“Normal birth at any cost” – Understanding and addressing root causes is important to promoting safety in UK maternity services

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Practices underpinned by “normal birth at any cost” are reported as a contributory factor in the failings in two UK maternity services. This has led to calls to ‘stamp out normal birth ideology’. That such an ideology should exist alarms midwives and researchers when evidence strongly points to the overuse of clinical interventions in the UK and globally. In trying to make sense of “normal birth at any cost” the on-going contentious debate on “normal birth” is discussed, three possible causes why “normal birth as any cost” occurred are outlined, and further recommendations to promote safety are proposed.

Introduction

The phrase “normal birth at any cost” was first used in the report on the failings at the Morecambe Bay maternity services in 2015. It has since been used in the preliminary findings of the Ockenden report in 2021 with reference to not only midwives, but also obstetricians. Since the failings at Morecambe Bay, the term “normal birth” has given rise to calls to, “stamp out the normal birth ideology,” with this call increasing in intensity after the Ockenden and HSCC reports.

In considered debates, two equally important standpoints are evident, firstly ethical, for example Lyerly, 2012 who questions “normality as a goal for population” stating that “it does not track well with normality as an ideal for particular women.” She points to “unintentional and untoward consequences where women who use and benefit from technology may conclude that their births are somehow less than ideal, a distance from a notion of the “good” that was either out of reach or inconsistent with their values and preferences”.1 The second is a scientific standpoint that it is important to continue to explain and develop statements about normal childbirth as birth systems evolve into a more and more medicalised process where the routine use of clinical interventions is a norm.2

Midwives in the UK embrace the ethical standpoint, while continuing to emphasise the importance of reducing the over-medicalisation of childbirth. However, what concerns midwives is the way these debates have become politicised with the media, politicians and safety campaigners, waging an increasingly vitriolic campaign without evidence that normal birth at any cost exists across the NHS, and must be “stamped out” to ensure safety. Midwifery concerns centre especially around how this will inevitably influence efforts to implement a physiological approach to labour and birth, and support the appropriate use of clinical interventions in childbirth, equally necessary for safe care (Miller et al., 2016).

Instead of “stamping out,” what is importantly needed to promote safety, is an understanding of the root causes of why “normal birth at any cost” contributed to the failings at these maternity services. This may need research, but three reasons are proposed here using current literature to aid understanding (i) Outcome-led versus process-led care (ii) Loss of skills and competence in the use of a physiological approach (iii) Birth as inherently risky versus birth as inherently physiological. Further recommendations to improve safety apart from those outlined in the three reports are proposed.
1. **Outcome-led versus process-led care**

The HSCC report (2021) on improving safety in the maternity services, states that NHS Trusts must not be penalised for high caesarean section rates, postulating that the need to reduce high section rates as one of the reasons for care underpinned by “normal birth at any cost.” The HSCC (2021) recommended:

“an immediate end to the use of total Caesarean Section percentages as a metric for maternity services, and for it to be replaced by using the Robson criteria to measure Caesarean Section rates more intelligently.”

Using the Robson criteria will enable us to understand the reasons for caesarean sections, identify and address overuse i.e. care defined here by process as opposed to care driven by the need to meet outcomes such as meeting targets for caesarean section rates that are arbitrarily set. Similarly, in order to guard against “normal birth at any cost” we need to understand care processes that support physiological labour and birth i.e. an approach that advocates being with the woman, responding to her physical and emotional needs and using clinical interventions only when problems arise. This is identified as an important area for research and work is underway to develop tools to assess these care processes.

2. **Loss of skill and competence**

The Core Competency Framework that was developed in response to the Ockenden report focuses on training in risk management. The only training that is outlined in the framework in relation to care to support a physiological labour and birth is the intermittent monitoring of the foetus. Although “normal birth at any cost” suggests that care disregarded the need for clinical interventions, several incidents described in the Ockenden report demonstrates poor decision-making and delay in the use of appropriate clinical interventions. Both reports identify the need to improve competence. However, the focus in the recommendations on training in risk management does not address the problem of a lack of competence in supporting a physiological labour and birth. A recent systematic review showed that skills and competence in the use of a physiological approach have been eroded in systems of care where the routine use of surveillance and active management of labour dominates. So, unless safe care in the UK is being conceptualised as routine surveillance and active management of labour as a standard, the education of midwives post-qualification must resource both a physiological approach and risk management.

3. **Birth as inherently risky versus birth as inherently physiological**

Even though the media, safety campaigners and politicians chose to focus on reporting “normal birth at any cost,” both the Morecambe Bay report and preliminary Ockenden report highlight the harms caused by routine clinical intervention use. In the UK normal birth rates continue to fall while caesarean section rates continue to rise. In 2019/2020, the caesarean rate was 31.5% compared to 17% in Sweden. Sweden has been held up as an example that the UK maternity service should work towards by Jeremy Hunt, the former health secretary, who headed the HSCC Committee on safety in the maternity services. In their work to explore why Sweden has sustained a low C/S rate, Panda and colleagues found that a shared
belief in physiological birth, a common goal of achieving physiological birth and providing mainly midwife-led care within a ‘team approach’ in obstetric settings helped keep their CS rate low. A physiological solution drawing on midwifery expertise was sought when problems did not require urgent clinical interventions. The culture described in these Swedish maternity services has been demonstrated in other studies in UK obstetric settings and Midwifery Led Units, as contributing to low interventions and positive experiences for women.

However, a recent review of 32 studies, 10 of which were based in the UK, found that the culture of care described by Panda et al is not reflected in most obstetric settings. Care in these settings predominantly draws on the perception of birth as inherently risky; a risk-informed approach routinely using surveillance and clinical interventions to actively manage labour and birth is implemented. Most midwives described the use of hierarchical decision-making structures to impose a risk-informed approach and a lack of respect for midwifery expertise. Efforts to implement a physiological approach was experienced by most midwives "as a struggle on a daily basis". Mavis Kirkham exposed a hierarchical ‘blame culture’ where midwives are described as reluctant to challenge or confront, and instead “do good by stealth.” She questioned whether this enables midwives to bring about collective change where a physiological approach can be normalised and openly used to support women. The recent HSCC committee report (see above) also identified a blame culture as the main cause of failings in the maternity services. It seems that little has changed since Kirkham’s study. Thus, it is important to question whether a deeply embedded blame culture, standardisation and imposition of a risk-informed approach, that contrasts so sharply with professional ideals of the midwifery profession, could have pushed some individuals to the brink, and led to the dysfunctional practice of “normal birth at all cost.”

In this context the long disregarded inter-professional education that the Ockenden report (2021) recommends that all NHS Trusts must implement is important: it offers opportunities for managers, midwives and obstetricians to understand how a positive collaborative culture can be nurtured. However, what is equally needed to spearhead change are evaluations to determine whether such education translates into practice. Such an evaluation must assess whether a physiological and risk-informed approach are drawn upon appropriately to provide care.

Conclusion

I have outlined here three important reasons why approaches to care underpinned by “normal birth at any cost” could have occurred. Some of the recommendation made by the Morecambe Bay, Ockenden and HSCC committee reports on safety in the maternity services are considered, and further recommendations to improve safety are proposed. Research is an important consideration. This is needed to test and implement tools to assess care processes in the appropriate use of a physiological and risk-informed approach, provide a greater understanding of preceptorship needs of midwives and explore in greater depth “emotion work” that midwives undertake to manage the realities of their work and its influences on their practice.

References

2. Young, D. (2009). What is Normal Childbirth, and Do We Need More Statements About It?
Working in Partnership: Collaborative Multi-Disciplinary Support and Care Planning for Women Choosing to Birth Outside of Guidelines

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Summary
Collaborative partnership working between community midwives and obstetricians enables facilitation of effective care planning for women birthing outside of guidelines. Trusting working relationships have been established, whereby community midwives and obstetricians regularly converse about women receiving shared care. Community midwives often attend obstetric clinic appointments with women, facilitating a united approach in supporting women’s choices surrounding labour care and place of birth. Obstetricians are extremely supportive of planning care outside of guidelines where women have made an informed choice. Student midwives play an active role in care planning, attending appointments with women and being part of multi-disciplinary discussions.

Introduction
Choice is imperative in maternity care, with numerous policies and legislations supporting women’s right to informed choice and consent. Cases such as that of Montgomery vs Lanarkshire provided a stark reminder of the importance of informed consent in relation to decisions surrounding labour and birth. Collaborative working between healthcare professionals has been reported by midwives to be extremely beneficial when supporting women and birthing people who are choosing to birth outside of guidelines. A cohesive way of working has been established in Bronglais Hospital, with community midwives and
obstetricians working together in partnership to support women planning birth outside of guidelines. Bronglais Hospital is situated in Aberystwyth in West Wales and had a birth rate of 440 for 2020. Gwenllian Maternity Ward functions as an antenatal ward, postnatal ward, triage unit, obstetric-led birthing area and midwife-led birthing area; all services are provided on the same ward. This enables close working relationships and cohesive teamwork.

Early discussion about place of birth

The community midwifery team discusses place of birth with all women in early pregnancy, discussing and issuing the Birthplace Decisions Leaflet. Recommendations are made regarding place of birth based on women’s individual pregnancy and history, and the care pathway that she will be following (midwifery-led or obstetricled). If women are advised to birth in an obstetric unit, we make them aware of the reasons for this, however we make sure women are aware that they ultimately have a choice about place of birth. Due to the design of the unit in Bronglais, the majority of women who plan births outside of guidelines choose to birth at home. Discussing place of birth early in pregnancy enables time to make multi-disciplinary plans of care, request notes from previous births if applicable, and to make referrals to other departments and specialities should this be indicated.

