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An Organisational Study of Alongside Midwifery Units: a follow-on study from the Birthplace in England Programme

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1. Aims/Objectives:

The aim of this study is to investigate questions emerging from the current Birthplace study about how care is provided in Alongside Midwifery Units (AMUs), to offer effective, equitable and safe choices of birth care to women and their partners, including staffing and management of the units.

The primary research questions are:

1. How are Alongside Midwifery Units (AMUs) organised, staffed and managed in order to seek to provide safe and high quality care on a sustainable basis?

2. What are the professional and service user perceptions and experiences of care in Alongside Midwifery Units?

Objectives:

- identification and analysis of potential unanticipated as well as intended consequences of AMU development, including system effects
- identification and analysis of models of organisation, culture and staffing that address such aims and challenges
- development of a typology of AMU models and clarify definitions
- analysis of how AMU developments can respond to current policy directions, including potential role in Maternity Care Networks and provision of choice to women and to healthcare staff

2. Background:

This study aims to explore the specific function of those midwife-led units that are situated close to – often in the same building, or at least on the same campus – as an obstetric unit. 'Alongside midwife led units' or 'AMUs' (commonly also referred to as hospital birth centres) provide midwife-led care for women who are deemed 'low-risk' at the start of labour care. Rates of birth in Alongside Midwife Units (AMUs) have risen from 0% in 1995-96 to 7% in 2005-06 (ONS 2007) and Maternity Matters (DH 2007) identified that all women should have a choice of place of birth by 2009, including access to an AMU. Other recent policy drives to encourage the further development of such units have intended to use AMUs to increase midwife staff satisfaction and retention, and maternal choice, as well as to facilitate opportunities for 'normal' birth for women of low obstetric risk.

A range of service-specific and national policy initiatives are driving changes in the organisation and delivery of maternity care more widely. These changes are collectively directing policy in favour of AMUs. The Department of Health's National Service Framework (DH 2005) emphasised the importance of choice, continuity and control for women in maternity care, and advocated more targeted approaches to ensure a safe and high quality service. Additionally, the Changing Workforce Programme, revisions to medical training, the European Working Time Directive, maternity staffing standards and neonatal service reconfigurations are all altering the configuration of maternity units, professional practice boundaries, skill mix and

relationships, including the introduction of support workers and the promotion of midwifery led care (NHS Confederation 2004, RCOG et al 2007). The Maternity Standard of the NSF specified that service providers and Trusts ensure that '…options for midwife-led care will include midwife-led units in the community or on a hospital site.' Care is to be provided in a '…framework which enables easy and early transfer of women and babies who unexpectedly require specialist care'. AMUs are therefore increasingly relevant to the configuration of maternity services currently under consideration in England. They have the potential to deliver responsive and effective high quality care but there remains a lack of evidence to inform these processes and the ways in which AMUs operate requires greater scrutiny.

However, the limited previous research that has focussed on AMUs has uncovered a number of questions about their function, particularly in the long term. The recent Health Care Commission review and Birthplace Mapping Study (HCC 2008) highlighted the ad-hoc nature of the development of AMUs, with a number opening and closing, challenges in developing useable data systems and lack of agreed definitions, eligibility, staffing or operational criteria.

Clinical outcomes

A Cochrane review of RCTs of home-like settings for birth (Hodnett et al. 2005) showed that women who give birth in AMUs experienced significantly greater satisfaction with care, reduced rate of intra-partum analgesia, lower risk of augmentation in labour; and lower risk of operative delivery than women delivering in conventional settings, but also a non-statistically significant trend towards higher perinatal mortality. This trend raises important questions. A focus on normality may have a negative impact on the ability of caregivers and childbearing women to detect, act upon, and/or receive assistance with complications. Other possible causes include poor communication between the staff in the two settings, inter-unit rivalries, and/or delays in detection and intervention. However, variation among trials, wide variations in trial size, the low number of women allocated to home-like settings who actually gave birth in their allocated setting all mean it has been impossible to draw firm conclusions about the relative outcomes of AMU births. The variations in organizational models of care in the trials is another important factor that complicates interpretation of the results of the existing quantitative evidence. The forthcoming findings of the Birthplace in England Prospective Cohort Study will provide some much needed evidence on the relative outcomes for 'low risk' women who plan birth in AMUs.

