

THE BRADFORD TEACHING HOSPITAL NHS FOUNDATION TRUST

MIDWIFERY WORKFORCE REPORT

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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 Maternity Services for inclusion within 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 are 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 antenatal 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. The results are based on 3 months' casemix from November 2020 to January 2021 and average annual activity based on data from 2-19/20.
2. Allowances of 22% uplift and 12.5% community travel are included in the draft staffing figures.
3. Total Births are 5370 of which:
 - 4170 are on the Delivery Suite and in Obstetric Theatres
 - 1099 in Bradford Birth Centre
 - 101 at home
4. The Birthrate Plus® staffing is based on the activity and methodology rather than on where women may be seen &/or which midwives provide the care.
5. 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.

6. The casemix (Table 1) indicates that 60% of women are in the 2 higher categories IV and V which slightly 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.

Birthrate Plus Category	I	II	III	IV	V
2020 % Casemix	6.1	16.8	17.2	23.9	36.0
	40.1%			59.9%	
2017 % casemix	46.0%			54.0%	

Table 1

7. 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.
8. The 2017 workforce report applied a lower casemix, but 2020 data shows an increase in acuity of mothers and babies, as experienced by all maternity services in the past 4 years. Table 1 shows the decrease in the lower 3 categories and an increase of 6% in Categories IV and V.
9. Annually, 456 antenatal cases are seen on delivery suite as the women require one to one care and are often warded for ongoing observation and monitoring.
10. Inductions of labour (prostin/propess) are based on the annual number of doses (1612) administered so will be less women. The staffing is allocated to the Delivery Suite (20%) and 80% to M3.
11. Bradford Birth Centre provides intrapartum care to 1099 women and postnatal care and NIPE to 637 as 462 women require transfer to the postnatal ward. In addition, it has high 'triage' activity both in attendances and phone calls. 536 women start their intrapartum episode in BBC but require transfer to DS at some stage.
12. 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 1315 admission episodes to the ward excluding inductions and elective sections.

13. The 'extra care babies' of 320 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.
14. Staffing is included for the majority of babies to have their NIPE carried out by a midwife. NIPE for birth centre and home births and is routinely included.
15. The staffing for Maternity Assessment Centre/Triage is based on having 7 days a week service with support for telephone triage is 24 hours. A total of 11250 annual episodes are seen in MAC.
16. The staffing for Antenatal Day Unit is based on having 5 days a week service. A total of 4620 annual episodes are seen in MAC.
17. Outpatient Clinics are based on session times and numbers of staff to cover these based on management decision, rather than on a dependency classification and average hours. It is not feasible to produce an accurate scoring system for women who attend outpatients, nor is it possible to produce average times per attendance that cover the clinical care given. Clinics need to be staffed from the time of the 1st appointment to when the last woman has left and to include the administration of clinic. Outpatient activity can be planned ahead, and appropriate staffing allocated.

Professional judgement from the senior midwives is a valid method to apply when assessing the length of clinic sessions and numbers of staff required.
18. The total community cases (women having ante & postnatal care) are 5557 plus 101 home births.
19. There are 156 women who birth in Bradford but are from out of area so receive their community care from neighbouring Trusts.
20. There are 444 women who birth elsewhere but are within the local population for the Trust so have their full community care from Bradford midwives.
21. In addition, there are 928 women who do not complete pregnancy or move out of area (attrition cases).
22. Additional staffing for significant safeguarding is included in the community.

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

23. The staffing is based on 29% of women booked in one of the caseload/continuity teams and the remaining births within core services.
24. The total recommended clinical wte applying the Birthrate Plus methodology is 238.63wte and this figure will contain the contribution from Band 3 MSWs in community postnatal services.
25. 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 an estimated 23.86wte can be MSWs.
26. The recommended total clinical establishment does not include the following roles:
 - Head of Midwifery & Matrons with additional hours for Band 7 ward managers and team leaders to participate in strategic planning & wider Trust business
 - Practice Educator role
 - Risk and Governance role
 - Time for Baby Friendly Initiative, which is not to assist women with breast feeding, but to produce & monitor guidelines & undertake audits
 - Additional hours for antenatal screening over & above the time provided in actual clinics
 - Additional time for specialist midwives to undertake audits, train midwives, prepare information for women
 - Coordination for such work as Safeguarding Children
 - Clinical Practice and Development
 - Professional Midwifery Advocates
27. The above additional roles can be included based on adding in 9% of the total clinical establishment, as in the recent baseline. This equates to 21.48. Applying an agreed % avoids duplication of roles irrespective of which midwives undertake the non-clinical duties.
28. 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.

29. The CoC model is represented by allocating an estimated total of 1512 (29%) women into one of the caseload teams based on the women receiving continuity. This includes women who will birth in hospital or at home. The total number of eligible women is 5214.
30. Note that the total number of women delivered in hospital is 5269 but of these, 156 women are transferred to neighbouring units for their community care so cannot be included in the total for calculating the CoC pathway.
31. For the workforce baseline, there are 444 women who birthed in neighbouring units but receive their community care from Bradford's midwives, so at present are excluded from working out the % receiving CoC.
32. 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 and can be
33. Core hospital staffing 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.

