UNIVERSITY HOSPITALS OF DERBY AND BURTON NHS FOUNDATION TRUST

MIDWIFERY WORKFORCE REPORT

Contents

Birthrate Plus ®: THE SYSTEM

Birthrate Plus® (BR+) is a framework for workforce planning and strategic decision-making and has been in variable use in UK maternity units since 1988, with periodic revisions as national maternity policies and guidance are published.

It is based upon an understanding of the total midwifery time required to care for women and on a minimum standard of providing one-to-one midwifery care throughout established labour. The principles underpinning the BR+ methodology are consistent with the recommendations in the NICE safe staffing guideline for midwives in maternity settings and have been endorsed by the RCM and RCOG.

The RCM strongly recommends using Birthrate Plus® (BR+) to undertake a systematic assessment of workforce requirements, since BR+ is the only recognised national tool for calculating midwifery staffing levels. Whilst birth outcomes are not influenced by staff numbers alone, applying a recognised and well-used tool is crucial for determining the number of midwives and support staff required to ensure each woman receives one-to-one care in labour (as per recommendation 1.1.3).

Birthrate Plus® has been used in maternity units ranging from stand-alone community/midwife units through to regional referral centres, and from units that undertake 10 births p.a. through to those that have in excess of 8000 births. In addition, it caters for the various models of providing care, such as traditional, community based teams and continuity caseload teams. It is responsive to local factors such as demographics of the population; socio-economic needs; rurality issues; complexity of associated neo-natal services, etc. The methodology remains responsive to changes in government policies on maternity services and clinical practices. Birthrate Plus® is the most widely used system for classifying women and babies according to their needs and using clinical outcome data to calculate the numbers of midwives required to provide intrapartum and postpartum care.

An individual service will produce a casemix based on clinical indicators of the wellbeing of the mother and infant throughout labour and delivery. Each of the indicators has a weighted score designed to reflect the different processes of labour and delivery and the degree to deviations from obstetric normality. Five different categories are created - the lower the score the more normal are the processes of labour and delivery.

Other categories classify women admitted to the delivery suite for other reasons than for labour and delivery.

Together with the casemix, the number of midwife hours per patient/client category based upon the well-established standard of one midwife to one woman throughout labour, plus extra midwife time needed for complicated Categories III, IV & V, calculates the clinical staffing for the annual number of women delivered.

Included in the workforce assessment is the staffing required for antenatal inpatient and outpatient services, ante and postnatal care of women and babies in community birthing in either the local hospital or neighbouring ones.

The method works out the clinical establishment based on agreed standards of care and specialist needs and then includes the midwifery management and specialist roles required to manage maternity services. Adjustment of clinical staffing between midwives and competent & qualified support staff is included.

The recommendation is to provide total care to women and their babies throughout the 24 hours 7 days a week inclusive of the local % for annual, sick & study leave allowance and for travel in community**.**

Factors affecting the Birthrate Plus® Study

The Governance agenda, which includes evidence-based guidelines, on-going monitoring, audit of clinical practices and clinical training programmes, will have an impact upon the required midwifery input; plus, other key health policies. Birthrate Plus® allows for inclusion of the requisite resources to undertake such activities.

Increasingly, with having alongside midwife units where women remain for a short postnatal stay before being transferred home, the maternity wards provide care to postnatal women and/or babies who are more complex cases. Transitional care is often given on the ward rather than in neonatal units, safeguarding needs require significant input which put higher demand on the workload.

Shorter postnatal stays before transfer home requires sufficient midwifery input in order to ensure that the mothers are prepared for coping at home. It is well known that if adequate

skilled resources are provided during this postnatal period, then such problems as postnatal depression or inability to breast-feed can be reduced or avoided.

Community based care is expanding with the emphasis being placed on ‘normal/low risk/need care being provided in community by midwives and midwifery support roles. Women and babies are often being seen more in a clinic environment with less contacts at home. However, reduced antenatal admissions and shorter postnatal stays result in an increase in community care. Midwives undertake the Newborn and Physical Examination (NIPE) instead of paediatricians, either in hospital or at home.

