

***West, North & East Cumbria Success Regime  
Maternity Services in West Cumberland  
Elective Consultant and Midwifery Led Unit  
29th July 2016***

## **1. Introduction**

The configuration of most secondary acute clinical services in small district hospitals is a real challenge for commissioners and providers due to the needs of the community who require access to local services. This situation is compounded by the challenge of both attracting and retaining staff; ensuring compliance with national quality standards all delivered within a financial model that is sustainable in the longer term. Developing a viable and sustainable maternity service, with the co-dependencies of paediatrics, anaesthetics, obstetrics and gynaecology and midwifery for Cumbria has been explored in great detail. Such challenges were described in the recent National Maternity Review for England Better Births improving outcomes of maternity services in England. Indeed it was acknowledged that the ability to provide safe maternity services in rural and remote locations is compromised by the quality standards that have been designed for large metropolitan areas.

National and international models of care have been investigated and advice from a range of clinical experts has been sought, which culminated in 3 models being considered as part of the West East and North Success Regime Pre-Consultation Business Case (PCBC). Within Europe, small consultant led units are common, but the challenges of workforce numbers and financial remuneration are not so immediate in these communities, and the roles and responsibilities of midwives vary in different countries. Currently the provision of maternity services is seriously challenged throughout Cumbria by the workforce issues, in particular across paediatrics and anaesthetics.

In autumn 2014 we commissioned a review of Maternity Services, by the Royal College of Obstetricians and Gynaecologists (RCOG). The purpose of the review was to provide independent and expert advice on the best way to arrange high quality, safe and sustainable maternity services in the future. The review took place in November 2014 and reported in March 2015.

Since then detailed and comprehensive work has been undertaken to determine the feasibility of the three options that were recommended, exploring the cost, viability and risk associated with each one, considering working in very different ways to try and improve long term safety through different configurations and working practices of staff.

The planning process to date has concentrated on the nature and location of a Consultant Led Unit (CLU), when in effect the greatest improvement in maternity outcomes could be achieved by improving public health measures e.g. social deprivation, smoking cessation, resolving obesity etc. However, the demography of women currently needing obstetric and maternity services is becoming more complex due to the increasing age of the mother, maternal obesity, the incidence of multiple pregnancies and other medical co-morbidities. So the paradox is that more Consultant led services are necessary to meet this challenge. However, for those women stratified as low risk, more

imaginative service provision is needed which will improve outcome and reduce medical intervention, when not required.

The four models addressed within England are home birth, stand-alone midwifery unit, co-located Midwifery unit and Consultant led unit. Within the recommendations of the recent National Maternity Review report – Better Births, Improving outcomes of maternity services in England, (February 2016) - there are variations of these models that will be safe in providing services and will address the other challenges.

**Midwifery Led Units (MLUs)** are run by midwives. They can be next to a main hospital maternity unit ('alongside') or completely separate from hospital ('freestanding'). Because most women can give birth without needing medical interventions, these units can be a good choice as an alternative to giving birth in a consultant led unit.

**Consultant Led Units (CLUs)** are staffed by midwives, maternity care assistants, obstetric doctors, neonatal doctors and anaesthetists. During labour most care will be provided by a midwife, but doctors may be involved if needed. Giving birth in a consultant-led unit is recommended if there have been problems in a previous pregnancy, if complications have developed during pregnancy, or in case of certain medical conditions. Induction (starting labour off artificially with medication or by breaking your waters), always takes place in a consultant-led unit.

The table below identifies the original options considered as part of the West North and East (WNE) Cumbria Success Regime.