A passion for supporting choice

The community midwifery team shares a passion for supporting and promoting women’s choice. Student midwives who undertake placements within the team have the opportunity to participate in discussion surrounding place of birth, communication within the multidisciplinary team and developing plans of care with women and obstetricians. Furthermore, student midwives have the opportunity to attend home births with the team, meaning they may care for women whose birth plans they have been involved in. The community team has eight midwives and they do not receive cross cover from neighbouring teams, meaning that women often have midwives who are caring for them in labour during the antenatal period. This means that the community team that is supporting women to plan birth outside of guidelines will be in attendance at their home births. The team has found that being involved in care planning eases most
anxieties in caring for women birthing outside of guidelines.

Regular conversations

The community midwives’ office is based on the maternity ward, enabling regular face-to-face conversations with obstetricians about women receiving shared care. An excellent working relationship has been developed between community midwives and obstetricians, with the team regularly making email or face-to-face contact to discuss care plans. This has facilitated mutual trust between professions, and an extremely cohesive way of working. Both midwives and obstetricians feel able to approach one another with questions or concerns regarding care, which is extremely productive.

Attending obstetric-led clinics

Community midwives commonly attend obstetric appointments with women on their caseload who are planning birth outside of guidelines, to ensure a collaborative approach to care planning. This is welcomed by the obstetricians in Bronglais and is extremely helpful in planning ongoing care in a timely manner. In a recent study on supporting birth outside of guidelines, it was reported that some obstetricians viewed midwives attending clinics with women as confrontational, and midwives felt they needed to attend to challenge decisions made. This could not be further from the case in Bronglais, whereby joint clinic appointments are readily facilitated by all involved. There is a real recognition from obstetric colleagues that whilst we may not recommend or promote home birth for some women, we cannot say no or refuse to support them in planning a birth outside of guidelines.

Sharing care plans

Care plans for women birthing outside of guidelines are constructed in an SBAR (a communication tool) format, with input from the community midwife, consultant obstetrician, consultant midwife and operational lead midwife for Bronglais. Plans are shared with all community midwives who may be caring for the woman during her birth, all obstetric consultants and all ward midwives in case a transfer is indicated. Student midwives who are on placement with the team are involved in care planning.

Feeding back on outcomes

The community team tries to regularly feedback to obstetricians who have been involved in care planning. This often takes place whilst making a coffee in the staffroom, and the obstetricians are always pleased to hear about women’s experiences and outcomes. The collaborative nature of working that has been developed in Bronglais often results in a 10% monthly home birth rate, and women have been extremely satisfied with their care and support to plan their birth.

Reflections from Becky Westbury

I feel truly lucky to work in Bronglais. Our community team is extremely keen to support both physiological birth and women’s choices, and it is so fulfilling to work within a team that all shares this passion. As a team we are also extremely passionate about promoting home birth, however we are mindful that for some women this is not the recommended care pathway and are therefore careful not to influence their decision making when providing evidence-based information on place of birth. We are fortunate to be able to provide an excellent level of continuity of care which is extremely beneficial when planning care outside of guidelines, as we have been able to establish rapport and trusting relationships with women in our care.

Student midwives who undertake placements within our team have excellent exposure to both supporting physiological birth and supporting choice. Many students are fortunate to attend multiple home births with
us and have often met the women during the antenatal period. We try to actively involve student midwives in planning birth outside of guidelines, in the hope that the exposure in this area of practice gives them confidence to support women in the future.

We work very closely with our obstetric colleagues, which again means we have developed mutual respect and excellent working relationships. This enables effective and collaborative care planning, whereby women feel that we are working together to support their choices. Women provide excellent feedback about the support they have had to plan their births outside of guidelines. I feel extremely lucky to work with supportive obstetricians, as this makes care planning so much more straightforward. Many midwife friends from other units describe challenges in gaining support and input from obstetric colleagues when planning home birth outside of guidelines, however our experience in Bronglais is the total opposite. I feel that this is an example of the benefits that can come from working in a smaller unit, however much of this could be replicated in other areas to facilitate collaborative team working.

Reflections from Alan Treharne

Traditionally, midwifery-led care has functioned without obstetric input by the very nature of its definition. I think there has been an evolution in the care we provide, even over the last 15 years I have practised obstetrics. Medically, enhanced screening, preventative practice and more knowledge through research and teaching have made childbirth safer. We have moved from a more dictated care model to one that values and integrates patients’ ideas and expectations into their labour journey.
I have the luxury of often seeing patients wishing to birth outside guidance at booking with their community midwife. Some patients are relatively simple to counsel, if for example their only complicating factor is a post-partum haemorrhage from a traumatic tear. Some women requesting to birth outside of guidance may be far more complex. They may have had a previous caesarean section or have a baby with an estimated weight over 4.5kg. These cases are far more complex. The reality is: women don’t take risks knowingly. You have to remember; they often only have one, two or three children. So why should they have absorbed a textbook of high-risk obstetrics? That is what we are there for. They may have ideas that seem inappropriate to the clinical situation (to an obstetrician), but in reality, with a calm explanation, a unified approach and by listening, women will be accepting of a birth plan that is safe for mum and baby and that ensures they birth the way they want. What is dangerous is not listening and pushing them away. The feedback I have seen for this team is exceptional, but the one thing that stands out is when a woman feels respected as an individual and not a statistic. This group of women are more extensively counselled and educated than most high-risk women, but that level of awareness is something we should aspire to for all women.

As a consultant obstetrician it is relatively unusual to work in such an integrated way with the community midwifery team. As a more junior consultant, I tried to stop using the words ‘shared care’ – don’t blur it, you are either midwifery-led or obstetricled. Very naïve of me. With a little more experience and a wonderful team, working with these women has become a very satisfying aspect of my job, and I really do value the benefit of this ‘closely shared’ care model.

**Reflections from Malen Williams**

My placement allocation with the North Ceredigion community team was very influential. During this time I supported six home births with three of these being births outside of guidelines. I also cared for many women in the antenatal period who asked about birthing outside of guidelines and I was able to discuss their options alongside the evidence base, support their choices and refer the woman’s care to the multi-disciplinary team for effective collaborative care and ongoing individualised care plans.

I feel very fortunate that I was able to provide continuity of carer to most women in my practice supervisor’s caseload.

The obstetricians at Bronglais were very approachable and the excellent working relationship between them and the community midwives was evident. As a student midwife I was often involved with the care planning of home births and was able to have open conversations with obstetricians surrounding specific care plans for women birthing outside of guidelines. We often discussed how women choosing to birth outside of guidelines are fully informed of all the evidence and have made informed decisions after in-depth discussions including the benefits, risks and alternative options. Additionally, I feel very fortunate that I was able to provide continuity of carer to most women in my practice supervisor’s caseload. I had also met four of the women who had a home birth at least once prior to caring for them in labour which I truly believe enabled a smooth transition and calming environment when I arrived to care for them during the intrapartum period at their home. The experiences I had with this team has given me confidence to discuss options, support, complete care plans (including the SBAR) and care for women who choose to birth outside of guidelines. It has also fuelled my passion to provide continuity of carer whenever possible, as I was fortunate to witness and experience the significant benefits of continuity of carer in the antenatal, intrapartum and postnatal period. I truly believe an effective multi-disciplinary team that works collaboratively, such as in Bronglais, ensures optimum care and fully supports women’s choices.

**Conclusion**

The collaborative, multi-disciplinary way of working that we have developed has led to better outcomes.
and satisfaction for women and birthing people, and improved staff working relationships. Participation in this way of working enables student midwives to see first-hand the benefits of effective communication and collaboration in supporting women to plan birth outside of guidelines. **TPM**

### References


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**Baby’s First Hug: Establishing Skin-To-Skin Contact as a Routine Practice During Caesarean Birth Using Participatory Action Research**

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### Summary

Though the benefits of skin-to-skin contact (SSC) are widely recognised,1 barriers in theatre settings include thermoregulation concerns, interference with surgical practices, and busy schedules. In the twelfth article in our Understanding Research series, a Participatory Action Research (PAR) design was used to establish SSC in a tertiary hospital as routine care for caesarean births, and explored staff and maternal perceptions to the practice.

SSC increased from 0% to 77% in theatre, rising from 29% to 87% in the first hour for all caesarean births. Staff described how they overcame barriers, and mothers felt ‘healed’. This study demonstrated
that it is feasible to establish SSC in theatre for all well mothers and babies, and it is recommended to promote better birth experiences.

**Introduction**

The World Health Organization (WHO) recommends at least 80% of women experience optimal SSC with their babies, regardless of mode of birth.\(^1\) Optimal SSC begins right after birth and lasts for a minimum of one hour. Facilitating SSC during a caesarean birth enables birthing parents to embrace their newborns in a natural, physiological way; yet difficulties in implementing SSC in theatre have been reported.\(^2,3,4\)

SSC in theatre has many benefits, such as higher maternal satisfaction and better bonding.\(^5,6\) Women can have difficulty initiating and sustaining breastfeeding following caesarean birth,\(^7,8\) yet if they experience SSC, they are more likely to have successful breast or chestfeeding outcomes.\(^2,9,10\) Research demonstrates that women who experience SSC in theatre have similar or reduced instances of pain and anxiety\(^5,11\) and similar rates of infection, blood loss, and hospital stay.\(^12,13\) Babies who experience SSC after a caesarean birth achieve faster cardiorespiratory stabilisation,\(^14,15\) thermoregulation,\(^16,17\) and they have reduced rates of neonatal infection\(^12\) and admissions to Neonatal Intensive Care Unit (NICU).\(^18\)

The barriers to implementing SSC for caesarean births include: lack of knowledge; theatre equipment issues; resistance to change; and inadequate staffing.\(^2,3,19,20\) While the transition can be challenging for staff, when SSC is implemented in theatre settings, the results lead to greater job satisfaction for midwives and other staff\(^20\) with a positive trend in feedback over time.\(^2\)

In 2018, a preliminary audit was carried out in a large tertiary hospital to identify SSC practices. Over a one-week period, 0% of newborns received SSC in theatre, while only 29% received SSC within one hour of birth in the recovery area. These babies were close to an hour old before first being held by their mothers. The results of the audit prompted a Quality Improvement Initiative (QIP) to introduce SSC as routine practice in the theatre/recovery areas and to achieve the WHO recommended rate of at least 80%.\(^1\)

Facilitating SSC during a caesarean birth enables birthing parents to embrace their newborns in a natural, physiological way; yet difficulties in implementing SSC in theatre have been reported.