Cross border activity can have an impact on community resources in two ways. Some women may receive antenatal and/or postnatal care from community staff in the local area but give birth in another Trust. This activity counts as extra to the workload as not in the birth numbers. They have been termed as "imported" cross border cases. Equally, there ae women who birth in a particular hospital but from out of area so are ‘exported’ to their local community service. Adjustments are made to midwifery establishments to accommodate the community flows. Should more local women choose to birth at the local hospital in the future adjustments will need to be made to workforce to provide the ante natal and intrapartum care.

The NICE guideline on Antenatal Care recommends that all women be ‘booked’ by 10 weeks’ gestation, consequently more women are meeting their midwife earlier than previously happened. This early visit requires midwifery assessment/advice, but the pregnancy may end as a fetal loss, so the total number of postnatal women is less than antenatal.

Discussion of Data

1. University Hospitals of Derby and Burton (UHDB) provide maternity services at Queens Hospital Burton (QHB), Royal Derby Hospital (RDH) and local community services.

2. Comparisons have been made between birth activity in FY 19/20 and 20/21 to plan services for the future:

3. Table 1 indicates a reduction of 182 births between FY 19/20 and 20/21, RDH has reduced by 32 and QHB by 150.

	RDH 19/20	RDH 20/21	QHB 19/20	QHB 20/21
Delivery Suite Births	4754	4724	2915	2765
Birth Centre	802	800	223	223
Home Births	80	80	7	7
Total Births	**5636**	**5604**	**3145**	**2995**

Table 1

4. The Birthrate Plus® staffing is based on the activity and methodology rather than on where women may be seen and/or which midwives provide the care.

5. 24% uplift has been applied to cover annual, sick and study leave and time for travel in the community services.

6. The results are based on a review of the casemix obtained for the months of November – January 2021. Since the previous review in 2017/2018, an increase of almost 6% was noted in the more complex category V group.

7. Table 2 indicates an increase of 5.8% in category IV and V women in the generic casemix at RDH.

Royal Derby Hospital	% Cat I	% Cat II	% Cat III	% Cat IV	% Cat V
2020 DS % Casemix	*3.0*	*8.2*	*19.9*	*27.9*	*41.0*
	31.1%			*68.9%*	
2017 DS % casemix	*0.1*	*7.5*	*26.1*	*30.5*	*35.8*
	33.7%			*66.3%*	
2020 Generic % Casemix (DS and Birth Centre births)	*6.4*	*11.3*	*18.4*	*25.9*	*38*
	36.1%			*63.9%*	
2017 Generic % Casemix	*7.9*	*11.1*	*22.9*	*26.7*	*31.5*
	41.9%			*58.2%*	

Table 2

8. Table 3 indicates there has been an increase of 5.3% of women in Category IV and V in the generic case mix at QHB.

Queens Hospital Burton	% Cat 1	% Cat 11	% Cat 111	% Cat IV	% Cat V
2020 Generic % Casemix	*3.8*	*14.1*	*18.4*	*28.8*	*34.9*
	36.3%			*63.7%*	
2017 Generic % Casemix	*4.5*	*14.9*	*22.2*	*30.0*	*28.4*
	41.6%			*58.4%*	

Table 3

9. The generic casemix indicates that between 63.9% (QHB) and 68.9% (RDH) of women are in the 2 higher categories IV and V which is higher than the average for England of 58% based on 55 maternity units from a wide range of size and location. The casemix is unique to each service as reflects the clinical and social needs of women, local demographics, clinical decision making and adherence to national guidelines. Appendix 1 provides a description of the 5 categories.

10. To calculate the staffing for intrapartum and postnatal care on, the delivery suite casemix has been applied. For community staffing, the generic casemix is used.

11. Time is included for Band 7 Coordinators, Ward and Department Managers and Team Leaders to cover the day to day management and coordination in all areas.

12. There will be a correlation between the casemix, and maternity stats recorded on the dashboard especially in relation to Induction rates, delivery method, post-delivery problems, obstetric and medical conditions.

13. Annually, (RDH 850, QHB 260) antenatal cases are seen on delivery suite as the women require one to one care and are often warded for ongoing observation and monitoring.

14. Inductions of labour (RDH 2060, QHB 1115) are based on the annual number of doses administered so will be less women.

