning groups across the West Midlands were contacted to obtain information on improvement projects in relation to the scope of the maternity gap analysis project. Of the 23 CCGs, 12 responses were received. Initiatives currently in place include;

- Identification of fetal growth restriction – North Staffordshire CCG, Coventry and Rugby CCG, South Warwickshire CCG, Wolverhampton CCG, Dudley acknowledge an initiative is required but as yet do not have anything in place
- Reducing caesarean section rates – Coventry and Rugby CCG

There were a number of other initiatives underway across the West Midlands in maternity services but were not in the scope of the SCN’s current project

Acute Trusts

It is locally accepted that antenatal detection of IUGR continues to be a challenge, aggravated by the fact that there is a national shortage of sonographers. Within Sandwell & City, Heart of England Foundation Trust and Birmingham Women’s Hospital units have previously trained midwives as part of the Community Outreach Growth Scanning (COGS) pilot to undertake repeat scans for suspected IUGR or those identified as at increased risk of fetal growth restriction (FGR). HoEFT formerly audited the notes of all babies with a birth weight < 2,500g but note that this is not proving the best measure to use.

The West Midlands Perinatal Institute reported early evaluation on the COGS programme in December 2010. Both BWH and City hospitals have identified that as a result of implementing the COGS pathway at BWH, the antenatal detection rates increased – results were produced in total for the 2 units due to relatively small numbers. The following improvements were reported:

- The diagnosis of IUGR recognised and recorded antenatally increased significantly, from 11.1% in 2009 to 25.8% in 2010
- The overall antenatal detection of IUGR, including either a record in notes or by EFW, also increased significantly, from 27.8% to 33.9%
- This increase was mainly due to more serial scans being ordered and undertaken in pregnancies at increased risk of IUGR.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Births</th>
<th>IUGR at birth</th>
<th>Record of IUGR diagnosis in antenatal notes</th>
<th>Record of IUGR Dx in notes or low scan estimate fetal weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>2009 Sep - Nov</td>
<td>1,797</td>
<td>235</td>
<td>13.1%</td>
<td>26</td>
</tr>
<tr>
<td>2010 Sep - Nov</td>
<td>1,729</td>
<td>221</td>
<td>12.8%</td>
<td>57</td>
</tr>
</tbody>
</table>

1. p<0.001
2. p=0.05 (two-sided hypothesis test)
There is no more recent analysis on the COGS programme available. BWH have continued to work on detection rates, carrying out a retrospective notes trawl of all babies born below the 10th centile – however, the method is extremely resource intensive. The audit checks whether the COGS criteria (scan every 3/52) was achieved. It is noted that some women may have been induced for static growth which may not be captured in the audit. It is suggested that once the Trust has the appropriate electronic data capture system in place it should be easier to identify these.

Despite this work they still report maximum detection rates in the region of 35-40% - short of the 60% that the West Midlands Perinatal Institute (WMPNI) had proposed was achievable.

University Hospital of North Staffordshire have implemented an action plan to improve the management of severe postpartum haemorrhage. Since 2012, all cases of PPH at the Trust have been audited, a continuous improvement programme has been agreed and all incidents of major PPH are now discussed as part of the obstetric risk management process at UHNS.

6 Stakeholder engagement

A stakeholder engagement event was held on the 1st October 2014, attended by a range of professionals from across the West Midlands. All three maternity and newborn networks were in attendance, along with obstetricians, neonatologists, midwives, commissioners and the charity sector.

The data and patient experience findings were presented to the group and open discussion took place around what areas the SCN should prioritise for future work. Appendix 3 shows all the possible work streams that were discussed. However, the need for a data system that can pull from all current Trust based maternity systems, into one shared location and generate useful and timely reports, was the greatest request of the stakeholder group.

The data that had been presented brought about some queries and challenges from Trust staff who didn’t feel that what was being presented was reflective of what was truly happening. Without more robust IT systems for data collection and analysis, this data is how Trusts are currently being monitored or judged.

The process of this gap analysis has identified and evidenced the vast challenges around gathering together any level of comparable data for maternity; and as such the project would support a recommendation for a longer-term project of this nature.

In addition, the group were heavily focused on bereavement care, taking stock of the patient voice and the experiences and variation received. There was discussion around ensuring Trusts offer bereavement counsellors, as opposed to midwives, to enable early neonatal loss parents to benefit from this service in addition to stillbirth parents.

The future work discussion held at the stakeholder event has directly influenced the recommendations within this report.
7 Citizen Engagement

An incredible level of patient engagement and involvement was achieved throughout this project, which has provided a balanced view of citizen versus clinical input into our recommendations and future work. Our approach to this was primarily through the use of social media, with our original request for support being shared through over 60 different individuals, groups or charities. All individuals that then contacted us were given further details by way of our Patient Information Leaflet (see Appendix 4) and were offered the opportunity to share their experiences and thoughts in a variety of ways – including face to face, telephone interviews and in writing.

We received full stories from 22 patients, covering 11 hospitals within the West Midlands region.

It is to be acknowledged that our request for patient involvement largely included the important minority of people who receive a complex, distressing or poor outcome of pregnancy or birth. As such, this patient experience analysis should not be taken as indicative of the entire experience of antenatal care across the West Midlands. The experiences recalled by the parents involved in the project were often traumatic and it is important to recognise that such experiences are frequently described as either very good or very bad, there is little middle ground. (Branchett & Stretton, 2012).

With stillbirths accounting for only 0.5% of all births in the UK, the patient experience discussed represents the minority of families experiencing maternity services. Full patient experience of all antenatal care is outside of the scope of this project, but for further information on West Midlands’ units in relation to antenatal care can be found within the Care Quality Commission survey of 2013.