**Methods**

To change practice, a PAR design was chosen as it promotes inclusivity, inspiring participants to take ownership and becoming motivated to succeed.\(^21\) PAR is
an iterative process which invites learning, initiative, creative thinking and problem solving, ultimately promoting high quality practice. Following the aforementioned audit, a multi-disciplinary meeting was organised involving the Assistant Director of Midwifery, consultants from obstetrics, neonatology and anaesthetics, senior doctors, lactation consultants, risk management, theatre management and theatre staff. The project to introduce SSC for elective caesarean births was proposed with a view to offering it for emergency cases going forward. A policy was then developed and approved by the Hospital Group Directorate. Barriers identified by theatre staff were addressed; to facilitate monitoring during SSC, electro-cardiograph (ECG) leads were to be placed on the woman’s back and gowns with ‘popper’ sleeves were ordered for better access. Other barriers identified by staff would be addressed over the course of the project. Ethical approval was granted by the regional ethics review board and the hospital.

Sample

Purposive sampling was used; five multi-disciplinary key informants were identified to provide insight into the practice and identify potential challenges. Theatre nurses and midwives were invited for individual or focus group interviews to explore their perceptions of the change in practice. Following the implementation of SSC, all women having elective caesarean births were asked to complete a questionnaire postnatally. Women and birth partners consented to have their births observed. Participants were over 18 years of age, fluent in English, and had a baby who was not critically unwell.

The sample comprised hospital staff (n=26), students (n=1), mothers (n=84) and birth partners (n=4).

Data collection

Key informant interviews: Semi-structured interviews lasted 10–20 minutes, and they were digitally recorded and transcribed. The aim of these one-to-one interviews was to identify key considerations and attitudes towards SSC in theatre.

Focus groups: Two focus groups were undertaken to determine the attitudes of theatre/recovery midwives and nurses implementing the change on a larger scale to the interviews. It was hoped this would support sustainability of the QIP.

Field observation: Field observation of staff practices were taken in four elective cases to support audit findings and triangulate data.

Questionnaires: A questionnaire was developed for feedback from mothers on how the SSC in theatre affected their birth experience. This was pilot tested on a small group of women prior to commencing the study whereby appropriate timing was identified and the questions were assessed for readability.

Clinical audits: Audits were undertaken before and after data collection to reflect the progress of SSC implementation.

Content analysis was used to identify themes and patterns from the interviews and conversations with staff members during field observations. The transcripts were read multiple times and coded for shared themes and meaning. The questionnaire was analysed using SPSS Statistics.

Findings

Key informant interviews

Experienced staff members (with more than five years in clinical area) were interviewed to provide insight into the reality and the culture of the maternity theatres in the hospital. This comprised a senior theatre
midwife (SMW), a consultant anaesthetist and neonatologist, a senior obstetric registrar and a former theatre midwife (FMW), who had attempted to introduce SSC previously. Themes expressed by the informants were developed.

Welcoming change

Informants expressed positive attitudes toward SSC in theatre, demonstrating knowledge of the associated benefits, with the neonatologist describing it as ‘very desirable’. The obstetrician acknowledged in theatre women can feel ‘completely out of control’, and she felt that facilitating choice is helpful. She noted how midwives lead SSC in theatre; minimising separation is their key role. A recurring theme was the importance of SSC in reducing maternal stress, reducing the clinical aspect of the birth, and promoting a positive experience.

Looking through a lens

Nevertheless, obstacles were noted by participants reflecting their varying perspectives. The SMW highlighted staff shortages as the biggest barrier, noting the need to constantly observe the baby having SSC and expressing a need for more support.

‘That’s not always achievable if you don’t have enough staff and you’re busy, but we do our best.’ (SMW)

This was also of concern to the neonatologist, who commented that it is the responsibility of the staff to ‘look through that lens’, to be aware of the risks and prioritise safe care. While the parents were monitoring the baby, it was felt by all that the constant presence of a staff member was essential to ensuring the safety of the mother and the baby. The anaesthetist had concerns around monitoring but reflected that there was a ‘way around’ this in most situations. He felt the introduction of the policy helped to create a perception of SSC being routine, and separation as the intervention. Overall it was identified that the barriers to introducing SSC could be reduced with adequate staffing and support.

Focus groups

Discussion around SSC in theatre was generally positive, with the staff acknowledging that although there were difficulties, the benefits and maternal satisfaction were sufficient motivators to promote the practice. Staff shortages sometimes meant they could not monitor the baby at all times. They were often required to complete tasks or assist other staff members, which created a barrier to SSC:

‘Well I will not do skin-to-skin unless I know that I can observe the baby one-on-one... I won’t do it.’ (FG2)

The high caesarean birth rate was acknowledged as problematic, particularly when combined with staff shortages, which means staff can’t monitor babies having SSC. However, changing practice to place ECG leads on the woman’s back was helpful, while support from management and doctors was seen favourably. Other facilitators included anecdotal benefits such as mothers being ‘distracted’ from pain or discomfort and babies having better temperatures after SSC compared to those placed in cots.

Overall, participants were supportive of the change, attributing the success to the benefits of SSC:

‘It’s benefitting the mothers because... they get to spend time with their baby. It’s benefitting all the staff because... it’s nearly distracting the mother from... the procedure’ (FG2) and ‘it’s lovely in fairness’. (FG2)

A theatre nurse suggested a more approachable name for SSC in the hospital: ‘Baby’s first hug.’ This title was well received by all staff as a means of offering SSC to mothers immediately from birth.
Field observation

Field observation of four elective cases was included to further data triangulation, focusing on staff practices around safe SSC. ECG leads were correctly placed in every case and all four babies were positioned safely. In all but one case, SSC was uninterrupted in theatre. Areas for improvement were identified as the observation of babies having SSC and documentation.

Questionnaires

Questionnaires were given to women having elective caesarean births. A total of n=84 were returned over a six-week period; return rate 78%. Results are outlined in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Age</th>
<th>18 – 26</th>
<th>27 – 32</th>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of previous births</td>
<td>0</td>
<td>1 – 3</td>
<td>21</td>
<td>63</td>
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<td>Assisted vaginal birth</td>
<td>Emergency caesarean birth</td>
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<td>21 (25.0%)</td>
<td></td>
<td></td>
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<tr>
<td>SSC with any previous births</td>
<td>Yes</td>
<td>40 (47.6%)</td>
<td></td>
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<tr>
<td>Feeding</td>
<td>Breastfeeding</td>
<td>47 (56.6%)</td>
<td>Bottle feeding</td>
<td>31 (37.3%)</td>
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<td></td>
<td>Combined</td>
<td>5 (6.0%)</td>
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The majority of respondents had caesarean births previously, with 25% reporting previous SSC. This increased to 47.6% in mothers who had given birth vaginally in the past. Maternal responses to SSC based on a Likert scale are outlined in Table 2.
All respondents either agreed or strongly agreed that this SSC made them feel happy, deeply connected to their baby, and promoted good mother/baby bonding. Additionally, 97.4% reported SSC to be comfortable, while 82.7% of women felt empowered by the experience. Anxiety was the highest rated negative emotion at 9.3%.

No comments were supplied to clarify if this was related to SSC, caesarean birth, or theatre environment. Women (n=29) provided additional comments which were explored using content analysis. The experience was described repeatedly as ‘fantastic’, ‘amazing’, and several women commented on how ‘delighted’ they were as they ‘missed out’ on SSC previously. One woman described the healing effect it had on her:

‘After a previous traumatic birth, the opportunity to have immediate skin-to-skin contact with my baby really helped to make it a wonderful experience and I’m grateful I had such a healing experience this time around.’ (R5)

Another recurring comment was around the extra time and attention women received from having a midwife present to observe the baby:

‘Far better [than previous birth]. So personal – gave more time one-on-one with midwife too, for asking questions. Delighted with the experience.’ (R18)

Overall, women expressed very positive attitudes towards having the choice of SSC:

‘I… would love to know this is a standard practice for all mothers and partners having C-sections.’ (R26)

**Clinical audits**

In 2018, 28.9% of mother/baby dyads received SSC, all of which occurred in the recovery area. After the
QIP, SSC was facilitated in 95.5% of elective cases and 70% of emergencies (Table 3). Overall rates for the hospital rose to 87.5% of all caesarean births in 2019. This exceeds the 80% target rate originally set and meets international standards of best practice.¹

Table 3

<table>
<thead>
<tr>
<th>Skin-to-skin contact</th>
<th>2018 total</th>
<th>Audit (post-study)</th>
<th>July 2019 total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Elective</td>
<td>Emergency</td>
</tr>
<tr>
<td>Any SSC</td>
<td>28.9%</td>
<td>95.5%</td>
<td>70.0%</td>
</tr>
<tr>
<td>per category total</td>
<td></td>
<td>65.6%</td>
<td>21.8%</td>
</tr>
<tr>
<td>In theatre</td>
<td>0%</td>
<td>77.3%</td>
<td>40.0%</td>
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<tr>
<td>per category total</td>
<td></td>
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<tr>
<td>Optimal SSC</td>
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<td>27.3%</td>
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</tr>
<tr>
<td>per category total</td>
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<td>3.1%</td>
</tr>
<tr>
<td>Total numbers</td>
<td>38</td>
<td>22</td>
<td>10</td>
</tr>
</tbody>
</table>

Discussion

This study highlighted the implementation SSC for women experiencing caesarean birth as a quality initiative. Short staffing was a concern, particularly in a busy environment; newborns having SSC require constant supervision and this was not always feasible. The reprioritisation of SSC as a routine standard of care can aid staff members to view this practice as an important aspect of their role, as midwives have a unique place in theatre to minimise separation. This is the recognition of how person-centred care results in positive experiences for families.