Organisational factors

A recent small-scale study by Huber and Sandall (2007) of intrapartum referral, handover and transfer in an AMU identified a number of organisational issues to be addressed in further research. Rather than promoting safe and effective co-working and transfer, the physical proximity of the units appeared to engender competition around physical and human resources, confusion and conflict around responsibility. Clashes of philosophy, rather than shared understandings or protocols also formed barriers to teamworking and effective communication. This study indicates the need to explore approaches to staff deployment, management and training, clear guidelines and inter-professional communication that can avoid such problems arising. It echoed findings of the few earlier studies of transfer indicating that organisational and staffing or cultural issues may be of major importance to quality and safety. Similar issues have been identified in Rayment's (2011) doctoral study of midwives' comparative experiences of working in an AMU and an obstetric unit. Few

studies of transfer have focused on transfers within hospital sites, but a study of home birth transfers in two cultures, indicated that organisational and attitudinal factors were a primary cause for concern, rather than the more technical transport issues (Davis-Floyd 2003). A case study of an AMU, conducted as part of a wider study of implementation of protocol-based care indicated that while benefits were observed in terms of satisfaction and midwifery team working within the birth centre, there were also unintended consequences – specifically more negative relationships with obstetric and other midwifery colleagues, which could have an impact on overall quality of care (Bick et al. 2009). This study also highlighted, but did not investigate the key role of managers and management approaches in such developments .

While few studies have been conducted of AMUs, enquiries into safety problems in Freestanding Midwife Units and in Obstetric Units have indicated that even where formal systems – such as staffing levels and mix – appear well functioning, problems in the informal operation of those systems may arise. These may be as a result of factors such as poor inter-professional teamworking, management and training limitations, failure to consistently implement agreed guidelines or the effect of economic and political conerns on clinical decision-making. These all lead to quality and safety concerns (Garland et al. 2004, HCC 2005). Additionally, little is known about the effect on the obstetric unit or on women with higher risk of developing separate places with different philosophies of care.

Although substantive literature on AMUs is very limited to date, the wider and theoretical literature points to the importance of structural and systemic features of health care systems, and organisational culture as well as formal organisation. It suggests that power play and local cultures may strongly affect risk and safety within healthcare institutions and that inter-personal or professional issues may influence behaviour and decision-making amongst healthcare professionals (Rayment 2011, Silbey 2009, West 2000). Vaughan's study of healthcare organisation, for example, posited 'structural secrecy' – inherent barriers or resistance to communication – as an important source of danger in complex systems and Vaughan proposed that social organisation in itself (rather than merely the actions or omissions of individuals, or technical systems in isolation from social systems) forms a source of safety or danger (Vaughan 1999). The theoretical and substantive literature points to the need to examine the environment and processes of care, looking at different areas of activity and different professional groups as part of a complex system, rather than in isolation (Silbey 2009).

3. Need:

The review above has uncovered a number of questions about the impact of competing philosophical, political, and administrative pressures on the operation of home-like settings and these questions require qualitative investigation. The findings from our current research on Birthplace and within Kings College London's PSSQ highlight the importance of examining the whole journey through the care system when escalation is needed. For example investigating the timeliness and appropriateness of assessment in tertiary referral centres once care has been escalated. This has been highlighted as a particular problem in maternity care and transfer from midwifery to obstetric care. The management of such boundaries (geographical, professional, spatial) were a particular focus in our current Birthplace research, and will remain so in this study of AMUs, where such issues have received less attention compared to boundary issues with freestanding MLUs and home births.

In the light of these policy initiatives and previous research findings, this study aims to clarify the experiences of existing AMUs that impact on their function: for example preparation and planning, staffing, management, organisational culture, inter-professional relationships and access for women, in order to better prepare Trusts for opening AMUs in the future and therefore help to make such units sustainable in the future.

4. Methods:

a. Setting

Our case study sites have been purposively selected to represent maximum variation amongst AMUs. The criteria for the purposive sampling are based on key research aims and questions that build strongly on the emerging findings of the current Birthplace Programme, and the questions they pose. Our key criteria, therefore, are: size of unit; geographical/regional location; age of unit; staffing model and deployment (including grade mix, core or rotating staff, midwifery models, use of support workers); management approach and leadership (formal arrangements and style).

b. Design

The proposed study will use an organisational ethnography approach (Hunter 2007, Øvretveit 1998). Since there is very little prior research on this topic, small-scale but in-depth qualitative case studies are most appropriate and will also inform future larger scale development and research (Stake 1994). The ethnographic approach is particularly suited to more exploratory phases of research. It can provide a rich description and analysis of service models, which can inform service managers, commissioners and practitioners about how to develop and provide care effectively in such settings. This approach includes a range of data collection methods. We plan to conduct initial interviews with key stakeholders such as senior managers and consumer representatives and gather relevant service documents for analysis. This will be followed by observation of key points in the service where decisions are made and information or care transferred. Interviews will be conducted with women and their birth partners, and with relevant professionals.

The use of visual methods such as photography is growing in the social sciences and provides a way of collecting rich information about how participants use the spaces they work within (Harper 2002). We will offer participant healthcare practitioners the opportunity to take photographs of the important spaces and objects in their work before interviews and use these as triggers for interview discussions.