This CQC maternity services survey compared the results of 23,000 women who had experienced a live birth, against a comparative cohort completing the same survey in 2010. The key findings report improvements in the following areas of antenatal care:

- An increase in the proportion of women who said that they were always spoken to in a way they could understand during antenatal care and labour and birth.
- More women felt that they were always involved during antenatal care and labour and birth
- More women felt that they were treated with kindness and understanding and had confidence and trust in the staff caring for them during labour and birth

Areas in which they report no improvement since 2010 fall into line with some of the experiences reported by our project cohort, including lack of or inconsistent information; and one in five women reporting that their concerns were not taken seriously.

Within all areas and themes discussed by the patients, there was a distinct variance in the experiences of patients across the West Midlands’ units; and where experiences had room for improvement in some areas, many families report excellent levels of care, support, professionalism and compassion.
There were some important discussions with our parents around the original scope of the project and those specific contributors as identified by the national NHSE team:

a. Fetal growth restriction

We heard from our patients that when fetal growth restriction was detected, they felt safe and secure; and very well looked after. However, with an increased amount of appointments occurring in hospital locations (sometimes within different teams), continuity of care was occasionally lost. In addition this could lead to a lowered level of engagement and relationship with their community midwife.

When fetal growth was left undetected, parents expressed feelings of being brushed off, even when some clear variation in measurements existed.

“My scans were all in different places… fetal medicine, triage, antenatal scanning area… I never saw the same member of staff twice”

b. Cooling

Four of the families we heard from had experienced the cooling treatment for HIE, with three resulting in loss and one baby surviving. Of these, two babies (including the survivor) were already in a specialist cooling unit and two were transferred by the West Midlands Neonatal Transport Service.

“The hospital and their interventions saved my babies life”

“I dread to think what would have happened if I wasn’t in the right hospital”

“We arrived at the new hospital and he being cooled and was on the brain monitor – it only showed any fluctuation when he fitted – he didn’t last long”

c. Term admissions to Neonatal Unit

Best practice:

Experiences of neonatal units were, in the main, very good. Families were often made to feel included, supported, well-informed and part of the decision making process. Parents discussed the levels of information given being very useful and made them feel comfortable with their surroundings.

Professionalism and the support of both the neonatal nurses and medical teams was commended by many families, with them feeling they built good relationships with the teams on the unit and felt their baby was in safe hands.

“They always made me feel welcome on the unit – I felt like I could go at any time and stay for as long as I wanted”

“When they did the ward rounds, they pulled me in and asked my opinion, including me in the decisions. That meant the world to me that they were listening and I very much felt part of it.”

For improvement:

This excellent approach to joined-up care was not experienced by all and there is some work to do to narrow the variation in this, and learn from the existing best practice, across the region.
“They didn't show me what or how to care for my baby; they just did it themselves, including all the normal baby care. We just felt like we were in the way and never saw the same neonatologist twice. No one told me how poorly my daughter was”

One overriding area for improvement identified by our patients lies with the relationship and lack of coordination and unity between postnatal wards and neonatal units. Women talked about their care and the care of their babies being completely separate. Spending time with their babies on neonatal units was often done at the compromise of their own care, medications and clinical management. In contrast, waiting around on their own wards for such things compromised their precious time with their babies.

Communication between the departments was often reported to be poor, with the mother being somewhat “in the middle”. Women reported a concern that as they sometimes spent such little time on the ward, staff lacked a sense of responsibility for them as patients and their well-being was therefore not managed as effectively as it could’ve been.

“They don’t talk to each other”

“They don’t communicate”

“I feel there was a big difference in the care I was given and the care my daughter was given by the doctors.”

No patient stories included PPH or caesarean section pre 39 weeks without clinical indication. Additional attempts were made with the Trusts directly to obtain patient voices from these areas, but were unsuccessful.

Further to discussions around the original scope, experiences in line with the national care bundle were also heard by patients, including reduced fetal movement and CTG interpretation:

d. Reduced fetal movement

In addition to the feeling of not being heard, parents also discussed a lack of urgency in response to reduced fetal movement. In relation to the above, the majority of women were aware at some point in their pregnancy of a reduction in fetal movement and knowing the movements had changed – either they didn’t act on it urgently due to lack of awareness or professionals didn’t act on it quickly once they had been informed.

“My midwife asked me how the movements were and I told her they weren’t as they used to be, he used to kick a lot but I’m not feeling it as prominent as it used to be. She told me I would have to go straight to hospital to be checked”

“I was concerned with my son’s movements as they had felt softer and reduced over the past few days.. My midwife told me not to worry as I was just an anxious first time mother. She listened to my son’s heartbeat and said it was strong and I had nothing to worry about. This was normal. I listened and trusted the trained medical advice”

“I realised that I hadn’t felt much movement for quite some time. This concerned me so I immediately phoned the delivery suite ….I explained that I had a constant pain in my tummy but what concerned me the most was that I hadn’t felt him move for a few
hours… the nurse… told me to come into the hospital at 8pm. I looked at the time; it was 6:20pm. I did think that this was strange but that maybe I was over reacting… I assumed that they were doing the right thing by not telling me to come in immediately… so I waited until 8pm”

“Through the morning I felt no movement at all and at midday we made our way back to the hospital. We had told the hospital over the phone I had no movement and told them again when we arrived however we then waited for 1½ hours to be seen”

“His movements began to reduce drastically and he seemed like a very effortless and tired baby all the time, as the clinic doctor said he would because he would have less room to move around due to the size of him for his age. So as a naive, trusting first time pregnancy I had believed what he said must have been true, my instincts were just stupid as he pretty much made out.”