Previous studies have reported staff resistance to change,³¹⁹ but staff in this study showed little resistance. They were particularly encouraged by the feedback from mothers. Midwives and nurses noted that SSC can make their jobs easier; mothers become involved with their newborns, ‘distracted’ from other aspects of the experience, allowing staff to complete tasks such as documentation.

Other supportive measures were developed to promote the process of changing practice. Along with written reminders/prompts, the new practices were discussed regularly during morning handover meetings. Having a policy, multi-disciplinary and management support were key facilitators, while the PAR design reinforced sustainable staff engagement.

Documentation was the only area where staff appeared resistant to adapt. Completed documentation rates dropped over the data collection period as the SSC end time/duration was often not filled in. As such, these cases were not included in the optimal SSC rate of 21.9%, though the true rate may have been higher.

All respondents either agreed or strongly agreed that this SSC made them feel happy, deeply connected to their baby, and promoted good mother/baby bonding.

Despite this, the audit results demonstrate significant change; SSC increased by almost 60%. Initially the aim was to achieve this standard in elective procedures, however staff were so enthusiastic, it quickly became routine for emergency caesarean births when the babies were born in good condition. The rate of
SSC during elective cases was 95.5% at the time of audit, with only babies being transferred to the NICU not receiving their ‘first hug’.

Furthermore, within the hospital group the policy on SSC has been disseminated and SSC in theatre will now be implemented as a routine practice in three other hospitals. This is an important advancement in SSC practices in Ireland.

While safe care is integral to good care, healthcare professionals are now at a turning point whereby good care can be defined by the mother’s experience and not by birth outcomes alone. Although caesarean birth is an intervention, it is important to make the experience person-centred. The feedback from mothers was overwhelmingly positive; responses indicated they want this choice when they come into hospital. Mothers were happy, supported and even ‘healed’. They reported the SSC to be ‘amazing’, and a better experience overall. It is important as care providers that we respect the wishes of the women and families in our services.

Multi-disciplinary staff and respondents alike acknowledged how the ‘first hug’ can reduce the clinical aspect of the theatre environment, even returning some control to mothers. When they are clinically stable, separation of mother and newborn should be viewed as an intervention. SSC enhances a mother’s natural instincts to nurture and bond with her baby, and produces a more positive birthing experience. As such, it can be argued that women who give birth via caesarean deserve these benefits as much as women who have vaginal births. They are entitled to this time and space to have their ‘first hug’ with their babies immediately from birth.

**Study limitations**

The questionnaire sample size was limited, and while all elective cases were included, some women who were unable to have SSC, for example if their baby was transferred to the NICU, were only offered the questionnaire at the discretion of the staff. This may give a skewed result of women’s perceptions of SSC.

**Implications for practice**

While a high importance is placed on the psychological care of women and babies, the demands of working in busy hospitals can often be prioritised. Further research into maternal perceptions of the impact of SSC during caesarean birth may continue to expand current knowledge.

PAR is an iterative process which invites learning, initiative, creative thinking and problem-solving, ultimately promoting high quality practice

**Conclusion**

The introduction of SSC during caesarean birth has been a welcome change in practice. Multi-disciplinary staff and mothers are enthusiastic and motivated to have it be routine care for caesarean births, with almost no resistance evident. It is possible that the benefits of SSC are now so widely known that it has become more commonplace, not only for staff to accept it, but also for mothers to expect it. This study has demonstrated that SSC can be safely and successfully introduced for both elective and emergency caesarean births, promoting evidence-based care and more positive birthing experiences for mothers.

TPM
References

2. World Health Organization. WHO recommendation on skin-to-skin contact. Published 2018.
Embracing the Rapid Acceleration of Digital Transformation in Research During the Covid-19 Pandemic

Conducting Midwifery Research in the NHS as a Clinical Academic Doctoral Student

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Twitter: @femmidwife

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Summary

The COVID-19 pandemic has transformed every aspect of our lives, including how non-COVID related research was conducted in the NHS during the third national lockdown in 2020. Charlotte Clayton, midwife and Clinical Academic Doctoral student at Bournemouth University, reflects on the dilemmas caused by the pandemic as she prepared to recruit members of the public and midwives to her PhD study in the NHS, and the opportunities it provided both her and the people who took part.

The pandemic forced me to adapt at pace under the most uncertain circumstances and embrace digital transformation in research

Introduction

It’s difficult to remember life as it was before the COVID-19 pandemic, but I’ve found a degree of strength from reflecting on what I’ve learnt and how, as a postgraduate midwifery research student, the pandemic forced me to adapt at pace under the most uncertain circumstances and embrace digital transformation in research. As you can imagine, the pandemic impacted on my research in multiple ways. But since
November 2020, I’ve had the privilege of listening to and learning from the experiences of women and midwives in many one-to-one interviews thanks to the use of digital technology as a method to collect research data. I therefore wanted to reflect on the opportunities the third national lockdown provided me to recruitment and data collection in the NHS when I opened my PhD research study ‘The Mi-CARE Study’.¹

Independent clinical research

I am an experienced midwife, and I am in the last year of a four-year Clinical Academic Doctorate (CAD) programme at Bournemouth University. The CAD programme provides midwives with bespoke research training, which includes conducting a piece of independent research whilst also remaining in clinical practice. The CAD programme is part of the NIHR (National Institute for Health Research) Wessex Integrated Clinical Academic Training Scheme and in my case is coordinated and supported by Bournemouth University (BU) and University Hospital Southampton (UHS), where I am also a midwife.²

‘The Mi-CARE Study’, which has been included on the NIHR Clinical Research Network (CRN) Portfolio, is a qualitative study exploring the public health role of caseloading midwives working within areas of social deprivation in Southampton, alongside the health inequality and maternity care experiences of women receiving midwifery caseloading care. Through the use of semi-structured interviews with women and midwives, the research is developing theory which seeks to explain how caseloading midwives specifically work to achieve health equity. The research is being conducted in the wake of NHS England’s Maternity Transformation Plan³ and the NHS Long Term Plan,⁴ whilst being undeniably influenced by the deluge of the COVID-19 pandemic.

My approach to the study

During the design phase of my research, way before the pandemic hit, I had the great fortune of consulting with midwives, children’s centre staff, and the communities they support, to determine the best ways to advertise the research and engage with the local community. These insights established that I needed flexible, blended approaches of both digital and traditional methods of recruitment and data collection in order for the research study to be inclusive and appeal to those I was seeking to recruit. In addition, to account for people who might be digitally excluded, I had planned on immersing myself in the local community, working in partnership with the children’s centres and local midwives to identify potential participants. However, as the pandemic unfolded and social distancing restrictions became the norm, I was unable to conduct any in-person fieldwork. It was at this point that I recognised I needed to adapt the study quickly in order to make any tangible progress. This process took time, lots of reflection, false starts and talking things through with my supervisory team.

I successfully received NHS Research Ethics approval for the design strategies I developed with stakeholders, which included a study Facebook page (@TheMiCareStudy) and social media advertising campaigns. I was fortunate enough for the study to be advertised on multiple stakeholder pages, including UHS’s own maternity services’ Facebook page @southamptonmaternityservice, which reached over 4,700 people. I am forever grateful to Emily Seddon and Becky Parker – consultant midwife trainees at UHS at the time – for their help and support with the recruitment for my study. Within its first day on social media, I had over 100 enquiries, including enquiries from women living across the globe who were keen to share their experiences about receiving maternity care in Southampton.

I also developed an online consent process, a digital site file for data management purposes, and options for participants to choose how their interviews were conducted including over video conferencing software, WhatsApp, or over the phone. All participants, whether members of the public or midwives, received a ‘Love2shop’ voucher in recognition of their time and contribution to the research. This was important to me, as I wished to remunerate participants for taking the time to talk to me.
Data collection

I started recruitment and data collection during the second national lockdown in November 2020. I learnt how to use new and unfamiliar video conferencing software and soon enough I was attending Zoom sessions with children’s centre staff and local families, Microsoft Teams meetings with my colleagues, and answering swathes of enquiries about the study via Facebook.

I’ve conducted 32 interviews so far with eligible people, all of which have been conducted over Microsoft Teams, Zoom, or over the phone. For many childbearing participants, being able to share their experiences virtually or over the phone, whilst being confined to their homes, provided an opportunity to speak with another adult outside of their household, offered a space for them to share their experiences, and be actively listened to. Naturally, out of a desire to help others in similar situations, I’ve found women’s motives to take part are altruistic.

Whilst participants did receive a voucher in recognition of taking part, this did not appear to be the motive. One person alluded to this at the end of their interview with me, ‘I wasn’t bothered about it anyway, it was more just sharing with you and giving the recognition for the midwives that I had.’ Many other women said similar things. It has been an utter privilege to hear their stories, and to better understand the context of their lives in order shape maternity services of the future that seek to achieve health equity.

I have been able to engage with participants in new ways and learn transferrable skills that will inevitably support me beyond the PhD.