A framework approach to analysis will be utilised (Ritchie et al. 2003), building on the current Birthplace Organisational Case studies, the clinical findings of the Birthplace Cohort Study and previous literature to generate questions, observation and topic guides, and to provide an initial coding framework for analysis. Further analysis will be thematic and will be conducted continuously so that initial findings from each stage help to guide and focus the next stage, and to inform sampling decisions. Findings will be fed back to local service providers at appropriate points, in interactive workshops, as well as being disseminated more widely.

c. Data collection

i) *Documentary analysis: Service delivery and configuration*

Key documents relevant to the study will be obtained and analysed, where possible prior to site visits and interviews, where questions arising from the analysis can be followed up.

A checklist of key questions will be used to guide the analysis, which will be used to provide:

- an initial description of the background, configuration and organisation of the service
- key questions and queries for discussion during site visits

Key documents for review will include:

- service planning, consultation and reconfiguration documents
- eligibility criteria for AMU care
- unit protocols
- any formal care pathways or algorithms in use
- any transfer protocols in use
- any safety and risk management tools in use
- Risk meeting agendas and notes and memos

The subsequent site visits may also identify further documents to be reviewed.

ii) Interviews with key stakeholders

Interviews will be conducted with key stakeholders such as service managers, commissioners and user representatives. These will use a semi-structured approach, but respondents may be sent a questionnaire to complete prior to the interview to help prepare and to provide more structured information on aspects of the local service. The analysis of these interviews will inform our sampling and topic guides for the phases of the study to follow and will provide key data on the background and history, as well as the current service configuration and its rationale and aims.

The interview sample will be refined based on each case but is likely to include as a minimum:

- Clinical director and Chief Nurse
- Clinical lead obstetrics
- Obstetricians
- Clinical neonatology lead
- Obstetric unit midwives
- Head of Midwifery
- Consultant midwife
- Supervisors of Midwives
- Service commissioners
- MSLC members, including lay members
- Local consumer representatives
- Key managers or personnel involved with transfer services and risk management

Questions and topics will include:

- service configuration, including consultations, service reconfigurations or developments and reasons for these

- details of service configuration and organisation, including workforce arrangements, skill mix, models of care and escalation/transfer services and protocols
- any current plans for change or development and reasons for these

iii) Observation of key 'moments' in the service

Detailed observation will be conducted of selected aspects of the service, at key locations and times. We will focus particularly on points of transfer of information and people, and will include, for example, staff handover meetings, antenatal assessment and discussion of options, transfers of women from AMU to labour ward and transfers of staff between areas. The observations will be conducted before interviews with staff and service users take place, and will inform the interview questions. However, there should be flexibility in the approach so that, where appropriate, selected observations can be made to explore further issues raised during the interviews.

As the time available for each case study is limited, this observation will not take the form of a conventional (usually long-term and unstructured) participant observation. Instead, more structured and time limited forms of non-participant observation will be used. Researchers will observe for specified time slots at key locations, which represent points of interface and decision-making in the service. This approach has been used effectively and economically in work-sampling studies of maternity care, and has been used to study levels of supportive care (McNiven et al. 1992).

iv) Interviews with professionals

Interviews will be conducted with a purposive sample of service providers in each case study. These should be determined in the light of each case study context but should include a selection of midwives and maternity care assistants/support workers, general practitioners, obstetricians, anaesthetists and paediatricians working in related units.

The interviews will in most cases be individual, but for certain staff groups (such as midwives working in a particular unit) it may prove more appropriate to arrange discussion meetings with a group of staff. Where group discussions are used, these should be in peer-groups to facilitate open and balanced discussion.

The interviews will use a semi-structured approach, as they will seek open views as well as responses to more focused questions developed through the earlier phases of the Programme, literature review and documentary analysis. The interview questions will also be guided by the observations conducted by the researchers and the choices of the participants. However, these are likely to include their views on:

- experiences of working on or in relation to the alongside midwife-led unit
- service organisation, including workforce arrangements, skill mix, models of care and escalation/transfer services and protocols
- facilitators and barriers to choice of place of birth in different settings for low-risk women
- facilitators and barriers for professionals working in different birth settings
- training provision and needs for staff working in different birth settings
- management and staff support and development arrangements
- any local, contextual or organisational factors impacting on quality of care and staff or user satisfaction

All interviews (service users and providers or stakeholders) will be audio-taped, with permission and transcribed in full. Interviews will be conducted in the venue chosen by the participant.

Front line clinical staff who agree to participate in interviews will be offered the opportunity to use a camera to take photographs of the spaces in which they work before the interview. These photographs will be used as prompts to guide the interview discussion (Harper 2002, Leap, Sandall et al 2009, Meo 2010). Participants will be encouraged to not take identifiable photographs of colleagues or patients in order to protect the anonymity of others.