15. The Birth Centre at RDH provides intrapartum care to 800 women and provides postnatal care and NIPE to 529, as 273 women require transfer to the postnatal ward. There are a further 210 women who start their intrapartum episode in the MLU but require transfer and complete their intrapartum episode on DS. Women are triaged with 1230 annual episodes.

16. At the time of the review, Samuel Johnston FMU was temporarily closed due to the impact of COVID 19 on the service. The most recent activity was taken to calculate the number of staff required for the service. This was based on 223 births, 516 Triage episodes and 78 women who either transferred to the hospital in labour or

immediately after birth. Provision is made for 2 midwives to be present throughout the labour care.

17. Often the antenatal activity taking place in hospital is reflective of the higher % in Categories IV & V, as women with medical/obstetric problems, low birth weight &/or preterm infants require more frequent hospital based care. The annual activity indicates (RDH 1196, QHB 680) admission episodes to the ward excluding inductions and elective sections.

18. The 'extra care babies' of (RDH 735, QHB 140) are those that have a postnatal stay longer than 72hrs. The increase in babies that require frequent monitoring is covered in the casemix as more hours are allocated to women in the higher categories IV and V.

19. Staffing is included for the majority of babies to have their NIPE carried out by a midwife (RDH 4416, QHB 1850). NIPE for the birth centre and home births is routinely included in the staffing for those area.

20. The staffing for Triage/PAU at RHD is based on a 24/7 days a week service with a total of 11191 annual episodes. The staffing for Triage/MAU at QHB is also based on a 24 hour 7 day service and have a total of 9828 annual episodes.

21. Outpatient Clinic services are based on session times and numbers of staff to cover these, rather than on a dependency classification and average hours. Professional judgement is used to assess the numbers of midwives and support staff required to 'staff' the clinics/sessions. The outpatients' profile is unique to each maternity service and will heavily depend on the obstetric specialties provided, complexity of women, etc.

22. The total community cases (women having ante & postnatal care) at RDH are 8062 and at 3942 at QHB including home births.

23. The number of out of area women who birth at RDH is 377 and 402 at QHB, therefore receive their community care from neighbouring Trusts.

24. There are 2835 women for RDH and 1199 women for QHB, who birth elsewhere but are within the local population for the Trust so have their full community care from UHDB midwives.

25. In addition, there are 565 women at RDH and 314 women on QHB who do not complete pregnancy or move out of area (attrition cases).

26. Additional staffing for significant safeguarding is included in the community.

Breakdown of Birthrate Plus Recommended Staffing

Royal Derby Hospital	**Annual Data 2020/21**
• Total Deliveries = 5604 • Total Community Cases = 8062	
Clinical WTE required	
Delivery Suite • Births • A/N cases • Escorted transfers out • Non-viable pregnancies	68.05wte (without IoLs) (71.82wte inc IoL)
Triage / PAU	18.05wte
Induction of labour activity	3.77wte
Midwifery Led Unit: • Births only • PN care & NIPE • Transfers to DS **small % women transferred to PN ward often for baby monitoring so included in ward staffing*	14.72wte
Ante Natal Ward: • A/N Admissions • Postnatal women • NIPE • Extra Care Babies • Postnatal readmissions	7.37 57.35wte (*includes band 3 support staff)*
Outpatients Services • All Midwife Led Clinics • All Obstetric Led Clinics • Specialist Obstetric Clinics	9.75wte
Community Services: • Home births • Community AN & PN care • Attrition • Additional hours for Safeguarding	77.01 (*includes band 3 support staff)*
Total Clinical WTE	**256.07wte**

Table 4

Breakdown of Birthrate Plus Recommended Staffing

Queens Hospital Burton **Annual Data 2020/21** • Total Deliveries = 2995 • Total Community Cases = 3792	
Clinical WTE required	
Delivery Suite • Births • A/N cases • Escorted transfers out • Non-viable pregnancies	36.08wte
Triage / MAU	13.89 wte
Induction of labour activity	2.04wte
Ante Natal Ward: • A/N Admissions • Postnatal women • NIPE • Extra Care Babies • Postnatal readmissions	4.04 28.25wte (*includes band 3 support staff)*
Outpatients Services • All Midwife Led Clinics • All Obstetric Led Clinics • Specialist Obstetric Clinics	3.24wte
Community Services: • Home births • Community AN & PN care • Attrition • Additional hours for Safeguarding	34.13 (*includes band 3 support staff)*
Samuel Johnson FMU • Births (total Care) • Transfers to Obstetric Unit • Triage cases • GTT Clinic & Anti D	**8.48**
Total Clinical WTE	**130.15wte**