Conclusion

In the context of my own doctoral research, whilst the COVID-19 pandemic has caused unprecedented challenges, it has provided numerous opportunities to embrace digital transformation and to work smarter. Undoubtedly, conducting research interviews virtually has its limitations; namely causing barriers to participation for people who are digitally excluded. I am fully aware of the implication this will have on inclusivity and I am disappointed that I have been unable to complete the community engagement work I had planned prior to the pandemic. However, without the use of digital technology, I wouldn’t have been able to progress with my research nor had such success with my recruitment. I have been able to engage with participants in new ways and learn transferrable skills that will inevitably support me beyond the PhD. I am forever grateful to all of the partnerships I’ve developed and the support I’ve received from staff at the children’s centres across Southampton, my midwifery and research colleagues at UHS, my PhD supervisory team, and all the wonderful staff in Research Governance, IT, faculty librarians, and Research Delivery at BU. TPM

References

LGBTQIA+ Maternity Care Pride in Maternity: Proud of What

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Summary

Our knowledge and understanding of gender and sexuality is changing dramatically. With increasing numbers of LGBTQIA+ individuals accessing maternity care, we are now at a critical transition point. How do we turn what has been historically a heteronormative cisgendered system into one that caters for all genders and sexualities? As the first article in a four part series, here we explore the current challenges facing the LGBTQIA+ community when accessing healthcare and how the current maternity system fails to create a safe and inclusive space for new parents. We explore the improvements needed for progressive change to happen and how individual practitioners can care for the LGBTQIA+ community with compassion.

Introduction
Currently, the UK is experiencing a movement of sexual orientation and gender freedom, with increasing numbers of people identifying as Lesbian, Gay, Bisexual, Transgender, Queer and/or Questioning, Intersex, and Asexual and/or Ally, plus noncisgender and non-straight identities (LGBTQIA+). The Office for National Statistics states ‘An estimated 1.4 million people aged 16 and over in the UK identified as lesbian, gay or bisexual (LGB) in 2019’¹ – this does not include gender identities, such as transgender and non-binary, as up until the recent Census 2021 questionnaire these characteristics were not acknowledged.² This in itself demonstrates how society is shifting – the demand for representation and visibility is growing.

The term LGBTQIA+ has grown over the years to accommodate the spectrum of people who form the community. We are seeing less of ‘the gay community’ and ‘LGBT’ and are moving more towards an inclusive community where freedom to express sexuality and gender is embraced, even encouraged. However, healthcare has always been a contentious area for the LGBTQIA+ community, with an abundance of documented first hand experiences of discrimination and a lack of understanding when people are often at their most vulnerable. Maternity care is no exception and is arguably lagging behind other specialties in advancements to become more inclusive and welcoming of LGBTQIA+ people. As more people from the community are becoming pregnant and having children, it begs the question: why is maternity not striving to be more progressive? This failing in care results in transgender and non-binary individuals making the difficult decision to either have children before transitioning or to not have children at all. Same-sex couples who cannot afford expensive fertility treatment and are not entitled to NHS-funded care, unlike their heterosexual counterparts, are using non-regulated sperm donation/surrogacy services at the risk of their health and safety. Why are LGBTQIA+ people still struggling to access the same standard of fertility and maternity care as heterosexual and cisgendered people?

**Where is the representation?**

There is a plethora of problematic issues in maternity care and they are, quite literally, everywhere you
look. The lack of visual representation in the NHS is both perplexing and outdated for an organisation that advertises itself as a service for everyone at any time. Leaflets, posters, websites – they are all lacking in representation of LGBTQIA+ people. The majority of depictions are of cisgendered and heterosexual people and families. Representation is lacking because the system is yet to fully acknowledge the very presence of LGBTQIA+ people in maternity. Maternity data collection for transgender and non-binary people is practically non-existent in the UK. From start to finish, people’s childbearing journeys are entrenched in heteronormativity and gender conformity. During ‘the booking’ process, we expect pregnant people to be female, and this creates difficult and sometimes painful conversations for non-cisgendered people. The rigidity of IT systems means that midwives are unable to perform simple tasks such as virtually admitting men onto a postnatal ward and a variety of similar issues. It is no wonder LGBTQIA+ people avoid healthcare to their detriment.

Even though there is a gap in in-depth research surrounding LGBTQIA+ people and their experiences of maternity care, there is enough information available from the community to inform what is harmful and should be avoided – misgendering people, for example. The effect this has on transgender and non-binary people is detrimental, but it continues to happen all too frequently. It is the act of choosing not to acknowledge and address failings in practice that is perpetuating a cycle of discrimination and trauma. It is important, however, to remember that the LGBTQIA+ community is not present as a teaching aid. Some of the responsibility must come from midwives and other health professionals taking the initiative to do their own reading. There is an abundance of blogs and articles available for people to read, to learn from stories that are enriched with lived experience.

‘Last time I went to get my shot [of testosterone], she had a student in with her “because it’s interesting for them to learn” and kept asking me about all the surgeries I’ve had done and how they do them.’ – anon

Speaking up

LGBTQIA+ people do not feel safe to speak up because it is both frightening and dangerous. Stonewall published its LGBT in Britain: Hate crime and discrimination report in 2017, which stated that ‘two in five trans people (41%) have experienced a hate crime or incident because of their gender identity in the last 12 months and one in six LGB people, who aren’t trans (16%), have experienced a hate crime or incident due to their sexual orientation in the same period.’ Stonewall also reported that ‘between 2008 and 2014, there were 1,612 trans people murdered across 62 countries – equivalent to a killing every two days’. How long can healthcare continue to ignore these statistics? The LGBTQIA+ community has a longstanding history of being subjected to violence and hate crimes which makes being visible hazardous. The ongoing gamble of ally or non-ally is exhausting and unsafe.

It can also be incredibly uncomfortable and anxiety-inducing to be forced to disclose your identity in order to access basic healthcare. When speaking to a transgender man about his experience with a GP, he said: ‘Everything goes back to your “transness”, I could go in with a broken arm and they’d tell me it’s because of testosterone or something. I’ve had severe acne on my back for eight years now, the last time I went and pleaded for someone to look at it, she looked and she obviously hadn’t read my file and was like “Looks painful, so do you use steroids? You shouldn’t, [they are] bad for your body.” I told her I was trans; she backed up and wouldn’t even look at me and said “Well it’ll be your sex change hormones causing that, you would have to stop them for it to go away.”’

Disheartening stories are becoming more frequent in the media – such as non-birthing parents in lesbian relationships having to assert themselves as mothers (often being mistaken for friends or relatives) or male same-sex couples having to fight to be part of their intended child’s birth. These assumptions are incredibly damaging, especially so during the delicate transition to parenthood.
There is a distinct lack of national LGBTQIA+ related guidance in maternity; neither the National Institute for Health and Care Excellence (NICE) nor the Royal College of Obstetricians and Gynaecologists (RCOG) have specific guidelines. This makes it challenging for local trusts to formulate their own, and when they do, it is often met with hostility. Recently a trust publicised their own guidance on gender in maternity, which has been met with a backlash of transphobic comments on social media. The guidance was simply offering advice on language when caring for pregnant people, but the opposition was overwhelming. Suggestions that the word ‘woman’ is being erased comes from privilege - where cisgendered women have the ability to be vocal without fear of retribution because their place in society is already well engrained and anchored.

Recently social media has sadly been used as a platform for midwives and other healthcare professionals to voice hurtful sentiments against the LGBTQIA+ community. Those practitioners would do well to remind themselves of not only our professional codes, but also that hate crimes are just that, crimes which fall under the Criminal Justice Act 2003. There seems to be a rhetoric of radical feminism which condemns the existence of transgender people in maternity, suggesting that only women give birth. It is baffling to think these people practise under a professional code that states that midwives must ‘avoid making assumptions and recognise diversity and individual choice’ and ‘respect and uphold people’s human rights’ – the emphasis is on human rights here. The Equality Act 2010 makes it illegal to discriminate against anyone for a number of protected characteristics – including sexuality and gender reassignment. How can we make LGBTQIA+ people feel safe in a system which is heterocentric and gender-conforming?

Conclusion

To ensure LGBTQIA+ people feel safe in maternity, maternity needs to address its shortfalls. Maternity services are facing arguably one of their greatest challenges – to create a safe and inclusive space for all service users. We must start listening to the voices of the LGBTQIA+ community and adapt services so that everyone has positive maternity experiences. Moving away from the current heteronormative cisgendered model of care must be embraced by all for this to be successful. This change will not be easy, but education is key to addressing knowledge gaps and becoming better allies. The profession must challenge transphobia and homophobia in a bid to create the inclusive space maternity so desperately
Recommendations

- Do a tour of your unit and count how many times you see LGBTQIA+ people being represented – you will be surprised how rare this is.
- Know your legal obligations, and make amendments to your practice and guidelines/policies in accordance.
- Read blogs and articles – learn from lived experience about how you can be a better ally.
- Wear a pronoun badge at work so birthing people know it is safe to tell you theirs.
- If you make a mistake, e.g. using incorrect pronouns – acknowledge the mistake, apologise and learn for next time.
- Be vocal and fearless when calling out homophobia/transphobia – this can be incredibly empowering for an LGBTQIA+ individual to witness.
- Do not make assumptions about gender/sexuality and family dynamics.
- Be critical of the heteronormative system and encourage others to be the same.

References

Summary

‘Stay home, protect the NHS, save lives’\(^1\) was the legally binding rule issued for pregnant women on 16 March 2020. The PANDAS (Pre and Post Natal Depression Advice and Support) Foundation recognised that there was an increase in the number of calls made to their free telephone helpline. Reviewing the calls from December 2019 to May 2020 demonstrated that call volume peaked the day after this ruling. Callers reported high levels of anxiety regarding their health and pregnancy, work and financial situations. Volunteers responded by sharing online resources, demonstrating a breadth of knowledge around support services for their callers at a time when midwives and health visitors were offering very limited face-to-face contact and support.