“His movements kept reducing but I believed that was completely normal as that’s what the doctor had told me.”

“I was becoming more and more distressed with his lack of movement.”

In comparison to the above comments being received from our patients, the CQC survey reported that only 2% of women felt that their midwives did not listen to them during their antenatal appointments, with 79% feeling they were always listened to, and 19% feeling they were sometimes listened to.

e. CTG Interpretation

A relatively small proportion of patients discussed the use of CTG during pregnancy and labour. As such, the comments below are not considered fully representative of all CTG interpretation, but are included as for these patients the events were significant.

The stories included concerns around the use of, interpretation of, and action following CTG monitoring, in both antenatal and perinatal care. These women raised concerns that problems identified on CTG were not always followed through with further action and challenged as to why this was the case and whether appropriate protocols were being used. They equally raised concerns about the levels of the individuals reading these reports and deciding on resulting actions, or lack of.

As a result they were left feeling signs were dismissed and that they were just sent on their way without further concern, unless they themselves pushed for additional confirmation.

“They put a heartbeat monitor on me and claimed the baby’s heart was beating fine. I told them it wasn’t right and demanded a scan. When they scanned me, the baby was dead”

“I was placed on the CTG and monitored by a student midwife for 2 hours, during which time I felt no kicks… the consultant came in and said as long as I felt well it was fine”

In addition to the areas of the original scope discussed, many new, recurring and significant themes emerged from patient stories, as summarised below:
f. **Culture: Professional expertise versus Mothering instinct**

The CQC survey reported that 94% of pregnant women who had resulted in a live birth felt that they were given the help they needed when they contacted a midwife.

At many points during the patient stories, there became evident a need to drive up the relationship between the pregnant lady and the midwifery team. A large number of women explained feelings of being reassured and sent away. There were many discussions around these women knowing there was something wrong but they weren’t listened to or trusted by the professionals. The project heard of a shared feeling of “wasting their time” and being embarrassed for questioning when they felt something wasn’t right. These recollections would strongly indicate a required culture shift to trusting mother instinct or appropriately following through on concerns; the challenge being around how that is achieved given time/capacity issues. Patients were frequently left feeling “they were just too busy to listen to me”.

“The nurse gave me a look as though I was wasting their time and I felt myself go red with embarrassment”

“She told me my son had died as a result of undiagnosed Pre-eclampsia due to excessive clotting in my placenta and cord. From day one, I told everyone that I had pre-eclampsia and my claims were continuously dismissed and dismissed again”

“She in a way made me feel stupid for returning and for feeling so anxious as I was so unsure what was normal and what was not”

“She walked us to a delivery room and said “We are very busy so you’ll be waiting a while” and then shut the door on us. I remember feeling really guilty for wasting their time when there were so many other women on the ward.”

“…made me feel silly and belittled the pain I’ve been in”

“My admissions were always dismissed by the clinic doctors “

“I noticed the baby wasn’t moving much and I started feeling hot. I went to see the midwife who checked the baby’s heartbeat and she said it was slow but probably the baby was asleep and she sent me home… I knew in my heart she wasn’t alive but didn’t want to admit it”

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g. **Patient education**

We heard from patients around the lack of information available in many areas, not just that for reduced fetal movement. Many families felt strongly that there should be more information on what can go wrong in pregnancy – they had little or no knowledge around stillbirth, neonatal units or babies dying shortly after birth. They felt that appropriate risks were not highlighted in pregnancy and there was a lack of information leaflets or posters on what to watch out for (such as reduced fetal movement, pre-eclampsia, Group B Strep/ infection).

“Stillbirth or neonatal death was never mentioned and this is why I believe there is still such a taboo around the subject”

“I believe that all first time ladies should be told about the symptoms of pre-eclampsia”

“No one had talked to us previously about the importance of feeling your baby kicking regularly… I read all the information and posters in the waiting room, trying to find..."
something about what it meant if your baby wasn’t kicking – and why it was important – but there was nothing to do with movement at all.”

The CQC survey reported that 59% of women felt they received enough information, with 30% stating they “sometimes” receive the information and 11% feeling they were not provided with the information they needed.

h. The difference a staff member can make

Best practice:

There was a great variety in the levels of attitude and approach experienced by these families, from all specialities of NHS staff.

In the main, excellent care and compassion was experienced by most from midwifery staff, with patients commenting that they “tried their best” to make situations as easy as possible. When the exceptions exist to this rule it impacts on the trauma greatly.

“All my midwives I had encountered were all so thoughtful and amazing”

“My GP midwife was my completely rock”

“In a short space of time, I got to really trust my midwife”

“The staff were second to none; I can’t praise them enough for all the help and support they gave us. Everyone was so nice, even the security guard that worked the maternity door was unbelievably kind, bringing all my family to the front of the queue so they wouldn’t have to stand with other family’s waiting to see their newborns!”

For improvement:

Some experienced a feeling of their labour not being important. They reported being left alone and feeling unsupported as the team were too busy handling live births.

“We felt abandoned”

“Our birth was less important to staff”

There were a number of comments relating to the clinical manner of medical staff, often leaving patients feeling confused, embarrassed and angry; and compounded already incredibly traumatic experiences.

“There was no compassion for either of us whatsoever”

“My individualism was lost, I was just a statistic”

i. Location of care

Location of care was, without doubt, the most frequently recurring area of concern. The placement of families throughout these experiences is one that stays with them for many years. Families recall the emotions of not only what they can see during their time on delivery suites and postnatal wards, but also the sounds they can hear. For parents of stillborn babies, they tell of the stark difference between the silence of their own babies and the sounds of other babies around them.