The data from these interviews will build on the analysis of relevant findings from the Birthplace Progamme, in particular the national mapping study and the organisational case studies. This will also provide a broader context to these selected study sites.

v) Interviews with service users and their birth partners

Women's experiences and pathways through care will be explored using individual semi-structured interviews with women and (where appropriate) their partners. Women will, therefore, be encouraged to 'tell the story' of their maternity experience. However, to ensure key study questions are addressed, an interview topic guide and prompts will include the following:

- women's pathways through care, including choices offered and made and any change of plans or referrals
- (how) did they choose to give birth in the AMU?
- their experience of maternity care, with particular focus on the alongside-midwife-unit birth setting
- experiences of birth complications and escalation or transfer of care
- experiences of any transfers of care or setting for organisational reasons, or personal choice
- wishes for future births

Qualitative interviews will be conducted with a range of women and their partners including those recruited from hard to reach community groups via local networks and facilitated by local link-workers where necessary. Their experience of care will be assessed with a sample of all 'low-risk' women who have given birth within the selected sites over a 6 month period prior to the fieldwork, with an emphasis on women who intended to give birth in AMUs at the onset of labour, or women who were offered the option of AMU care. We will include a sample of women who required transfer from AMU to OU care during labour and women who wished to plan birth in the AMU but were denied entry because of existing risk factors. Numbers of interviews will be decided during fieldwork in order to ensure a wide sample of women and using the principle of data saturation. However, based on experience of previous studies using this approach, we would anticipate up to about 20 interviews in each case study.

d. Data analysis

Interview data, and the less structured elements of the observation data will be analysed initially using a Framework Approach (Ritchie et al. 2003). A coding framework will be developed based on the analysis and emerging findings of the Birthplace study and further questions posed by this. In a framework approach, the prior coding frame is applied and tested, by informing study questions and by

mapping against the data, but a thematic approach is then incorporated, using open coding to identify and explore newly developing themes, and progressing to both axial and selective coding to identify key themes and categories. Qualitative data analysis software will be used to facilitate systematic and rigorous analysis. This will build in the existing data set established using NVivo8. Data analysis will initially be largely on a within site basis, but will be followed by cross-site analysis to generate themes that may be applicable more widely. Analysis will be continuous, and the concept of saturation of themes emerging from the data will guide the numbers of interviews and observations to be conducted in each site.

Ethical considerations

The ethical requirements of in-depth case-study research are complex. Although clear plans can be drawn up, this approach requires a certain level of open-ness and flexibility, particularly in the early stages of the work. This kind of research may also require ongoing negotiated consent, rather than simply relying on one-off initial consent, because of the use of observation. It is vital that all participants, whether practitioners or service users, feel no pressure to participate and are clear that consent to continue can be withdrawn at any stage. Research involving observation also requires particular care regarding protection of the privacy, dignity and anonymity of research participants. Information sheets will be displayed prominently and circulated widely within the case study sites, since a number of service users and providers may be peripherally involved in the observation aspects of the study (i.e not the focus but present in an area being observed). Participants who take part in photographic data collection will be asked to avoid taking photos that may identify colleagues, women or their families.

5. Project Management:

Plan of investigation and timetable

Data gathering will be conducted in two sites concurrently, with potential for further overlap in time if needed. JR and SR will take primary responsibility for data collections in two case study sites, but they will work closely together, meeting weekly and working together on data collection and analysis as needed. Project meetings of the whole co-investigator team and researchers will take place monthly, and with fortnightly meetings between JR, SR, the PI (CM) and JS (lead co-investigator).

Study timeline (2x2 case study sites concurrent)

Tasks	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18
1. Literature review	x	x	x						
2. Ethics & R&D approval	x								
3. Steering group meeting	x			x			x		x
4. Project group meeting	x	x	x	x	x	x	x	x	x
5. Documentary analysis		x	x				x	x	
6. Service observations		x	x				x	x	
7. Staff interviews		x	x	x	x				
8. Women's interviews				x	x	x	x		
9. Analysis				x	x	x	x	x	
10. Feed back, report, dissemination					x			x	x

Further dissemination events (active workshop format, conducted regionally) will be planned for the six months following this 18-month period, led by the co-investigators and with active involvement of service partners, to ensure the management lessons from the study are widely shared, on a practically useful basis.

6. Service users/public involvement:

The work will be enhanced by the active involvement of service provider and user partners, who are included as co-investigators, contributing to the design, conduct, analysis and dissemination of the work. The project steering group will also involve additional professional and service users partners, including consumer group representatives, midwives, obstetricians, GPs and commissioners. Additionally, City University Department of Midwifery has utilized the NIHR's Enabling Involvement Fund to develop an ongoing user-engagement group, which ensures that a wider range of service users are able to inform our research. The project team members have considerable prior experience of user-engagement approaches in research, having conducted collaborative enquiry groups, user-led research projects and research priority setting exercises.

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