Table 5

Summary inclusive of Postnatal MSWs, Clinical, Specialist and Management Midwives

27. Comparisons were made with the current funded establishment as per table 6 below.

Funded Establishment **UHDB**	Bands 5-7 RM/RN	Bands 3-4 providing P/N care	Contribution from Specialist roles	Total Clinical WTE
RDH	214.45	30.25	5.86	250.56
QHB	111.36	12.12	5.86	129.34
Total	**337.52**	**42.37**	**11.71**	**379.89**

Table 6

28. Table 7 total shows the recommended clinical wte by applying the Birthrate Plus methodology and this figure will contain the contribution from Band 3 MSWs providing postnatal care in hospital and community.

Comparisons with BR+ recommended wte	Funded Establishment bands 3-7	BR+ recommended bands 3-7 **Based on 19/20 births**	Variance Bands 3-7
RDH	250.56	257.12	-6.57
QHB	129.34	134.94	-5.60

Table 7

29. Table 8 sets out the number of clinical wte, bands 3-7, required based on 2020/21 activity.

Comparisons with BR+ recommended wte	Funded Establishment bands 3-7	BR+ recommended bands 3-7 **Based on 20/21 births**	Variance Bands 3-7
RDH	250.56	256.07	-5.52
QHB	129.34	130.15	-0.82

Table 8

30. Some of the clinical wte can be suitably qualified support staff working in postnatal services. It is a local management decision as to the actual adjustment but usually around 10% can be MSWs.

31. The recommended total clinical establishment does not include the following roles:

- Director and Head of Midwifery, Deputy Head & Matrons/managers with additional hours for team leaders to participate in strategic planning & wider Trust business
- Additional time for specialist midwives to undertake audits, training of staff, etc.
- Practice Development
- Supervision –PMA role
- Clinical Governance
- Bereavement role
- Perinatal Mental Health
- IT role

32. The above additional roles can be included based on adding in 9% of the total clinical establishment, as in the recent baseline. Applying an agreed % avoids duplication of roles irrespective of which midwives undertake the non-clinical duties.

33. Comparisons were made with the current funded establishment as per table below.

Comparison of Birthrate Plus recommended WTE and Current Funded

Comparisons with BR+ recommended wte	Funded Establishment non clinical and Management roles	BR+ recommended wte	Variance
Based on 2019/20 activity	24.89	35.29	-10.40
Based on 2020/21 activity	24.89	34.76	-9.87

Table 9

34. The Birthrate Plus clinical wte can be adjusted for skill mix so that some of the postnatal care is provided by suitably qualified support staff band 3s in hospital and community with an average of 10% usually applied:

35. In addition to the postnatal MSWs who can be part of the clinical midwifery total wte, there is a requirement for Band 2s and 3s in delivery suite, on the maternity ward and in outpatients' clinics. Assessing the numbers required is a management decision as it is not feasible to apply a clinical dependency method.

Summary of Results

36. At The Royal Derby Hospital, based on 2019/20 activity and a 24% uplift, the clinical total recommended is 257.12wte, of this 231.41wte are bands 5-7 and 25.71wte band 3 MSWs indicating a shortfall of 6.57

37. Based on 2020/21 activity at RDH and a 24% uplift, the clinical total recommended is 256.07wte, of this 230.46wte are bands 5-7 and 25.61wte band 3 indicating a shortfall of 5.52.