	<i>Do Nothing</i>		<i>1. New ways of working</i>		<i>2. Partial Consolidation</i>		<i>3. Full Consolidation</i>	
	WCH	CIC	WCH	CIC	WCH	CIC	WCH	CIC
<b>Paediatrics</b>	Full Inpatient	Full Inpatient	14 hour SSPAU; low acuity beds	14 hour SSPAU and Inpatient	14 hour SSPAU	Inpatient and SSPAU	Outpatient only 9-5 hot clinic	Inpatient and SSPAU
<b>Maternity</b>	Full obstetric	Full obstetric	Low risk CLU and MLU	CLU and MLU	MLU	CLU and MLU	Ante and post natal only	CLU and MLU

Initial feedback from the CCG, Primary Care Leads, the public, NHSE and NHSI suggested further work was required with stakeholders to determine whether all options had been fully explored. As a

result maternity workshops were held on 17<sup>th</sup> and 30<sup>th</sup> June 2016, which were attended by all stakeholders including Maternity Services Liaison Committee (MSLC) representatives.

A potential option did emerge from the workshops and it was agreed that this would be developed and explored over the coming weeks.

### 3. Proposed Service Model

This paper attempts to describe the consensus view that, in view of staffing and workforce issues, a sustainable option would include a consultant-led unit at Cumberland Infirmary Carlisle (CIC), developing an 'alongside' midwifery-led unit at CIC, while maintaining Obstetric and Gynaecology cover at West Cumberland Hospital (WCH) between the hours of 8am – 8pm providing an elective consultant service and enhanced midwifery-led unit (MLU).

This option will also provide enhanced antenatal day assessment facilities, with EPU, scanning, antenatal assessment unit with midwifery and specialist input and all postnatal care would be available locally through midwifery, Health Visitor and General Practitioner input.

This option would exclude inductions of labour and provision of epidural.

There is a variation of this model operating in Aberystwyth, South Wales which is responsible for 500 births (see Appendix 1). However, it must be noted that the model in Aberystwyth has a range of support services including obstetric consultant non-resident on call, paediatric inpatients and surgical inpatients including emergency cover.

As the model of service provision described in this paper does not have the same level of support from interdependent specialities as Aberystwyth one could argue that this is a ground breaking approach that may provide an acceptable solution to the population of West Cumbria. There is a balance between providing services that are accessible but must be safe if elective caesarean section were to be provided at WCH. In addition to a MLU there may be a requirement in the short to medium term to provide a 'safety net' whereby provision of an out of hours non-resident obstetric service is available.

We recognise this risk and have plans to mitigate any risks associated with providing the service model without the back up of non-resident on-call obstetrics and on-site emergency surgical and paediatric cover. This could be monitored and evaluated over 6-12 months to determine whether or not this level of cover is required.

Attempts to define criteria for determining place of birth has been discussed locally however it may be more appropriate to base this on the NICE guideline for Intrapartum care for healthy mothers and babies, which identifies factors that should determine place of birth.

<https://www.nice.org.uk/guidance/cg190/chapter/1-recommendations#place-of-birth>

If best practice was adopted as detailed at appendix 2 it is envisaged that approximately 300-400 births could safely take place at WCH.

### 3.1 Service provision at WCH

A range of outpatient services would continue and indeed be enhanced at the WCH site. Obstetric and Gynaecology cover between 8am – 8pm would provide the following level of service provision:

- Antenatal Day Assessment Unit (8am – 8pm) NB this service would need to be provided 7 days a week and could be staffed by midwives with telemedicine support.
- Antenatal clinics
- Diabetic antenatal clinics
- Wellbeing clinics
- Vaginal Birth after Caesarean (VBAC)
- Anaesthetic Pre-assessment clinics
- Newborn Hearing Screening
- Day Assessment unit (8.00 a.m. – 6.00 p.m.)
- Fetal Telemedicine
- Scanning:
  - Nuchal
  - Dating Scans
  - Growth Scans
- Early Pregnancy Assessment Clinic (EPAC)
- Infertility clinics
- Special Gynae Clinics (Termination of Pregnancy)
- General Gynae clinics
- Uro-gynae clinics
- Colposcopy clinics
- Hysteroscopy clinics
- Rapid Access clinics
- Post Multi-Disciplinary Team clinics

Consultant obstetric and gynaecology input would be solely during the day but would include day case services across gynaecology (including day case surgery), outpatient investigations, Emergency Gynaecology Unit (EGU), fertility, colposcopy and uro-gynaecology. It is important to appreciate the absolute interdependence of gynaecology with obstetrics. All inpatient gynaecology and consultant led obstetrics would be at CIC.

