The Shrewsbury and Telford Hospital NHS
NHS Trust

Improving Maternity Services across Shropshire & Mid-Wales

(Future Models of Care – to be read in conjunction with Consultant Unit Risks paper)

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Introduction

This paper provides information on the work undertaken during the last two years by the Maternity Service to review the current provision of maternity care for Shropshire and Mid-Wales.

The review of the model of care has been driven by the requirement to deliver:

- A contemporary, safe, high quality service that can deliver efficient, effective and clinically sustainable care, whilst supporting women's choice.
- Meet Key performance Indicators (KPI) and the requirements of commissioners via the standard NHS contract.
- Utilise the current workforce effectively whilst future proofing against workforce pressures experienced within the current hub and spoke model.
- Deliver the medium and long-term business objectives within the care group.
- Provide an equitable service throughout all care settings.
- Contribute to the strategic direction of women and children's services locally as developed through the NHS Sustainability and Transformation Plan (STP)

Considerations

In considering a future model of care, the care group acknowledges and has considered the following issues prior to providing an option appraisal:

1. The challenges of providing maternity services across a large rural county; including Mid-Wales.
2. Public and political opinion of maternity services generated by a commitment from communities to support localised care and services.
3. The current midwifery whole time equivalent (WTE)/ Midwife to birth ratio which is correct according to Birthrate Plus (national staffing measure) however; this has been calculated according to the current model allocating staff to the current service rather than the demand/ activity (form does not support function).
4. Provision of midwife led unit care, community midwifery and homebirth service required by NHS Maternity Commissioning Guidance and NHS Mandate.
5. The need to support choice for women of home, Midwife Led Unit (MLU); alongside or freestanding and Consultant Unit (CU) deliveries for all women within the County (Cumberledge Report 2016)

Current Maternity service and Trends

Shropshire maternity services functions as a "Hub and Spoke Model", the hub being the main Consultant Unit (CU) at Princess Royal Hospital (PRH) and the spokes being the five Midwife Led Units (MLUs) in Shrewsbury, Telford, Ludlow, Oswestry and Bridgnorth. There are also two community hubs at Market Drayton and Whitchurch. This is nationally unique in having five Midwife led Units, four being free standing and one same-site (PRH) but is in keeping with the geographic disposition of the county population in this large rural county.

The service within Shropshire has functioned in much the same way for over 30 years despite changes in the demographics of the population. For example, the marked increase in obesity and associated co-morbidities, age profile of child bearing women and subsequent increased risk factors. Likewise, the increase in women with mental ill-health and social complexities contributing to the numbers and requirement of high risk maternity care.

Over the last 2-3 years the births within Shropshire have seen a significant drift towards Consultant led care with MLU deliveries declining. This is consistent with trends described nationally in the recent 'National Maternity Review' - Cumberledge Report 2016; where women are described as becoming more risk averse and requiring reassurance of giving birth close to obstetric and neonatal services.

Despite an MLU marketing strategy developed to redress the trend and promote utilisation of the MLUs, as a safe and close to home alternative; MLU birth activity has only marginally increased in some areas during 2015/16. A market analysis based on post code failed to identify that there were significant opportunities to repatriate activity from other providers to the MLUs on the periphery of the service to increase MLU delivery numbers. For example: from women choosing to deliver at Hereford the maximum number that may be repatriated is, 15.

The National Maternity review noted that in 2012, 87% of births took place in NHS obstetric units, 9% in an along-side unit, 2% in a free standing MLU and 2% home birth. The Trust's annual statistics for 2015/16 shows 82.3% of activity in the consultant unit; 7.4% in the alongside unit; and 8.7% in the free standing MLU's with 1.6% as home deliveries. Previously at SaTH, 73% of the activity took place on the consultant unit and 27% of the activity took place in the MLU's. Most recent figures demonstrate that 84% of the activity takes place on the consultant unit and 16% of the activity takes place in our MLU's. To date there have been no workforce moves to accommodate this change.

Consultant Unit – service description

Hub or High risk maternity service is composed of in-patient delivery suite, antenatal and postnatal wards and out-patient triage and day assessment units, consultant led antenatal clinics and ultrasound scan services. Total inpatient beds for the unit = 49 + 2 bereavement rooms.

Delivery Suite

13 rooms + 1 bereavement room + 2 obstetric theatres.

Staffing template

7 midwives and 3 WSA per 12 hour shift. 1 Midwife is a band 7 coordinator who is responsible for allocation of staff and maintaining safety on the delivery suite. This template includes provision for planned caesarean section lists 3 days per week. Out of hours the coordinator is responsible for overseeing the whole unit/ county wide service with the support of the on call manager.