Introduction

On 23 March 2020, the UK was placed under the first legally binding national ‘lockdown’ due to the global coronavirus pandemic – SARS-CoV-2 or COVID-19.\(^2\) This lockdown, announced by the Prime Minister, clearly stated – Stay home, protect the NHS, save lives. Health professionals are now reflecting on what this has meant for their services over the past year and how it has affected specific groups of the population. Those groups of people with underlying health issues, and pregnant women, were classed as ‘vulnerable’ and received the self-isolate regulation earlier than the rest of the population – 16 March 2020.\(^1,2\) For new parents and parents to be, this meant the usual face-to-face support groups, midwifery and health visiting home visits were suddenly reduced or completely withdrawn. This left expectant and new parents without the usual service that they were expecting to see them through the perinatal period.\(^3,4\) The WAVE report (2014)\(^5\) was the first cross parliamentary report into the period between conception and two years of age. It highlighted how important this period was for a child’s health and development. Figures from the National Health Service (NHS) Long Term Plan (2019)\(^6\) suggest that between 10 and 20% of mothers, and 10% of fathers, experience a mental illness during this time which, if untreated, can affect a parent/carer’s ability to provide the most sensitive and responsive care for their baby.
The report Babies in Lockdown (2020), estimated that over 200,000 babies were born between 23 March 2020 and 4 July 2020, when the first national lockdown measures were the most stringent within the UK. Six in 10 parents, whose calls were analysed, reported significant concerns around their mental health, which rose to nine in 10 reporting an increased anxiety relating to parenting during the period. Only one third of respondents felt they were confident about accessing mental health services, although 25% of pregnant women – and 32% of those with a child under one – reported they would have liked further support over this period. The PANDAS Foundation was established in the UK in 2011 as a direct result of parents’ experiences of perinatal mental illness and in recognition of more support being needed outside of the mainstream health services. The vision of this charity is to support every individual, family and carer who is suffering from perinatal mental illness. It campaigns to raise awareness of – and remove the stigma associated with – mental illness experienced within the 1,001-critical day period of a child’s life (Wave). The Foundation offers a free helpline all year round, face-to-face support groups and online support via closed Facebook pages for parents. The volunteers have often experienced perinatal mental illness themselves and undergo rigorous online training which includes how to communicate, listen to a caller and recognise a safeguarding concern. This training clearly informs volunteers that they are not diagnosing or treating, but listening and signposting to other services available.

After the lockdown regulations were announced in March 2020, the helpline volunteers reported an increase in calls. This review was undertaken to ascertain if this was the case and if so, why were parents ringing more frequently. The details of each call were recorded on the Foundation’s standard information log to ascertain why the call was made and which services were signposted for each caller. Details about the call and the caller’s own understanding of the mental health situation discussed, were then forwarded to a central discussed were then forwarded to a central volunteer as was the normal procedure for the helpline. This volunteer removed all identifying information before forwarding them to the reviewer. As this was a service evaluation, ethical approval was not required.

**Aim of this service evaluation:** to understand how a volunteer/peer-to-peer helpline was used by parents to be and new parents experiencing perinatal mental illness during the first COVID-19 national lockdown in 2020.

**Objectives of the service evaluation:** to identify the number of calls made by birth people and their families during the first lockdown experienced in UK; identify the support services that were signposted by volunteers during this period; and consider how peer-to-peer services within the field of perinatal mental health can support the statutory agencies during a time of crisis.

**Methodology**

All calls were recorded by volunteers between 1 December 2019 to 31 May 2020. Permission was granted by the Foundation for analysis, then any personal data were redacted by the central coordinator. Following
this, the calls were analysed by one volunteer. A convenience sample of 203 calls were analysed which offered an insight into how lockdown was affecting the mental health of users of the PANDAS helpline. The information recorded on the call logs was grouped into broad areas such as number and duration of calls per day, reason for call and by whom, what insight and understanding had been recorded regarding the perinatal mental health concern under discussion and the support signposted by each volunteer. COVID-19 issues were recorded separately. These areas were agreed with the Foundation prior to analysis as the review set out to investigate the perceived rise in calls reported by helpline volunteers. Calls from December 2019 to March 2020 were included to compare call frequency before and after the lockdown regulations were first imposed.

This initial review of data produced both quantitative and qualitative data, the latter being further analysed using the principles of thematic analysis9 to identify how parents were reporting their perinatal mental illness, the support accessed from statutory and other services and whether COVID-19 issues were mentioned or discussed by the caller. Finally, it was noted where the volunteers signposted callers for further support.

Results

During this period, a total of 203 calls were received where the caller spoke to a PANDAS trained volunteer. The free helpline is open between 11am and 10pm. Calls on average lasted 30 minutes and most occurred between 2 – 10pm. Call numbers increased significantly from 20 per month (December 2019 to February 2020) to 52 in May 2020 – supporting the anecdotal evidence as this equates to 160% increase in calls since lockdown commenced.

Most calls received in any one day during the six-month data collection period occurred on 17 March 2020 - the day after the lockdown announcement for pregnant women. A total of 34 calls were logged by the volunteers that day with 15 directly related to concerns about COVID-19 and the impact on work, health and family support, and health of their unborn baby.

These calls were made between 2 – 6pm. During the six-month period from December 2019 to May 2020121 (60%) of the calls were made by mothers or mothers to be (46 were pregnant). Ninety-one calls were made regarding mental health issues which were related to both mothers and fathers with a baby under 12 months old. Fathers and family members, along with some professionals from midwifery, health visiting and children’s services used the helpline to request information about the helpline service or to discuss how they could support someone with a perinatal health issue at this time.
Findings

Perinatal mental illness as described by callers

Using callers’ own descriptions of the issues they were experiencing, anxiety and postnatal depression were most commonly reported with symptoms such as low mood, disturbed sleep issues, exhaustion, feeling very tearful and angry. Twenty-six callers discussed traumatic births, and volunteers were able to signpost to appropriate midwifery listening services. Self-harm and thoughts around suicide were raised on two occasions, with safeguarding concerns only recorded once in the logs. When these issues were raised, the volunteer escalated the call to the named volunteer with safeguarding experience, for further escalation to the appropriate local authority and/or agency. Sixteen callers used the word ‘overwhelmed’ to describe how they were feeling with life at the time of the call and 14 reported being exhausted and experiencing some sleep disturbance, not always related to their baby. Two women reported feeling low due to new body image, whilst 18 felt that feeding issues compounded their low mood.

Signposting to statutory services

Medication was discussed on 21 occasions following GP or mental health team recommendations of treatment - those that were taking prescribed treatment felt this decision had not been taken lightly, but was the only support available to them. GPs were the most discussed health professional (83 times) including referral to other services e.g. perinatal mental health teams, medication or support. Health visitors were suggested on 28 occasions for support relating to breastfeeding, sleep issues and listening support. Midwives were signposted on 22 occasions for information related to COVID-19, birth and antenatal concerns.

Signposting to voluntary services

PANDAS’ own support services, such as closed Facebook pages for parents, its email support service and other social media, were regularly discussed with callers (40% logged this signposting) whilst self-help suggestions such as breathing techniques, mindfulness, yoga and exercise were discussed 60 times. Other agencies that were recorded included the Peanut App (an app for new parents to connect with other families in their local area), Big White Wall (online service for people experiencing anxiety, depression and other common mental health issues - now known as Togetherall), Mind, Anxiety UK, Relate and Headspace (an app which supports mindfulness and sleep).

COVID-19 issues discussed

Calls on 17 March 2020 were signposted to the Citizens Advice Bureau, the Advisory Conciliation and Arbitration Service (Acas), Gov.uk and WHO.int for information relating to the pandemic and how it could affect both mother and baby, in terms of health and work. One business-owning caller expressed anxiety about managing financially without her income - before the governmental financial packages were announced.

There was also a degree of isolation expressed by both new mothers and fathers during the period of lockdown which was having a detrimental effect on both parents. Comments were recorded such as: ‘I didn’t expect it to be like this. I thought I would be out at groups and meeting people all of the time.’ ‘I think my husband has postnatal depression – what can I do?’ Comments were recorded very rarely on the call logs but indicate the loneliness and lack of usual support systems the callers felt were available to them.
Signposting to other areas not directly related to perinatal mental health

Relationship issues such as a partner not being supportive, not understanding or showing signs of controlling behaviour, were discussed on 27 occasions, with one caller discussing a real fear of domestic abuse. Signposting to Refuge and Women’s Aid was made due to an escalation in abusive behaviour by her partner.

Discussion

This evaluation has highlighted the impact that COVID-19 has had on parents to be and new parents. Those who contacted the PANDAS helpline self-reported a significant mental illness alongside a lack of general parental and psychological support during this period. This highlights how one voluntary sector organisation had been supporting mainstream health services during the first national lockdown in this pandemic.

The early lockdown regulation for expectant parents triggered a number of calls from women wanting information that was not readily available from their usual health and support services. This required the volunteers to consider other agencies that could provide the information required.

Callers who had been identified as having a mental health issue during the antenatal period prior to and during lockdown reported that support was more likely to be in place from specialist services within maternity, health visiting and psychological support teams once their baby had been born – albeit online and via telephone calls. The National Institute of Health and Care Excellence (NICE) guidelines state that health professionals (midwives and health visitors), should identify mental health issues during pregnancy and within the first six weeks of birth, and signpost on to more specialised support.