Such a structure would be centred on one team providing a single service across two hospital sites with all consultants visiting the unit at WCH to undertake these responsibilities. The benefits of this would be to enhance and improve some of the services at WCH with an emphasis on a consultant led service with all trainees being based at CIC but with the opportunity to travel for training rather than service issues. The emergency rotas would be at CIC, but the visiting consultants to WCH would provide consultant based services during an extended working day.

### 3.2 Enhanced Antenatal and Postnatal Care

It is anticipated that the majority of women in West Cumbria would receive their antenatal care at WCH. This unit would be supported by consultant obstetricians throughout daytime hours (TBD).

Women in the latent phase of labour could be assessed at the unit in order to prevent unnecessary travel to the obstetric unit in Carlisle.

Postnatal care would continue to be provided locally and in most cases in the family home. It is not anticipated that women having their babies at CIC will transfer to WCH during the postnatal period.

### **3.3 Paediatric Support**

The preferred model of paediatric services includes a 14 hour Short Stay Paediatric Assessment Unit (SSPAU) with the provision of 24 hour low acuity beds. The service would have paediatric medical cover from 8am – 11pm.

A unit of this nature would not require on-site paediatric support as immediate resuscitation of the newborn can be effectively managed by midwives, nurses and other professionals trained in Neonatal Life Support (NLS).

The unit may require a neonatal stabilisation room equipped with appropriate resources to maintain airway etc. in the unlikely event that a baby required a prolonged period of support. This would be very short term support (0-6 hours) until the retrieval team arrived or the baby could be safely transferred. Special care facilities would only be provided at CIC.

### **3.4 Anaesthetics**

Obstetric anaesthetic cover would only be required for elective caesarean sections. General consensus is that the provision of an epidural service apart from elective sections is not appropriate in a setting without the provision of consultant 24 hour obstetric, paediatric and anaesthetic services. The MLU in Pembrokeshire does not provide an epidural service and around 200 births take place in the unit with a transfer rate of 25%. The main reason for transfer is for epidural pain relief.

### **3.5 Midwifery**

The development of the Midwifery led units (MLUs) across both sites at CIC and WCH aims to maximise more options for place of birth, and safer care appropriate to the needs of women. The proposed staffing model would be to enhance much more continuity of care for women and families, and improve consistency of information and communication. Low-risk women who give birth in a birth centre type environment report higher levels of satisfaction with their birth experience as they report feeling informed, listened to and supported in their decision-making (Overgaard et al 2012).

The proposal is for integrated midwifery teams working flexibly between community and MLUs. This would be mainly using a shift system, with minimal on-call. The midwifery team will be based in the community and on the MLUs at CIC and WCH. As a team they will also cover the births at Penrith MLU and home births.

To staff and maintain midwifery led units on each site 24/7 increases the competencies and level of exposure of midwives to normal birth. The aim is to enhance midwifery skills and potentially increase job satisfaction overall.

The long term vision is the provision of a much more structured Preceptorship Midwifery programme which incorporates rotation of new midwives across all maternity services including the MLUs. Periods of supernumerary would be necessary within each rotation and essentially when on Community and MLU placements.

Midwives may require additional training to work within a truly midwifery led environment including neonatal life support skills and experience. This would need to be considered as part of planning and mobilisation. It is anticipated that training midwives, nurses and other professionals would take between 6 -12 months.