“I heard someone in the next room say “It’s a girl!” and it broke my heart”
“It was nothing short of evil being on a ward with fellow ladies in labour with alive babies it felt like the ward was full of the sounds of healthy heartbeats”

“I was placed in a room with a conjoining bathroom and could hear a live birth taking place in the next room - it was just awful”

“Being on a labour ward with normal pregnancies and labours was awful I felt like I was waiting for what seemed like an eternity for a cry that never came”

“The placing of the room isn’t very well thought out as at night all we could hear was babies crying but ours was silent and still”

“They moved us to a room away from the new mothers and babies in the labour ward but I could still hear them cry”

“I remember hearing other women giving birth along the corridor and the sound of newborn babies”

In addition, the suitability of the rooms they are admitted to afterwards – the best practice of hospitals who have specially designed bereavement suites, decorated as a calming bedroom, with a double bed – in contrast to a normal clinical room, with a hard hospital bed and no space for fathers to comfortably stay.

“I think they put me at the end of the corridor to keep me away from the other babies but it didn’t work as the ward got busy – I felt for them, they didn’t know where to put me”

“It was gruelling passing through the suite with crying babies in order to get to our room”

“It was all done out with a proper bed and it felt like a bedroom – it looked much better than the side room they had before”

“We had a room with a double bed and a proper duvet and pictures on the wall – it felt like a bedroom not a hospital room”

“A double bed would’ve been so much better – all I wanted to do was curl up with my husband”

“If I had the money, I’d go and decorate that room myself”

Parents whose babies were separated from them for any reason, whether it was because the baby had died or for treatment on the neonatal unit, described their experiences of being on a postnatal ward with other mothers and babies as extremely difficult, although many acknowledge that it is difficult for hospitals to accommodate them otherwise. However, sensitivity around this issue was appreciated. The Poppy Report details this experience for families

http://www.poppy-project.org.uk/resources/Poppy+report+for+PRINT.pdf

“I found it emotionally very difficult as I was on the ward with babies around me and couldn’t do with my baby what normal mums were doing”

Location of care was discussed further, in terms of where bereavement support may be delivered after discharge, with some families having to return to the hospital, which they found particularly traumatic.
“We returned to see the bereavement counsellor but had to go back to the hospital – back to the place we had been so many times”

Rooms allocated to post mortem meetings were also discussed, with families explaining a range of venues, from cramped consultants’ offices, to rooms with Sands bereavement boxes stacked in the corner, to a large impersonal board room.

j. Bereavement Support

Engaging with patients from across the whole of the West Midlands highlighted a wide variation in bereavement support, both during and after their experiences. The level of support received made a huge difference to these families.

Best practice:

Some families received support from a designated, named and skilled bereavement counsellor or midwife, who led them through their journey, provided them with coping strategies, empowered them to make difficult decisions and aided them in plans for funerals, birth and death certificates and onward support groups or charities.

“My post-natal care was nothing short of amazing the midwives helped us create so many memories to cherish forever”

For improvement:

Where these roles do not exist in hospitals, or these individuals were unavailable for any reason, families were often left feeling alone, isolated, struggling to cope with the additional tasks without guidance. GP support was reported to be too generic – and some families did not receive information of where else help could be sought (eg through voluntary organisations). These families went on to report how this extended their grieving processes, with fathers also struggling for years after the event. It is also reported to have had an impact on their ability to move on and consider future pregnancies.

“I paid for myself to attend counselling as I felt abandoned by the Trust”

“There was no bereavement midwife on duty so we had to come back a few days later to see them, however when we did see her she was very good.”

“Nobody was there to tell me what happens now, nobody to give me advice on my situation or to comfort my partner as he was in quite a bit of distress also. Instead we were left in a small room at the end of the ultrasound ward with a phone to call our families to come to the hospital, we had no support what so ever”

“We really had no aftercare as such”

k. Extra touches

Best practice:

Families shared with us the significance of the little touches that stay with them for years. Midwives encouraging handprints and photographs, the gift of memory boxes or neonatal blankets, support with funeral arrangements – and the difference a kind word can make.

“The midwives encouraged us to take pictures”
"The midwife came in and handed us a big cream box, it contained leaflets, a camera, a small hat, a teddy bear, little bags marked hair, bracelet, a blanket and a card. The card was for hand and foot prints. The midwife did this for us and cut off some of his hair. She returned later with his baby-grow and blanket that we will always cherish."

"The sands memory box from the hospital was a lovely thing to have"

A number of parents shared with us how it was purely the encouragement of the staff to see or hold their stillborn babies that allowed them to do this, with a resulting feeling of gratitude to these individuals for supporting them through a time of fear, discomfort and grief.

"When they bought her into us the midwife gently coaxed my husband to my side so he could see her, I'm so glad he did"

"The nurses suggested we do his handprints and asked me if I would like to hold him – I was nervous"

**I. Late miscarriages**

Families discussed with us the difficulties around late miscarriages and the fine line between babies being considered legally viable and those pre-viability. Our patient experiences included a patient losing a baby in utero close to but pre-24 weeks, patients having a live birth pre 24-weeks which resulted in an early neonatal loss; and patients having significant complications pre-24 weeks which led clinicians to have discussions around likely outcomes.

These women raised the use of appropriate terminology – highlighting that their loss or possible loss is no less significant to them at 23 or 24 weeks and how the clinical approach and use of certain language (such as “termination”) is difficult and can be felt to be inappropriate.