The NSPCC’s ‘All Babies Count’ campaign series advised that ‘Midwives should talk to all mothers and fathers antenatally about the prevalence and symptoms of mental illness and what to do if they are unwell.’ It was not clear from the call logs that the callers had been asked about their mental health prior to birth, or whether they had undergone any perinatal mental health screening following birth by health professionals using routine enquiry such as Whooley Questions, Generalised Anxiety Depression score or Edinburgh Postnatal Depression Scale questionnaire – all of which are recommended within the updated NICE guidelines.

Whilst volunteers were able to signpost to many third sector support services, midwifery and health visiting services were not suggested routinely. Therefore, this service evaluation raises some questions:

1. Why were midwifery and health visiting services not suggested to the callers more often?
2. What could these health professionals do to raise their profile amongst the volunteers on the helpline?

Limitations of the study

This was the first time that the PANDAS helpline call logs have been reviewed, with no benchmarks established to compare calls to a standard. The review highlighted the lack of consistency between volunteers when recording information on the helpline call log and the reviewer was unable to establish whether all calls had been recorded and therefore, were available for review.

Conclusion

Within an extraordinary time for all, PANDAS volunteers supported over 200 callers during this six-month period from all four countries of the UK, whilst coping with a myriad of new experiences themselves. A truly remarkable achievement for a peer-to-peer support service. The call logs indicate that the volunteers have a wide knowledge of the support available to families experiencing perinatal mental health illness.
plus other issues. There was a sensitive discussion recorded around the agency or support that was being signposted with a strong recognition of how midwifery and health visiting service provision had changed during this period of review. This was seen clearly following lockdown in March 2020 when volunteers were able to direct callers to more online resources, suggesting a rapid response to the situation where usual support services were not available. This review has highlighted how a voluntary service can work alongside statutory agencies to support the needs of new parents and parents to be in challenging times. Midwifery, health visiting and voluntary services all working together can only improve the perinatal mental health of our clients and their families, and help reduce the stigma surrounding this illness that affects so many families. **TPM**

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Effectiveness of Mindfulness on Labour Pain Among Nulliparous Women

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Summary

The management of labour pain, despite much research in its regard, remains a complex and difficult subject. Mindfulness-based cognitive therapy is addressed as a relatively new method of managing acute pain; however, it is less often used in midwifery. Therefore, the present study was carried out to evaluate the effectiveness of mindfulness-based interventions on labour pain.

METHODS: This is a clinical trial study in which 158 women, who referred to childbirth preparation classes, were allocated to two groups using simple randomisation. The intervention group was trained in mindfulness techniques during eight sessions by a trained midwife. Women in the control group received routine pregnancy care. On the day of delivery, the pain intensity and the immediate pregnancy outcomes in both groups were assessed. Data were collected using the Visual Analogue Scale and the delivery checklist. Collected data were then analysed using SPSS (a software package used for statistical analysis) and a Mann-Whitney U test.

RESULTS: During admission to the labour ward, the pain intensity among participants in both groups was moderate, and there was no significant difference (0.10). At the beginning of the active phase (4–6 cm of dilation), and 7–8 cm of dilatation and 9–10 cm of dilatation, the pain intensity was significantly lower in women in the intervention group (p=0.001). No difference regarding the maternal and fetal complications in pregnancy was observed between participants in the intervention and control groups. In addition, the need to apply other pain relief methods in participants in the intervention group was significantly less than participants in the control group (p=0.001).

CONCLUSIONS: According to the findings of this study, it can be concluded that mindfulness is a
successful and uncomplicated method to reduce labour pain. These findings could be used by midwives to provide holistic care to pregnant women.

Introduction

Pain is a common and inevitable phenomenon during labour. In terms of midwifery, labour pain is a complex, personal, mental and multifaceted phenomenon that is influenced by economic, social, cultural, biological and psychological factors, and adaptation to pain is effective in the intensity and the extent of pain experienced by women/birthing people.

Labour pain is accompanied by several adverse effects on the mother and the fetus's physiological condition, as well as the delivery process. Therefore, the goal of all obstetric care units is to reduce pain and turn labour into a pleasant experience with the least possible pain. Considering the fact that labour pain is acute, and includes sensory and affective components, various measures are taken to relieve it. The three fundamental principles in relieving labour pain are simplicity, safety and maintaining fetal homeostasis. In recent years, researchers have come to believe that in order to reduce the intensity of pain, safe methods for the mother and the fetus should be considered. Not only should these methods disrupt the delivery process, maternal consciousness, the fetal ejection reflex, and the mother’s physiological functions, but they should also be effective in relieving labour pain.

Labour pain relief methods can mainly be divided into two groups of pharmacological and non-pharmacological ones. Almost every drug that is used for labour analgesia in the mother can pass through the placenta, weaken the respiratory system, and cause fetal hypoxia. These drugs can also cause long labour and reflex disorder in the second stage of delivery. Non-pharmacological approaches to the relief of pain include a wide range of techniques used in the clinical area. In order to relieve labour pain, non-pharmacological methods are superior to pharmacological methods, since these methods are cheaper, simple to implement, non-invasive, and able to build confidence as well as to encourage client participation. They also have no effect on the course of labour, or on the mother and the fetus.

Currently, psychological methods such as biofeedback, mental imagery, mindfulness-based cognitive therapy are used, both individually and in combination with other medical methods, in the treatment of pain. Mindfulness-based cognitive therapy was first proposed by Jon Kabat-Zinn, and it includes a variety of meditations such as yoga, training on stress, anxiety and depression, and cognitive therapy. Mindfulness includes two important components of awareness and non-judgmental orientation to one’s moment-by-moment experiences such as thoughts, physical sensations, effects, and the environment. From Baer’s perspective, mindfulness is not a method or a technique; yet, many methods and techniques are applied to perform it, which are presented in these groups. Mindfulness acts as both an acute and preventative treatment, and as a stress-adapted strategy, it helps participants cope with the challenges and stressful events in their lives.

On the one hand, although various non-pharmacological methods such as massage, reflexology, aromatherapy, acupressure, yoga and hypnosis have been used to reduce labour pain, the management of labour pain remains a problem. On the other hand, there is limited information on mindfulness-based cognitive therapy among pregnant women, and the limited previous studies recommend that the effect of this method on labour pain be carefully evaluated. Therefore, this study was carried out to evaluate the effectiveness of mindfulness-based interventions on labour pain.
Methods

This is a randomised, controlled field trial using a parallel design that was conducted in Iran in 2020. The population of our study were all pregnant women who referred to the childbirth clinic in Kashan. The inclusion criteria were being primiparous; gestational age of 20 – 22 weeks; age range of 18 – 35 years; single pregnancy; being literate; and choosing Shahid Beheshti Hospital in Kashan as the place of delivery. The exclusion criteria were high-risk pregnancies; having chronic or acute physical or mental disorders; having experience of yoga or meditation; elective or emergency caesarean section; fetal distress; and choosing other hospitals in Kashan as the place of delivery.

In the first stage, sampling was done through a convenience sampling method, and all eligible women, who participated in childbirth preparation classes in 2019, were recruited to the study. In the second stage, the childbirth preparation classes were allocated to two groups of intervention and control using simple randomisation. According to the sample size of 100 and a maximum number of 10 participants in each course, 13 courses were held, and seven courses were selected for the intervention group. The sample size was calculated 112 using the Chuntharapat study.

Intervention

Before conducting the study, the midwife instructor passed a complete course on mindfulness under the supervision of two clinical psychologists and received the certificate of administration of these classes. Then the sampling was performed, and before the intervention, the aims of the study were explained to participants. After expressing their willingness to participate in the study, the written consent was obtained. After that, the demographic information checklist was completed.

The intervention group was trained in mindfulness techniques during eight one-hour sessions by a trained midwife. In the first session, the concept of mindfulness, the types of techniques, and the benefits of this type of meditation were explained. In the following sessions, the modified yoga during pregnancy and various meditations, including body scan, walking and mindful eating, were trained. 20% of the initial sessions were held under the direct supervision of a clinical psychologist. The control group received routine care. These care and intervention sessions were performed between 20 – 22 weeks and 36 weeks. On the day of delivery, the pain intensity was assessed in both groups during admission to the labour ward and at the beginning of the active phase (4 – 6 cm of dilation), 7 – 8 cm of dilatation, and 9 – 10 cm of dilatation using the Visual Analogue Scale and McGill pain questionnaire. Other information was obtained from the clients’ files through a checklist.

Blinding

Due to the methods of the study, it was not possible for the client to be blinded. However, the completion of the delivery checklist and pain questionnaires during delivery was done by a third person, who was not aware of the control and intervention groups. Also, the groups were statistically anonymous.

Data analysis

Collected data were analysed using SPSS. Data did not have normal distribution. So we used the Mann-Whitney U test to compare differences in mean score of pain intensity during different stages of labour, between women in the control and intervention groups. P value considered less than 0.05 significant.

Ethical consideration

Written consent was obtained from all women who agreed to participate at the time of entering the study in weeks 20 – 22 when they referred to the hospital clinic for routine pregnancy care. Participation in the
present study was completely voluntary. This study was carried out under the supervision of the Qazvin University of Medical Sciences ethics committee (with ethical code IR.QUMS.REC.1398.178). Also, we obtained a clinical trials code for study from the Iranian Registry of Clinical Trials (IRCT20191208045660N1).

Results

A total of 158 pregnant women attended childbirth preparation classes during the mentioned period (79 for each group). Of these, 34 (19 and 15 women in the intervention and control group respectively) were excluded from the study due to preterm birth and referral to other hospitals. Out of 126 pregnant women admitted to the hospital for delivery, six in the intervention group and eight in the control group were excluded due to emergency caesarean sections and spinal anaesthesia. Eventually, the data analysis was performed on 112 people (56 people for each group). Table 1 shows the demographic data in detail.