Antenatal Ward
13 beds and 1 bereavement room.

Staffing template
2 midwives and 1 WSA (7 women- 1 midwife staffing ratio at full occupancy)

Postnatal Ward
23 beds
Staffing template
3 midwives per shift + 3 WSA day shift/2 WSA night shift (8 women and babies-1 Midwife at full occupancy).

Only Mothers and babies requiring additional observation, care or neonatal team support are admitted to this area. All 'normal' mothers and babies are transferred directly from delivery suite to low risk midwifery led units.

Triage area
Staffed by 2 midwives and 1 WSA between 8am and 8.30 pm. All admissions through this area are risk assessed to ensure women with highest risk are prioritised and receive care in the area appropriate to their clinical needs. This service operates using an Emergency Department model with admissions after 8.30 pm directed to the delivery suite.

Midwifery Led Units and Community – Service description

The MLU's undertake all the antenatal bookings and Antenatal Care for both high and low risk women irrespective of where their subsequent antenatal care and deliveries occur.

Wrekin Midwifery Led Unit – Same site PRH
MLU staffing: 2 midwives per 12 hr shift delivering AN/intrapartum and PN care plus one midwife day shift (8 hrs).
On call midwifery team for supporting births within the unit (called in) for second stage of labour or escalation if women/midwife ratio challenged.

Shrewsbury MLU
MLU: 2 midwives during day shift supporting additional day assessment unit activity plus 4 hour day cover Monday to Friday. However at night staffed with one midwife and one WSA with a further midwife on call. RSH and PRH Community teams provide community midwifery care for women within the locality.

Oswestry, Bridgnorth and Ludlow MLUs
1 midwife and 1 WSA per 12 hr shift supported by on call midwife.
Community midwife during daytime hours.

Use of On-Call staff

- Flexed to support MLU intrapartum care/postnatal in patients, maintenance of services if transfer of Mother/baby to Consultant unit or Neonatal Unit.

- Support the escalation policy by attendance to an area experiencing high activity/ staffing shortfalls such as challenged women/midwife ratio.

Note: Appendix 1 = MLU bed days/month/MLU.

Current operational pressures

- With the decline in MLU deliveries and the requirements of the CU to deliver 1:1 care in labour, the operational pressure on the staffing of the consultant unit has increased despite the actions already taken with the increase of the staffing template from 6 wte to 7 wte and the introduction of the Obstetric triage area. These operational pressures are managed through the Care Group Escalation Policy as midwifery practice will show extreme troughs and peaks of activity with peak activity affecting the antenatal ward; labour ward and post natal ward all at the same time.
- The Care Group Escalation Policy is designed to ensure that there are sufficient midwifery staff to support CU activity during peaks in activity by "pulling in" staff from the on-call and community midwives. The effect of this support to the high risk area during escalation by community or MLU midwives is disruption to the working of the community services and loss of the MLU capacity to antepartum and post natal care during the time of escalation. The subsequent effect is re-scheduling of non-urgent community activity affecting patient experience. The Escalation Policy is being used with increasing frequency.
- Action to address capacity and demand issues through midwifery recruitment would result in a birth to midwife ratio (which are currently appropriate) that is in excess of national expectations and would require additional budgetary investment over and above the Maternity Pathway Tariff.
- The majority of patient safety issues and incidences originate in high risk areas.
- The majority of the MLU activity is during daylight hours with considerable community and day attendance activity. There is limited activity overnight with intrapartum and post natal care in the free standing MLUs as numbers of births are low and frequently there are few or no post natal inpatients with the staffing complement of the unit as described.
- This means that when combining all of the MLUs we have high numbers of staff undertaking limited clinical activity at night. This is seen as a costly, a poor use of staffing resources and creates disruption to the service during times of high activity with the enaction of the Escalation policy..
- **(See total bed days per month at Appendix I).**

Taking account of the current operational pressures listed above and the current maternity service and trends means that a re-investment of staffing will be required as a result of any re-modelling of services, in order to meet the current needs of the service (Appendix 2).

Financial Pressures

As part of the Care Group's business planning there is a requirement to review maternity services. Within the Care Group, obstetric and maternity services are in a financially challenged position.

The updated SLR @ month 16/17 gives an income of £11,227k and expenditure of £13,615K. Projected to give a full year loss of £4,776k.