"The staff talked to me at length about how it was unlikely that I would have a positive outcome – I think they had just given up on her – they fully expected me to miscarry"

**m. Further pregnancies**

Best practice:

A largely positive experience was reported for further pregnancies, with families that reporting a feeling of being supported, cared for and safe. They tell how the consultants go above and beyond, offering whatever is needed for reassurance.

"My consultant was so personal with me and so supportive"

"In October, I had a meeting with my Obstetrician to discuss our loss and possible future pregnancies. I wanted to discuss this – I had pined for my baby and wanted to try again, even though I knew we had to wait. I was asked what I would want during my next pregnancy – I needed more scans as I didn't feel reassured by CTG. I wanted him to deliver my next baby by caesarean section. He gave me what I needed and even arranged the team, including the bereavement midwife I had got to know. They even took me to a different theatre. I felt like the Royal family – I felt wrapped up in cotton wool and that's what I wanted"
For improvement:

An exception to this was one family who experienced reduced foetal movement in a post-stillbirth pregnancy and was made to wait by the hospital team, leaving them scared and feeling that nothing had improved or been learnt since their loss. This was an isolated report, amongst positive experiences.

In line with this topic, however, was the upset and anger caused to these families by medical staff not reading notes or histories prior to appointments and resulting inaccuracies.

“At my post partum check my GP asked me if I was bottle or breast feeding as he hadn’t read my notes which I found so evil in itself”

“At after I had lost one daughter and given birth to another healthy baby, a Dr said “So, you have 2 girls at home” – I had to correct her. She had a student with her and I think she was quite embarrassed. She went out into the waiting area shouting at the receptionists for not putting a sticker on my notes – which embarrassed me, I didn’t want everyone knowing! If she had read my notes, she wouldn’t need a sticker”

Summary

It is essential to remember that the patients interviewed throughout this process were those falling within the original scope of the project, having experienced a bereavement or a complex obstetric/neonatal pathway; and therefore is representative only of this cohort of patients, not of all antenatal care.

The learning from this patient involvement was shared with clinicians, commissioners, charities and other partner organisations in 2 forums – both at the Maternity Gap Analysis stakeholder meeting on 1st October 2014; and the Joint Perinatal Mortality Meeting, held at Birmingham Women’s Hospital, on behalf of the Staffordshire, Shropshire and Black Country Maternity and Newborn Network and the Southern West Midlands Maternity and Newborn Network.

All the themes as outlined above were discussed, along with full patient stories. A patient representative also attended the Joint Perinatal Mortality meeting, where she was able to share her experiences first hand with the delegates.

Discussions with our patients and their experiences have directly informed recommendations for future work.

9 Recommendations

In concluding the Maternity Gap Analysis, the project has been able to assess some small and large scale required areas of improvement, all contributing to the overriding aim to reduce stillbirth and early neonatal loss; and to improve the experience for families. In addition to the original scope, a number of new areas of focus were identified by either the national team, as part of the care bundle, or our patients.
The onward management of these required areas of improvement is varied. This report concludes by assessing suitability of ongoing work and suggestion of which organisation or team it would be appropriate for that work to sit within.

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<tr>
<th>What?</th>
<th>How?</th>
<th>Who?</th>
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<tbody>
<tr>
<td>Improve access to, and quality of, bereavement care across West Midlands providers</td>
<td>Scoping exercise for all Trusts to determine current provision of the following: 1. Levels/ availability of bereavement support during and after stillbirth and Early Neonatal Death 2. Location of care pre and post-delivery for stillbirth and NNU admissions; and post mortem meetings 3. Patient bereavement information provided/ available from voluntary sector, relating to both antenatal and postnatal information</td>
<td>Recommended SCN/ ODN/ Charity sector partnership working Phase 2 project element</td>
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<tr>
<td>Dashboard/ IT data systems</td>
<td>Regional/ national shared dashboard for comparable data collection for maternity services</td>
<td>Recommended ODNs complete dashboard analysis document to inform what data is currently collected by all CCGs/ other organisations; to feed future dashboard. Future work for 15/16 work programme would be based on findings - Implementation of a remote system which collects essential datasets from the variety of maternity systems in place across the region; and provides reporting for Trusts/ CCGs/ ODNs and SCN</td>
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<tr>
<td>C-Section pre 39 weeks without clinical indication</td>
<td>Increased understanding around numbers of sections being carried out pre 39 weeks without coding against a clinical indication (RCOG)</td>
<td>Recommended SCN gain de-anonymised data from RCOG solely to be utilised by the ODNs to work on existing variation.</td>
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<tr>
<td>CTG Interpretation</td>
<td>1. Training package for all staff reading CTGs 2. Roll out of the “Fresh Eyes” buddy initiative, devised by NCB</td>
<td>Recommended SCN project, in partnership for delivery of training with ODNs</td>
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</table>
| Reduced Fetal Movement (RFM) | 1. Increased awareness of patients around the importance of RFM through patient info leaflet and patient app  
2. Increased awareness of management of RFM by professionals | Leaflet design and app adoption by SCN/ dissemination to patients through ODNs/ Trusts  
Training around management by professional recommended for ODNs to address |
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<tr>
<td>PPH</td>
<td>Standardisation in PPH classifications (in line with RCOG recommendations)</td>
<td>SCN to provide current classifications to ODNs for their action to bring all Trusts in line with RCOG guidelines</td>
</tr>
</tbody>
</table>
| Reduce stillbirth through IUGR | Increasing rates of detection for Intra Uterine Growth Restriction, or Small for Gestational Age | With National Care Bundle – being tested out by North SCN – for spread within West Midlands April 2015  
ODNs to scope data/ audits currently in place across their units in relation to IUGR. |
| Child Death Overview Panel | Increased collaboration between all organisations involved in CDOP | All organisations/ partnership working |
| Smoking                    | To be determined by PHE/ linked to outputs of NCB | Public Health England to lead on smoking cessation project |
| Patient education          | A need for more robust information for patients around the following:  
Stillbirths/ neonatal death  
Neonatal units and varying levels of care  
Pre-eclampsia  
Reduced fetal movement | ODNs to work/engage with charity organisations who are developing resources |
<p>| Relationship between PNU &amp; NNU | Requirement to treat mother and baby as one; and challenge the frequent reality that time in neonatal unit is at the expense of mother’s care and treatment | ODNs to consider for future work |
| Late miscarriages/ terminology | Address the sensitivity of the terminology used to patients at the time of late miscarriages | ODNs to consider for future work |
| Staff attitude/ culture    | Ensuring the attitude of staff is positive and encourages pregnant women to trust their | ODNs to consider for future work |</p>
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<tr>
<th>Section</th>
<th>Description</th>
<th>ODNs to consider for future work</th>
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<tr>
<td>Intrapartum infection management</td>
<td>Early identification of infection during the intrapartum stage and acting appropriately and rapidly</td>
<td>ODNs to consider for future work</td>
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<tr>
<td>Cervix/placenta management</td>
<td>Ensure all patients are receiving adequate placenta and cervix management, identifying possible risks at the earliest opportunity and placing patients on best practice pathways</td>
<td>ODNs to consider for future work</td>
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<tr>
<td>Pre-eclampsia</td>
<td>As per patient information</td>
<td>ODNs to consider for future work</td>
</tr>
<tr>
<td>Subsequent pregnancies</td>
<td>Sharing best practice, experienced by many families, across the West Midlands Ensuring more vigilance with notes and patient histories understood by all professionals they come into contact with</td>
<td>ODNs to consider for future work</td>
</tr>
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Summary of recommendations:

The project team, with its direct partners have prioritised the following area for recommended ongoing work by the Maternity and Newborn Operational Delivery Networks:

- Scoping all current data collections, with particular attention to data and audit for Growth Restriction (IUGR)

There remain a number of other possible future work programmes for the ODNs for the future.

The West Midlands Strategic Clinical Network have selected a number of work streams for improvement to focus in Phase 2. These are short-term pieces of work for completion before April 2015:

1. Bereavement care – scoping on current service provision/ variation
2. CTG Interpretation (perinatal) – training package and ‘fresh eyes’ buddy system
3. Reduced fetal movement – patient information

In addition to this, the SCN will provide support to other pieces of work contributing to the stillbirth and infant mortality agenda,

- Information provision to ODNs around C-Section and PPH variation, for ODN action
- Supportive/ collaborative role with PHE and CDOP, to ensure joined up approach to reducing stillbirth and infant mortality

Recommendations for phase 3 of the maternity project, April 2015 onwards, would be:

1. A large scale project around the investigation and implementation of a shared data system
2. IUGR – Implement recommendations of North SCN work for National Care Bundle

The agreement of the SCN to move forward with Phases 2 and 3, along with the commitment of the ODNs to address their assigned recommendation, would see improvement work in line with the issues identified through data, the clinical and commissioning stakeholder requests and also the patient priorities.

References

Appendix 1

‘Saving Babies’ Lives’: A care package for reducing still birth

Outputs from stakeholder meeting, 11 August 2014

Background
A stakeholder meeting was held by NHS England on 11th August 2014 to present work to date on a still birth reduction care package / bundle. Further information on this approach and its origin can be found by reading the discussion paper written for the meeting (“140811 Reducing stillbirths meeting discussion paper”).

Discussion
Debate centred around whether to focus on one key Element (detecting fetal growth restriction) and develop a focused care bundle on that alone, or to have a wider bundle that brought in Interventions of other key Elements, for example from smoking cessation.

Key points raised
Please note these points were made by individuals, on occasions supported by others, but they are not points agreed by majority or discussed in that manner. They are captured here to aid the work of the task-and-finish groups and the recipients of the note who may not have attended.

- There are issues around not having the resources to support whatever is clinically appropriate for all patients
- We can’t wait for data to line up before we make progress. Data will start to flow when trusts become aware of the money they might lose if they don’t report
- Difficulties with introducing new financial incentives such as best practice tariff when current payment system has only recently been introduced
- Support for concept of a roadmap towards improvement with reward for steps taken and tolerances built in
- Fetal growth restriction is an excellent target for a care bundle
- Some units are unwilling/unable to implement even the low risk strategy
- We need a wider focus to include prevention, as if we start narrow, it is more difficult to widen and we risk lacking ambition
- Public Health messages ought to be galvanised by this work, while needing to focus on certain key elements, e.g. fetal growth restriction
- Timescales are an issue and sense of urgency which isn’t addressed by the bundle. We need urgently to consider what we do now
- Public health interventions have incentives elsewhere in the system, so we need to focus on key elements for the bundle
- We must guard against the sense that the interventions can be opted out of
- Important for the care bundle to be delivered in a proportional and stepped approach, with a set trajectory towards best practice
Agreed way forward

The prevailing view was that the care bundle should predominantly focus on fetal growth restriction, but that specific interventions from other important Elements (one from each) should be identified. The Elements to be included in the bundle are:

1. fetal growth restriction
2. smoking cessation
3. reduced fetal movement
4. Cardiotocography (CTG) interpretation.