#### **4. Dedicated Ambulance Vehicle (DAV)**

This model would require a DAV to ensure any maternity / paediatric transfers could be carried out without delay. Although this is an additional cost to the system (and has been factored into the PCBC) it will provide assurance to parents that should they require transfer to another unit this would be readily available. There is also anecdotal evidence to suggest that paramedics would find this an attractive post as it provides an opportunity to work within the hospital when not involved in transfers.

We have completed a Travel Impact Analysis in relation to all the acute service options detailed in the PCBC. The analysis shows that in the event of partial consolidation, if complex maternity work, including 203 emergency caesareans, moves to Cumberland Infirmary, looking specifically at the locations of patients requiring emergency caesareans in 2015/16 (largely time critical), these women would travel an additional 27 miles on average if they were to travel to Cumberland Infirmary instead of West Cumberland Hospital.

#### **5. Learning from South Wales**

The reconfiguration of maternity, neonatal and paediatric services in South Wales was as a result of significant recruitment difficulties at consultant level. This led to the development of standalone midwifery led unit and a paediatric assessment unit at Withybush. These services were previously consultant led.

An evaluation of reconfigured service carried out by the Royal College of Paediatrics and Child Health was published in November 2015. The high level findings supported the original reconfiguration and saw no clinical reason to reverse the decision. The evaluation found services to be safe with improving outcomes and better compliance with professional standards. The review supported the continued provision of a dedicated staffed ambulance for women and children, but refuted the need to continue with a consultant on-call for paediatric and obstetrics/gynaecology out of hours.

#### **6. Conclusion**

Having discussed the issues and explored the clinical scenarios, the consensus from commissioners and providers locally and nationally is that this would provide a sustainable option for maternity services and would align with option 2b of the RCOG review and option 2 of the Success Regime - partial consolidation.

National Maternity Leads (Matthew Jolly, Dr Kathy McLean and Jacky Dunkley-Bent) also confirmed their support for this option and the direction of travel during a meeting held on 29<sup>th</sup> July 2016.

## Appendix 1

### South Wales Reconfiguration of Maternity Services

In the summer and autumn of 2014, maternity services across south Wales were reconfigured with the centralisation of obstetrics, neonatal care and paediatric inpatients on the Glangwili site, with the Withybush site moving from a consultant-led service with special care unit to a midwife led 'low risk' maternity unit, no special care facility and 12-hour paediatric ambulatory care unit (PACU) replacing the inpatient ward.

The pressure for South Wales to reconfigure services is very similar to the issues the health system across Cumbria is currently facing:

- Insufficient activity to retain full training rotas across two sites
- Inability to recruit sufficient consultant staff across two sites to meet clinical standards
- Difficulty maintaining skills and experience with low levels of activity
- Over reliance on locum cover particularly in obstetrics and paediatrics

The combined clinical catchment covers a population base of 375,000 spread over three counties, which together covers 25% of Wales with a mixture of rural and urban living. Ten per cent of the population is deprived; there is poor road infrastructure and significant inter-hospital transfer times. The hospital runs obstetric and midwife led services with all high risk births for the area taking place in Glangwili. It has consultant cover on site in hours and consultant on call out of hours. There are approximately 500 births per annum and each pregnancy is risk assessed antenatally and throughout labour to determine whether or not it is safe to deliver in the unit. The exclusion criteria listed below automatically prevent a woman from delivering at the unit:

- No deliveries carried out less than 36 weeks gestation
- Women with Insulin dependent diabetes
- Any baby plotting small for gestational age on a customised growth chart

All high risk births for the area take place in Glangwili where the neonatal unit is situated. Elective sections and induction at term for uncomplicated pregnancies are carried out within the unit. Epidural facilities are also available.

## Appendix 2

Best practice recommendation NICE (2014) Intrapartum care for healthy women and babies.