Although total midwifery staffing levels have to be maintained to fulfil nationally accepted measurement (Birthrate Plus) and Safer Childbirth (2007) allocation of the staff from low activity MLU areas to areas of higher activity and risk seeks to achieve the following:

- Reduce overspend on excess hours
- Improve quality and safety
- Reduce risk and associated incidents
- Improve staff morale
- Reduce the call out of on-call midwives during escalation
- Reduce length of stay (no extended postnatal stays on MLU's and increase in flow through consultant unit)
- Increase in staff supporting the busiest and highest risk areas
- Reduce complaints and PALS
- Improve patient experience
- Reduce sickness/absence rates

This alteration in practices to streamline and enhance the consultant unit services has a natural tension with maintaining a number of choices available to women which is developed in the choices in this paper – the option put forward for consideration maintains a full range of choices for our women.

The Estate of the Maternity Services with the CU and 5 MLUs is in excess of the requirements of the population which generates capital charge but also the quality of the Estate requires considerable on-going investment to maintain functionality.

Schedule of work to date

- Outcome of CQC inspection and recommendation October 2014: This led to the increase in the labour ward template for 6 wte to 7 wte and the establishment of the obstetric Triage service in the consultant unit.

- Deep dive analysis of neonatal and obstetric service February 2015.

- Conversations with staff and feedback from staff representatives regarding the on-call policy, management of our patient flow when we are in escalation, strengthening of MLU staffing for intra partum care, and recognition that the MLU marketing strategy had not reversed the decline in MLU deliveries led to a workshop to discuss our models of care in April 2016. This was attended by clinical, specialist and midwifery management supported by the Trust Executive and from this further information was gathered.

- Risk assessment and review of activity relating to escalation on the CU (see associated risk paper)

Decision required by Trust Executive Team

The information presented in this paper is intended to highlight the changes that are required to maternity services to mitigate risks to quality and safety currently managed across the service and evidenced within the Consultant Unit risk paper. Whilst the use of the Maternity Services Escalation Policy mitigates the risk, it is recognised that this creates poor patient experience and effects the provision of care within midwifery led care and homebirths. Likewise, it affects staff morale and sickness absence rates.

Following this review of the Model of Care of midwifery service across Shropshire; this paper provides options for consideration to ensure staff are allocated to the most appropriate environment, considering activity and acuity.

Models of MLU and Community Midwifery Care – Option Appraisal

The following 3 models and option appraisal have been reflected within the care group and considered based on elements of safety, risk, women's experience and choice. The preferred option within the group based on clinical safety and workforce sustainability is Option 2.

Appendix 2 provides a financial appraisal of each option.

Option 1 = Remove Women's Support Assistant (WSA) on night duty in each of Oswestry, Ludlow & Bridgnorth MLU's	
Not considered viable option due to safety concerns.	
Advantages	**Disadvantages**
1 X band 2 X 12 hours	Lone worker – Risk assessment required
Redistribution of staff to areas of deficit or through natural attrition	Staff side representatives may object
Increased morale on CU	Benchmarking against other units around the country required
Decreased overtime and Bank rates	On-call RM to be called in earlier if there are postnatal in-patients = call-out costs are higher, compensatory rest to be given, increased cover for next day work
Immediate savings made	Increased admin. time for work currently done by night shift WSA
Reduced maternal readmissions	In the event of a serious emergency – only one staff member in attendance

Option 2 = Night closure of Bridgnorth, Ludlow & Oswestry MLU's 20.00hrs – 08.00hrs. Operate as an on-call birth centre during these hours	
Advantages	**Disadvantages**
Supports National Maternity Review recommendations of choice for women, as midwifery led services maintained within local areas.	No facility for ad hoc callers or precipitate births. Withdrawal of postnatal stay service.
Redistribution of low risk care to make efficient use of low risk Postnatal bed Capacity across the county.	Local community objection to reduction in choice.
Advice for breastfeeding, readmission to support still available within the county or during daytime hours.	Possibility of Increased community work i.e. breastfeeding support requiring daily visits, however option for woman to return to unit during daytime hours.
Limits possibility of Increased referrals to triage/ delivery suite as daytime services maintained.	50 – 75% of labours/births occur between 8pm and 8am = potential increased call-out cost, next day cover cost, compensatory rest cost.
50-75% births at night, but on balance this number is small against the number of nights where no labouring women are admitted.	Time/cost increase during the day for band 2 and band 6: notes prep, results checking, data entry, Medway discharges, E-Learning, phone advice, breastfeeding support, equipment checks, stock check & ordering, skills drills, audits, rosters, SROM checks, CTG's.
1 X RM band 6 and 1x band2 X 12 hours Redistribution of staff to areas of deficit or higher activity/acuity supporting quality and safety/ service developments. Reduction in acute services staff overtime spend.	Staff morale in Oswestry, Bridgnorth, Ludlow Implications of changing working pattern and increased on calls.
Potential to reduce footprint and reduce rental cost.	