It was agreed that task-and-finish work groups will be set up, the purpose of which is to use evidence and clinical and operational expertise to explore which intervention(s) will be most impactful and how these will be implemented.

The groups will also consider any issues around data collection for their proposed interventions.

Key functions of task-and-finish groups by the 30th September

1. Primary aim of each group is to determine the intervention(s) for their respective element
2. Consider data/compliance/reporting: how and by whom
3. Consider incentives: current and in-development / financial and contractual. Any issues around payment systems
4. Consider the guidance that would need to accompany the intervention. How can we provide information to enable implementation and signpost to learning/support/evidence?

Proposed next steps

- NHS England to appoint a project manager for each group
- The task-and-finish groups together with NHS England and in liaison with volunteers so far, to agree composition of groups and a chair for each
- ToRs of each group to be determined by group members with NHS England and outputs/milestones/deadline to be agreed
- First meetings of groups to be arranged by NHS England
- Groups to report back to next full stakeholder meeting on the 6th October 2014
- Deadline for work is 30 Sept 2014, to then allow a week to bring together and devise way forward, to be discussed on the 6th October.
Task-and-finish Group 1: Fetal growth restriction

Key considerations
1. Consider an incremental/stepped approach, setting a trajectory, building in tolerances
2. Royal College of Obstetricians and Gynaecologists (RCoG) guideline on scanning for high risk women to be instituted, despite barriers
3. There will be data issues, but that should not deter us from developing bundle interventions. Data will flow when incentives are in place.
4. Financial incentives, e.g. Best Practice Tariff will need careful consideration, especially in light of the newness of the Maternity Pathway Payment System (MPPS)
5. Key interventions should be identified quickly and implemented as soon as possible
6. Two to four interventions to be considered as this area constitutes the largest part of the bundle

Key contacts to be part of the group:
- Jason Gardosi, Perinatal Institute
- Anita Dougall, RCoG
- Royal College of Midwives (RCM) representation
- Debby Gould, HAELo
- North Region SCNs representation
- Other SCNs representation

Task-and-finish Group 2: Smoking cessation

Key considerations
1. This group to consider focusing on the including of a carbon monoxide test in the bundle
2. Key messages being developed by PHE could be used to ‘wrap around’ this element to aid effectiveness
3. Links could be made to ‘Making Every Contact Count’ (MECC)
4. Signposts to relevant work/support could be part of the remit of this group (Smoking in Pregnancy, Baby Clear, Lancashire Local Authority)

Key contacts:
- Ann Hoskins, Public Health England (PHE)
- Jo Locker, PHE
- Charlotte Bevan, SANDS
- Royal College of Midwives (RCM) representation
- Debby Gould, HAELo
- North Region SCNs representation
- Other SCNs representation

Suggested other organisations:
- Tommy’s?

Task-and-finish Group 3: Reduced fetal movement

Key considerations
1. Could align with work on awareness of still birth risk factors, being done by SANDS
2. This work should contribute to normalising conversations about still birth risk and reduced fetal movement and there is already a narrative being developed
3. AFFIRM study is yet to be published and evidence base is not yet level 1
4. SCNs in some regions are working on this area and information leaflets for women have been produced.
5. The RCoG guideline should be considered

**Key contacts:**
- Charlotte Bevan: SANDS
- Devender Roberts: Cheshire and Merseyside SCN (suggested in absentia)
- RCoG representation
- RCM representation
- North Region SCNs representation
- Other SCNs representation

**Task-and-finish Group 4: Cardiotorcography (CTG) interpretation**

**Key considerations**
1. NICE developing new guideline which is currently at draft stage
2. NHS Litigation Authority (NHS LA) to consider developing a template for providers to enable applications to ‘Sign Up to Safety’ and related fund
3. Decision needed on whether the intervention should be antenatal or intrapartum
4. This group needs quickly to define the precise nature of the work on this element

**Key contacts:**
- Jeanette Beer, NHS LA
- Donald Peebles, London SCN
- RCoG representation
- RCM representation
- North Region SCNs representation

**Additional task-and-finish Group 5: Implementation**

The central team driving and overseeing the development of the care bundle will continue to work on developing the approach of implementation, focusing on the means of capturing the bundle interventions for commissioners to use in contractual negotiations. This could take the form of a local service specification, developed in partnership between SCNs and Clinical Commissioning Groups (CCGs).

The team will additionally comprise of Matthew Jolly and a North Region SCN representative (Debby Gould?)
## Appendix 2
Table of conditions to justify elective caesarean section before 39 completed weeks (RCOG, 2012)