Staffing based on 29% of women being on a CoC Pathway (Current Baseline)

BRADFORD TEACHING HOSPITAL NHS FT		
	Annual estimate	WTE
Caseload Teams	1512	48.10
Core activity and staffing		150.15
<ul style="list-style-type: none"> I/P care inc. A/N cases I/P transfers from CoC Teams (20%) 	3053 302	47.51
<ul style="list-style-type: none"> BBC 	805	14.79
<ul style="list-style-type: none"> P/N Care (includes A/N & IOLs) P/N transfers from CoC teams (90%) 	3053 1361	58.13
<ul style="list-style-type: none"> Outpatients Services/DAU/MAC 		29.71
<ul style="list-style-type: none"> Community (includes attrition cases & additional safeguarding) 	4146	40.37
Total Clinical wte	238.62wte	
Additional Senior Management and Specialist midwives	21.48wte	
Total WTE for clinical, specialist and management	260.10wte	

Table 2

34. To achieve the 35% target as per Better Births will mean that 1825 women can be booked onto a continuity pathway increasing the number in the geographical teams. Table 3 shows the projected staffing to achieve 35%.

Staffing based on 35% of women being on a CoC Pathway

BRADFORD TEACHING HOSPITAL NHS FT		
Caseload Teams	Annual estimate	WTE
	1825	57.11
Core activity and staffing		146.13
<ul style="list-style-type: none"> I/P care inc. A/N cases I/P transfers from CoC Teams (20%) 	2806 365	44.95
<ul style="list-style-type: none"> BBC 	739	13.59
<ul style="list-style-type: none"> P/N Care (includes A/N & IOLs) P/N transfers from CoC teams (90%) 	2806 1642	57.88
<ul style="list-style-type: none"> Outpatients Services/DAU/MAC 		29.71
<ul style="list-style-type: none"> Community (includes attrition cases & additional safeguarding) 	3833	37.46
Total Clinical wte	240.70wte	
Additional Senior Management and Specialist midwives	21.66wte	
Total WTE for clinical, specialist and management	262.36wte	

Table 3

35. Calculating for achieving 35% Continuity as described above requires an additional 2.25wte.

36. To achieve the 51% target as per Better Births will mean that 2659 women can be booked onto a continuity pathway increasing the number in the geographical teams. Table 4 shows the projected staffing to achieve 51%.

Staffing based on 51% of women being on a CoC Pathway

BRADFORD TEACHING HOSPITAL NHS FT		
	Annual estimate	WTE
Caseload Teams	2659	83.22
Core activity and staffing		135.42
<ul style="list-style-type: none"> I/P care inc. A/N cases I/P transfers from CoC Teams (20%) 	2145 532	38.13
<ul style="list-style-type: none"> BBC 	565	10.39
<ul style="list-style-type: none"> P/N Care (includes A/N & IOLs) P/N transfers from CoC teams (90%) 	2145 2393	57.19
<ul style="list-style-type: none"> Outpatients Services/DAU/MAC 		29.71
<ul style="list-style-type: none"> Community (includes attrition cases & additional safeguarding) 	2999	29.65
Total Clinical wte	248.29wte	
Additional Senior Management and Specialist midwives	22.35wte	
Total WTE for clinical, specialist and management	270.64wte	

Table 4

37. Calculating for achieving 51% Continuity as described above requires an additional 10.53wte.

38. To achieve the 100% target based on 2021/22 priorities and operational planning guidance: Implementation guidance (NHS England, March 21) will mean that 5214 women can be booked onto a continuity pathway increasing the number in the geographical teams. Table 5 shows the projected staffing to achieve 100%.

Staffing based on 100% of women being on a CoC Pathway

BRADFORD TEACHING HOSPITAL NHS FT		
	Annual estimate	WTE
Caseload Teams	5214	156.21
Core activity and staffing		100.46
<ul style="list-style-type: none"> I/P care inc. A/N cases I/P transfers from CoC Teams (20%) 		17.22
<ul style="list-style-type: none"> BBC 		0.60
<ul style="list-style-type: none"> P/N Care (includes A/N & IOLs) P/N transfers from CoC teams (90%) 		47.19
<ul style="list-style-type: none"> Outpatients Services/DAU/MAC 		29.71
<ul style="list-style-type: none"> Community (includes attrition cases & additional safeguarding) 		5.74
Total Clinical wte	256.67wte	
Additional Senior Management and Specialist midwives	23.10wte	
Total WTE for clinical, specialist and management	279.77wte	

Table 5

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

	BIRTHRATE PLUS WTE Bands 3 to 8	CURRENT FUNDED WTE Bands 3 to 8	VARIANCE
Core Services and with Continuity Teams at 29%	260.10	247.56	-12.54
Core Services and with Continuity Teams at 35%	262.36	247.56	-14.80
Core Services and with Continuity Teams at 51%	270.64	247.56	-23.08
Core Services and with Continuity Teams at 100%	279.77	247.56	-32.21

Table 6

39. Table 6 summarises the staffing based on an incremental approach.
40. The projections on 35% / 51% / 100% are to show the expected increase required based on 2021/22 priorities and operational planning guidance: Implementation guidance (NHS England, March 21). 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.
41. 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.
42. 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

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.