Option 3 = Remove all birthing and postnatal in-patient stays from Oswestry, Ludlow & Bridgnorth MLU's. Operate only as community base plus homebirths. (As Market Drayton/Whitchurch)	
Advantages	**Disadvantages**
Redistribution of staff to areas of deficit or higher activity/acuity supporting quality and safety. Increased staff morale in these areas.	Local community and political objection to reduction to a perceived loss of services. Challenge to gain CCG, Health Watch, Monitor, Maternity Engagement Group approval.
Reduce estate footprint to reduce rental cost.	Limitation of choice for women.
	Increased community based visits possible = more RM WTE, cars, fuel, phones, kit. Increased calls/visits to other areas for e.g. SROM checks, breastfeeding advice, reduced FM. Etc. Increased travelling time for women in labour, and those requiring a postnatal stay around the county. No facility for ad hoc callers or precipitate births.
	Possibility of increased requests for homebirths (however unlikely as not seen when model used short term in the past or at MD/ Whitchurch). 2 X RM's on-call for 5 weeks for 1 woman.
	Potential for increase in BBA's - risk
	Potential for increased activity in consultant unit

Financial Assumptions

Savings from each Model are summarised below (see also Appendix 2)

1.	Remove WSA overnight	£180,566 / annual
2.	Birthing Centre Model	£535,856 / annual
	Re-investment required	£535,807 / annual
3.	Community Bases	£623,910 / annual

Option 2 is considered by the Care Group to be the preferred option that meets the requirements of risk mitigation for the CU, clinical safety, workforce sustainability financial efficiency.

Care Group Recommendations

Executives are asked to consider and approve the following proposals:

- To take forward work on option 2.
- Further develop the financial model for option 2 in line with the recommendations from Birthrate Plus.

Appendix I

Total bed days per month per MLU - FY15/16

Month	Wrekin MLU	Shrewsbury MLU	Bridgnorth MLU	Oswestry MLU	Ludlow MLU	Total MLU
Apr-15	101	98	37	63	12	311
May-15	98	68	19	67	15	267
Jun-15	115	36	32	25	20	228
Jul-15	145	50	23	48	26	292
Aug-15	113	65	17	78	15	288
Sep-15	111	73	23	54	18	279
Oct-15	149	89	26	39	27	330
Nov-15	98	72	26	49	35	280
Dec-15	99	53	28	54	35	269
Jan-16	132	68	50	33	52	335
Feb-16	106	79	36	69	16	306
Mar-16	102	89	25	42	18	276
FY15/16	**1369**	**840**	**342**	**621**	**289**	**3461**

Appendix 2

Models of care - costs					
A)					
Remove WSA overnight					
		hours	wte		
WSA	Band 2	307.44	8.20	226,674	
Additional midwife on call hours					
Hours in additional to current call out					
Assume 334 hours (as per BM) per unit				(33,823)	
Compensatory rest					
Admin support		22.5	0.6	(12,284)	reduced to 0.20 per unit
Total savings				**180,566**	
B)					
Close MLU's overnight - birthing centres					
		hours	wte		
Midwife	Band 6	307.44	8.20	430,818	
WSA	Band 2	307.44	8.20	226,674	
Additional midwife on call hours					
Hours in additional to current call out					
Assume 1067 hours (as per BM) per unit				(104,052)	
Compensatory rest 78.5 hours per unit assume covered				(5,300)	
Admin support		22.5	0.6	(12,284)	
Total savings				**535,856**	
C)					
Close MLU's to births					
		hours	wte		
Midwife	Band 6	307.44	8.20	430,818	
WSA	Band 2	307.44	8.20	226,674	
Additional midwife on call hours					
Due to increased homebirth rate (1% to 2%)					
63 more homebirths, 52 weeks on call *2, 9 hours per birth				(21,297)	
Admin support		22.5	0.6	(12,284)	
Total savings				**623,910**	
D)					
No information provided					
Reinvestment requirements					
Increase labour ward template by 1, 24/7		hours	wte		
Midwife	Band 6	204.96	5.47	(260,563)	
Increase triage to 24/7 cover from 12/7					
Midwife	Band 6	102.48	2.73	(143,606)	
Increase postnatal ward template					
Midwife (8 hour shift 5 days)	Band 6	45.75	1.22	(46,265)	
WSA (1 additional on night 7 days)	Band 2	102.48	2.73	(85,373)	Floating WSA to cover both P/N and Triage dependent upon activity
Total reinvestment				**(535,807)**	
All costs/savings @ midpoint with on costs					
Downtime included in WTE					