38. At Queens Hospital Burton, based on 2019/20 activity and a 24% uplift, the clinical total recommended is 134.94wte, of this 121.45wte are bands 5-7 and 13.49wte band 3 indicating a shortfall of 5.60

39. Based on 2020/21 activity at QHB and a 24% uplift, the clinical total recommended is 130.15wte, of this 117.14wte are bands 5-7 and 13.02wte band 3 indicating a shortfall of 0.82

40. Based on 2019/20 activity at UHDB, the total workforce requirements for bands 3-8, including clinical and non-clinical and managements is 427.35wte indicating a shortfall of 22.57wte

41. Based on 2020/21 activity at UDBH, the total workforce requirements for bands 3-8 including clinical and non-clinical management is 420.98we indicating a shortfall of 16.20wte.

Summary of staffing required for Core Services and Continuity of Care (CoC)

42. The baseline staffing as presented above has been reassessed to provide staffing for caseload/continuity teams and core services.

43. The women allocated to a caseload team includes women who will birth in hospital or at home.

44. The number of women eligible for allocating to a continuity pathway is adjusted, based on annual exports and imports as shown in Table 10 and activity for 2020/21.

Activity 2020/21	RHD	QHB
Annual Births	5604	2995
Community Exports	377	402
Total number of women eligible for CoC	**5227**	**2593**
Community Imports	2835	1199

Number of women eligible for CoC Table 10

45. There are women who give birth and are transferred to neighbouring units for their community care so cannot be included in the total for calculating the CoC pathway.

46. For the workforce baseline, there are women who birth in neighbouring units but receive their community care from UHDB midwives, so at present are excluded from working out the % receiving CoC.

47. It is likely that some women will require additional input from D/S core staff and likely have a postnatal ward stay which are factored into the core staffing for both units. For the draft figures and simplicity, it has been estimated that of the 20% of women may require I/P care from core staff, although this may primarily be from the higher risk caseloads and 90% to the ward although these are an approximation.

48. Table 11 shows the annual total of women 'booked' to birth as core or caseload teams although an adjustment has been made to the staffing for 20% of caseload women to be supported by core staff during their intrapartum episode.

RDH	**Baseline**	**35% CoC**	**51% CoC**
Core Births (DS/MLU/Home)	5604	3775	2938
Births - Caseload Teams (DS/MLU/Home)	0	1829	2666

RDH Incremental Increase of Caseload Births 35% -51% Table 11

QHB	**Baseline**	**35% CoC**	**51% CoC**
Core Births (DS/MS/Home)	2995	2087	1673
Births - Caseload Teams (DS/MS/Home)	0	908	1322

QHB Incremental Increase of Caseload Births 30% -51% Table 12

49. Core staffing for hospital is calculated to ensure adequate staffing on D/S including non-birthing activity for women not in a CoC model and the likelihood that some of the CoC women will transfer to the obstetric model; antenatal including IOLs, and postnatal ward care is provided by 'core staff' and allowing for transfer of women from the CoC Teams, and Triage, Outpatients Clinics and Day Unit remaining as in the baseline workforce. That some of the CoC women may see their CoC midwife in hospital clinics is included in the ratio for the specific team, and not deducted from core staffing.

50. Table 13 show the clinical staffing of midwives and postnatal MSWs for core services in hospital and community and caseload teams for 35% and 51%.

RDH	Baseline	35% CoC	51% CoC
Core Hospital			
Delivery Suite	71.82	56.18	48.63
AMU	14.72	10.06	7.83
Maternity Ward	64.72	58.83	57.07
Outpatients/MAU	27.80	27.80	27.80
Core Community	74.65	56.10	47.24
Caseload Teams ***(includes Home Births)***		57.06	83.15
Total Clinical wte PN Band 3s to MW Band 7s	**256.07**	**265.94**	**271.71**
Clinical Variance from baseline	**0.00**	**9.89**	**15.66**

Staffing required for incremental increase 35% and 51% Table 13

51. Some of the total wte will be MSWs in postnatal services and consideration must be given to how the baseline 10% allocation to the hospital and community is deployed with the core staffing reducing. MSWs attached to the caseload teams will be in addition to the midwives. If 10% is still applied, then some of this total will be for the Teams and the remainder split between the postnatal ward and core community. Care must be taken not to apply 10% to only Core staffing as this may reduce the midwifery total to an inappropriate level. Professional and management judgement will assist with a suitable allocation.

52. An additional 9% should be added to the clinical total wte for the specialist and management roles as explained in point 31.

53. Table 14 shows the staffing for the QHB baseline as current services and with increments for 35% and 51% continuity/caseload teams.