- All women should be risk assessed at booking by a midwife to determine appropriate lead professional and place of birth. This assessment would continue throughout pregnancy and labour and if the degree of risk changed the pattern of care would change as determined by local or national guidelines.
- Low risk multiparous women should be advised that planning to give birth at home or in a midwifery-led unit is particularly suitable for them because the rate of intervention in labour is lower and the subsequent outcome for the baby is the same as for delivery in a CLU.
- Low risk nulliparous women should be advised that planning to give birth in a midwife-led unit is particularly suitable for them because the rate of intervention is lower and the outcome for the baby is no different compared with a CLU; however they have a significant chance of requiring intrapartum transfer than low-risk multiparous women, due to epidural requests, and so co-location MLU may lessen the need for significant transfer. There is a small increase in the risk of an adverse outcome for the baby if they plan to give birth at home and so MLU or CLU should be advised for safety and neonatal outcome reasons.
- For healthy women with a low risk pregnancy planning a birth at home or in a freestanding midwife unit is associated with a higher rate of spontaneous vaginal birth than planning birth in an alongside midwifery unit and these 3 settings are associated with higher rates of spontaneous vaginal birth than planning birth in a CLU.
- For healthy women with low risk pregnancy planning birth in an obstetric unit is associated with a higher rate of interventions, such as instrumental vaginal birth, caesarean section and episiotomy, compared with planning births in other settings.
- There are no differences in outcomes for the baby associated with planning birth in any setting for multiparous women.
- Planning birth at home for nulliparous women is associated with an overall small increase (4 more per 1000 births) in the risk of a baby having a serious medical problem compared with planning birth in other settings (NICE 2014).

The summary below highlights the findings from Birthplace in England Cohort Study (NPEU, 2011). Perinatal and maternal outcomes by planned place of birth for health women with low risk pregnancies: the Birthplace in England national prospective study.

### **Giving birth is generally very safe**

- For 'low risk' women the incidence of adverse perinatal outcomes (intrapartum stillbirth, early neonatal death, neonatal encephalopathy, meconium aspiration syndrome, and



## West, North & East Cumbria

- specified birth related injuries including brachial plexus injury) was low (4.3 events per 1000 births).
- The occurrence of unexpected obstetric complications in a low risk population include post partum haemorrhage, failure to progress in labour, obstructed labour, shoulder dystocia and sepsis.

### **Midwifery units appear to be safe for the baby and offer benefits for the mother**

- For planned births in freestanding midwifery units and alongside midwifery there were no significant difference in adverse perinatal outcomes compared with planned birth in an obstetric unit.
- Women who planned birth in a midwifery unit (AMU or FMU) had significantly fewer interventions, including substantially fewer intrapartum caesarean sections, and more 'normal births' than women who planned birth in an obstetric unit.

### **For women having a second or subsequent baby, home births and midwifery unit births appear to be safe for the baby and offer benefits for the mother**

- For multiparous women, there were no significant differences in adverse perinatal outcomes between planned home births or midwifery unit births and planned births in obstetric units.
- For multiparous women, birth in a non-obstetric unit setting significantly and substantially reduced the odds of having an intrapartum caesarean section, instrumental delivery or episiotomy.

### **For women having a first baby, a planned home birth increases the risk for the baby**

- For nulliparous women, there were 9.3 adverse perinatal outcome events per 1000 planned home births compared with 5.3 per 1000 births for births planned in obstetric units, and this finding was statistically significant.

### **For women having a first baby, there is a fairly high probability of transferring to an obstetric unit during labour or immediately after the birth**

- For nulliparous women, the peri-partum transfer rate was 45% for planned home births, 36% for planned FMU births and 40% for planned AMU births.

### **For women having a second or subsequent baby, the transfer rate is around 10%**

- For women having a second or subsequent baby, the proportion of women transferred to an obstetric unit during labour or immediately after the birth was 12% for planned home births, 9% for planned FMU births and 13% for planned AMU births.

### **References**

NICE (2014) Intrapartum care for healthy women and babies.

NPEU (2011) Birthplace in England Cohort Study. Perinatal and maternal outcomes by planned place of birth for health women with low risk pregnancies: the Birthplace in England national prospective study.

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