<table>
<thead>
<tr>
<th>Condition</th>
<th>ICD-10 code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oedema, proteinuria and hypertensive disorders in pregnancy and childbirth</td>
<td>O10.0-9</td>
</tr>
<tr>
<td>Pre-existing hypertensive disorder with superimposed proteinuria</td>
<td>O11</td>
</tr>
<tr>
<td>Gestational [pregnancy-induced] hypertension with significant proteinuria</td>
<td>O14.0-9</td>
</tr>
<tr>
<td>Unspecified maternal hypertension</td>
<td>O16</td>
</tr>
<tr>
<td>Diabetes mellitus arising in pregnancy</td>
<td>O24.4</td>
</tr>
<tr>
<td>Diabetes mellitus in pregnancy, unspecified</td>
<td>O24.9</td>
</tr>
<tr>
<td>Liver disorders in pregnancy, childbirth and the puerperium</td>
<td>O26.6</td>
</tr>
<tr>
<td>Other specified pregnancy-related conditions</td>
<td>O26.8</td>
</tr>
<tr>
<td>Maternal care for (suspected) damage to fetus by radiation</td>
<td>O35.6</td>
</tr>
<tr>
<td>Maternal care for rhesus isoimmunization</td>
<td>O36.0</td>
</tr>
<tr>
<td>Maternal care for other isoimmunization</td>
<td>O36.1</td>
</tr>
<tr>
<td>Maternal care for poor fetal growth</td>
<td>O36.5</td>
</tr>
<tr>
<td>Oligohydramnios</td>
<td>O41.0</td>
</tr>
<tr>
<td>Infection of amniotic sac and membranes</td>
<td>O41.1</td>
</tr>
<tr>
<td>Premature rupture of membranes, onset of labour after 24 hours</td>
<td>O42.1</td>
</tr>
<tr>
<td>Placental transfusion syndromes</td>
<td>O43.0</td>
</tr>
<tr>
<td>Placenta praevia specified as without haemorrhage</td>
<td>O44.0</td>
</tr>
<tr>
<td>Placenta praevia with haemorrhage</td>
<td>O44.1</td>
</tr>
<tr>
<td>Labour and delivery complicated by vasa praevia</td>
<td>O69.4</td>
</tr>
<tr>
<td>Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy and childbirth</td>
<td>O99.1</td>
</tr>
<tr>
<td>Diseases of the circulatory system complicating pregnancy and childbirth</td>
<td>O99.4</td>
</tr>
<tr>
<td>Other specified diseases and conditions complicating pregnancy and childbirth</td>
<td>O99.8</td>
</tr>
<tr>
<td>Supervision of pregnancy with other poor reproductive or obstetric history</td>
<td>Z35.2</td>
</tr>
</tbody>
</table>

Appendix 3

Potential areas the SCN could prioritise for future work and how they link to the Maternity Gap Analysis Scope, National Care Bundle and the findings from our discussions with patients.

These areas of work were all discussed at the Clinical Stakeholder Event 1st October 2014
Appendix 4

Will I be able to claim expenses?
Any cost of pocket expenses incurred may be claimed in line with current West Midlands Strategic Clinical Network and Senate policy.

Where can I go for support?
Alison Davies and Liz Bagley are managing this project and will be available for support or discussion at any point either by telephone or email. In addition, they can put you in touch with the WMSCNS Patient Voice and Insight Lead, Kate Branchett, who will also assist you in any way she can.

Are there any other opportunities for patient involvement within the WMSCNS?
We are currently in the process of setting up a Citizen Senate, where all patient voices are welcome. There will be many opportunities for involvement in all areas. If you would like to keep informed of opportunities as they arise, please indicate this on your registration form.

Contacts:
Alison Davies
Quality Improvement Lead
07900 252794
Alison.davies10@nhs.net
Kate Branchett
Patient Voice and Insight Lead
07721 251465
Kate.branchett@nhs.net

WMSCNS Maternity Gap Analysis Project
Patient Information Leaflet

What is the background to this project?
Only around 42% of all births between 2004 and 2011 in England were ‘normal’. This means that more than half had medical intervention such as induction, forceps or caesarean section. These births carry higher risks for both mum and baby. More babies are being born and as pregnancies and births also become more complicated, this puts pressure on maternity services. Approximately 1 in 5 births in England take place in the West Midlands, so a significant number of births.
The Maternity and Children’s National Clinical Directors are committed to reducing the number of mothers and babies who die or whose health is affected. They have highlighted several areas to look at:
- Intra Umbilical Growth Restriction (IUGR) in pregnancy
- Postpartum haemorrhage
- Complication of 30 weeks
- Unexpected admissions to neonatal units for babies above 36 weeks gestation (term babies)
In addition to the above, we will look at local variation in the provision of therapeutic hypothermia (cooling) for term babies with possible brain injury caused by low oxygen at birth, also known as hypoxic ischaemic encephalopathy (HIE).

What are the aims of the project?
A Gap Analysis is a way of examining processes and resources in order to see whether they are being used in the best way. This project aims to identify gaps or areas where improvements could be made to help create plans to improve local maternity services. The findings from this project will provide information and recommendations for future joint work within maternity and neonatal services across the West Midlands.
We aim to find out:
- What does current national and local data tell us about how good services are in the West Midlands?
- What do our clinical leaders and our patients feel we should be doing to reduce stillbirth, neonatal and maternal death and serious illness?
- What local work is already in place to tackle these issues?

How long will the project last?
The project is anticipated to take a period of 5 months. At the end of October we will produce a report, collecting together all our data evidence, along with the patient, clinical and commissioning insight. This will allow us to prioritise future work for maternity and neonatal services within the West Midlands.

Which other organisations are involved in the project?
- Maternity & Neonatal networks including their clinical leads
- Commissioners (who decide where and how NHS money is spent)
- Patients, parents and carers

How can I be involved?
We want to gather thoughts and experiences of parents and patients to inform our work and our priorities going forward. We are offering you the opportunity to tell your story on a one to one basis and to suggest themes and issues that you feel need to be considered.
Everyone’s feedback will then be collated and presented on 1st October to our group of lead clinicians (including consultants and midwives) and commissioners (who decide where NHS money is spent). This will allow them to plan the way forward with some knowledge and insight into your experience and that of others. We are hoping that some patients may be able to join the discussion.
If you would like to take part in any way, please complete an application form and someone will be in touch to discuss your participation.

Will I be able to withdraw from this project?
You may withdraw from the project at any time, for any reason and you do not have to give a reason. However, we would hope that you feel supported enough to be able to discuss any problems you may encounter. If they arise.