QHB	Baseline	35% CoC	51% CoC
Core Hospital			
Delivery Suite	38.12	31.75	27.58
Maternity Ward	32.25	32.15	31.03
Outpatients/MAU	17.13	17.13	17.13
Core Community	33.96	26.01	21.64
SJ FMU Births	7.85		
SJ clinics/Anti D	0.63	0.63	0.63
Caseload Teams *(includes FMU and Home Birth)*		28.31	41.25
Total Clinical wte PN Band 3s to MW Band 7s	**130.14**	**135.98**	**139.25**
Clinical Variance from baseline		**5.84**	**9.11**

Staffing required for incremental increase 35% and 51% Table 14

54. The projections are to show the possible increase required, but there will be changes to services such as reduction or increase in births and/or community cases, setting up of new clinics, etc., that will also influence the workforce.

55. The actual deployment of staff is a local decision and the allocation into the caseload teams is well established for the current teams and planned for the next stage.

56. The report clarifies the workforce for core services as appropriate staffing will help to deal with the fluctuations in hospital workload and enable the caseload teams to work efficiently.

57. Table 15 sets out the total staff required to reach 51% CoC and additional clinical staff required, this is inclusive of Postnatal MSWs, Clinical, Specialist Midwives. An additional 9% should be added to the total to calculate the overall management and non-clinical staff.

RHD	BIRTHRATE PLUS WTE Bands 3 to 7	CURRENT FUNDED WTE Bands 3 to 7	VARIANCE
Current Staffing	256.07	250.56	-5.51
Core Services and with Continuity Teams at 35%	265.94	250.56	-15.38
Core Services and with Continuity Teams at 51%	271.71	250.56	-21.15

Additional WTE required to meet 51% CoC Table 15

58. Table 16 sets out the total staff required to reach 51% CoC and additional staff required, this is inclusive of Postnatal MSWs, Clinical, Specialist Midwives.

QHB	BIRTHRATE PLUS WTE Bands 3 to 7	CURRENT FUNDED WTE Bands 3 to 7	VARIANCE
Current Staffing	130.14	129.34	-0.88
Core Services and with Continuity Teams at 35%	135.98	129.34	-6.64
Core Services and with Continuity Teams at 51%	139.25	129.34	-9.91

Additional WTE required to meet 51% CoC Table 16

Appendix 1

Method for Classifying Birthrate Plus® Categories by Scoring Clinical Factors in the Process and Outcome of Labour and Delivery

There are five [5] categories for mothers who have given birth during their time in the delivery suite [Categories I – V)

CATEGORY I Score = 6

This is the most normal and healthy outcome possible. A woman is defined as Category I [*lowest level of dependency*] if: The woman's pregnancy is of 37 weeks' gestation or more, she is in labour for 8 hours or less; she achieves a normal delivery with an intact perineum; her baby has an Apgar score of 8+; and weighs more than 2.5kg; and she does not require or receive any further treatment and/or monitoring

CATEGORY II Score = 7 – 9

This is also a normal outcome, very similar to Category I, but usually with the perineal tear [score 2], or a length of labour of more than 8 hours [score 2]. IV Infusion [score 2] may also fall into this category if no other intervention. However, if more than one of these events happens, then the mother and baby outcome would be in Category III.

CATEGORY III Score = 10 – 13

Moderate risk/need such as Induction of Labour with syntocinon, instrumental deliveries will fall into this category, as may continuous fetal monitoring. Women having an instrumental delivery with an epidural, and/or syntocinon may become a Category IV.

CATEGORY IV Score = 14 –18

More complicated cases affecting mother and/or baby will be in this category, such as elective caesarean section; pre-term births; low Apgar and birth weight. Women having epidural for pain relief and a normal delivery will also be Category IV, as will those having a straightforward instrumental delivery.

CATEGORY V Score = 19 *or more*

This score is reached when the mother and/or baby require a very high degree of support or intervention, such as, emergency section, associated medical problem such as diabetes, stillbirth or multiple pregnancy, as well as unexpected intensive care needs post-delivery. Some women who require emergency anaesthetic for retained placenta or suture of third degree tear may be in this category.