Pain

During admission to the labour ward, the pain intensity among participants in both groups was moderate, and there was no significant difference (0.10). At the beginning of the active phase (4 – 6 cm of dilation), 7 – 8 cm of dilatation, and 9 – 10 cm of dilatation, the severity of pain was significantly lower in women in the intervention group (p=0.001). Table 2 demonstrates these findings in greater detail. Table 3 demonstrates the pregnancy complications for mother and baby. As seen from the data in this table, no difference in pregnancy complications was observed between women in the intervention and control groups. In addition, the need to apply other pain relief methods in participants in the intervention group was significantly less than participants in the control group (p=0.001).

Discussion

The application of non-pharmacological methods to control pain has always been considered by healthcare providers to pregnant mothers during childbirth. Mindfulness is one of these methods that brings cognition, awareness, and mastery over mind, thought and body for the user. This method results in better stress tolerance and provides appropriate reactions. In this study, the effectiveness of using this method on labour pain and some delivery complications among a group of Iranian women was evaluated. The results showed that the application of a mindfulness approach reduced pain during all stages of active labour. In addition, maternal and fetal complications of pregnancy were slightly reduced. Previous studies in midwifery and obstetrics have mostly examined the application of mindfulness to variables such as fear of childbirth, depression, anxiety, and stress among pregnant women. They have focused less on the effectiveness of this method in pain control and its consequences. In this regard, previous studies are very limited. In one study in 2017, Duncan et al. evaluated the impact of mindfulness on pregnant mothers’ readiness for labour and its complications. Similar to the present study, the results of the Duncan et al. study showed that the application of this technique can be effective in reducing the extent of pain experienced by women, albeit insignificantly. Also, the results of the Duncan et al. study revealed that the use of this method has a significant effect on reducing the number and doses of analgesic drugs, which is similar to the finding of the present study.

The theory of pain proposed by Grantly Dick-Read suggests that pain results from a fear of childbirth, and the worry and stress of pregnancy. Previous studies showed that the application of mindfulness can significantly reduce fear of childbirth and maternal distress. In this regard, the study conducted by Aminorroaya et al. can be mentioned. In this clinical trial, pregnant mothers who used the mindfulness method in combination with routine care reported a significantly lower level of fear of childbirth. It seems that mindfulness reduced the fear of childbirth, worry or stress related to pregnancy, pain and subsequently decreased the maternal and fetal complications of pregnancy among pregnant mothers who participated in the present study. Additionally, empowerment, self-confidence, positive thinking, and a
Mindfulness acts as both an acute and preventative treatment, and as a stress-adapted strategy, it helps participants cope with the challenges and stressful events in their lives.

Table 1
Table 1: Personal and social characteristics of participants

<table>
<thead>
<tr>
<th>Items</th>
<th>Intervention group</th>
<th>Control group</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>56 (50%)</td>
<td>56 (50%)</td>
<td></td>
</tr>
<tr>
<td>Spouse’s level of education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>1 (1.8%)</td>
<td>3 (5.4%)</td>
<td>0.78</td>
</tr>
<tr>
<td>High school</td>
<td>20 (35.7%)</td>
<td>19 (33.9%)</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>35 (62.5%)</td>
<td>34 (60.7%)</td>
<td></td>
</tr>
<tr>
<td>Mother’s level of education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>2 (3.6%)</td>
<td>4 (7.1%)</td>
<td>0.64</td>
</tr>
<tr>
<td>High school</td>
<td>30 (53.6%)</td>
<td>26 (46.4%)</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>24 (42.9%)</td>
<td>26 (46.4%)</td>
<td></td>
</tr>
<tr>
<td>Spouse’s occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>17 (30.4%)</td>
<td>21 (37.5%)</td>
<td>0.93</td>
</tr>
<tr>
<td>Manual worker</td>
<td>16 (28.6%)</td>
<td>14 (25.0%)</td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>21 (37.5%)</td>
<td>20 (35.7%)</td>
<td></td>
</tr>
<tr>
<td>Freelancer</td>
<td>2 (3.6%)</td>
<td>1 (1.8%)</td>
<td></td>
</tr>
<tr>
<td>Mother’s occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>36 (64.3%)</td>
<td>38 (67.9%)</td>
<td>0.93</td>
</tr>
<tr>
<td>Employed</td>
<td>20 (35.7%)</td>
<td>18 (32.1%)</td>
<td></td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>15 (26.8%)</td>
<td>13 (23.3%)</td>
<td>0.81</td>
</tr>
<tr>
<td>Average</td>
<td>37 (66.1%)</td>
<td>40 (71.4%)</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>4 (7.1%)</td>
<td>3 (5.4%)</td>
<td></td>
</tr>
<tr>
<td>Types of pregnancy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wanted</td>
<td>14 (25.0%)</td>
<td>20 (35.7%)</td>
<td>0.21</td>
</tr>
<tr>
<td>Unwanted</td>
<td>42 (75.0%)</td>
<td>36 (64.3%)</td>
<td></td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural area</td>
<td>55 (98.1%)</td>
<td>51 (91.1%)</td>
<td>0.14</td>
</tr>
<tr>
<td>Urban area</td>
<td>1 (1.8%)</td>
<td>5 (8.9%)</td>
<td></td>
</tr>
<tr>
<td>History of abortion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>52 (92.9%)</td>
<td>47 (83.9%)</td>
<td>0.14</td>
</tr>
<tr>
<td>Yes</td>
<td>4 (7.1%)</td>
<td>9 (16.1%)</td>
<td></td>
</tr>
<tr>
<td>History of infertility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8 (14.3%)</td>
<td>10 (17.9%)</td>
<td>0.06</td>
</tr>
<tr>
<td>Yes</td>
<td>48 (85.7%)</td>
<td>46 (82.1%)</td>
<td></td>
</tr>
<tr>
<td>Admission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4 (7.1%)</td>
<td>2 (3.6%)</td>
<td>0.67</td>
</tr>
<tr>
<td>No</td>
<td>52 (92.9%)</td>
<td>54 (96.4%)</td>
<td></td>
</tr>
<tr>
<td>Pregnancy care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>39 (69.6%)</td>
<td>35 (62.5%)</td>
<td>0.42</td>
</tr>
<tr>
<td>Irregular</td>
<td>17 (30.4%)</td>
<td>21 (37.5%)</td>
<td></td>
</tr>
<tr>
<td>Mother’s age</td>
<td>26.62 ± 3.04</td>
<td>26.80 ± 3.54</td>
<td>0.77</td>
</tr>
<tr>
<td>Father’s age</td>
<td>29.96 ± 2.91</td>
<td>30.39 ± 2.92</td>
<td>0.48</td>
</tr>
<tr>
<td>Marriage age</td>
<td>23.14 ± 3.24</td>
<td>22.29 ± 3.14</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Table 2
### Table 2: Frequency of variables of labour pain

<table>
<thead>
<tr>
<th>Items</th>
<th>Intervention group 56 (50%)</th>
<th>Control group 56 (50%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain intensity during admission</td>
<td>45 (80.4%)</td>
<td>51 (91.1%)</td>
<td>0.10</td>
</tr>
<tr>
<td>Mild</td>
<td>11 (19.6%)</td>
<td>5 (8.9%)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>15 (29.8%)</td>
<td>3 (5.4%)</td>
<td>&lt;0.001 F</td>
</tr>
<tr>
<td>Pain intensity at 4 – 6 cm of dilation</td>
<td>40 (71.4%)</td>
<td>46 (82.1%)</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>1 (1.8%)</td>
<td>7 (12.5%)</td>
<td></td>
</tr>
<tr>
<td>Pain intensity at 7 – 8 cm of dilation</td>
<td>55 (98.2%)</td>
<td>40 (71.4%)</td>
<td>&lt;0.001 F</td>
</tr>
<tr>
<td>Moderate</td>
<td>1 (1.8%)</td>
<td>16 (28.6%)</td>
<td></td>
</tr>
<tr>
<td>Pain intensity at 9 – 10 cm of dilation</td>
<td>54 (96.4%)</td>
<td>19 (33.9%)</td>
<td>&lt;0.001 F</td>
</tr>
<tr>
<td>Severe</td>
<td>2 (3.6%)</td>
<td>37 (66.1%)</td>
<td></td>
</tr>
<tr>
<td>Pain intensity in the second stage of labour</td>
<td>46 (82.1%)</td>
<td>8 (14.3%)</td>
<td>&lt;0.001 F</td>
</tr>
<tr>
<td>Moderate</td>
<td>10 (17.9%)</td>
<td>48 (85.7%)</td>
<td></td>
</tr>
<tr>
<td>Pain intensity in the second stage of labour</td>
<td>44 (78.6%)</td>
<td>5 (8.9%)</td>
<td>&lt;0.001 F</td>
</tr>
<tr>
<td>Moderate</td>
<td>12 (21.4%)</td>
<td>51 (91.1%)</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: Frequency of variables related to labour and childbirth

<table>
<thead>
<tr>
<th>Items</th>
<th>Intervention group 56 (50%)</th>
<th>Control group 56 (50%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episiotomy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>33 (58.9%)</td>
<td>53 (94.6%)</td>
<td>0.001</td>
</tr>
<tr>
<td>No</td>
<td>23 (41.1%)</td>
<td>3 (5.4%)</td>
<td></td>
</tr>
<tr>
<td>Oxytocin</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>25 (4.6%)</td>
<td>2 (3.6%)</td>
<td></td>
</tr>
<tr>
<td>Induction</td>
<td>0 (0.0%)</td>
<td>37 (66.1%)</td>
<td></td>
</tr>
<tr>
<td>Augmentation</td>
<td>31 (55.4%)</td>
<td>17 (30.4%)</td>
<td></td>
</tr>
<tr>
<td>Applying pain-relieving methods</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Yes</td>
<td>34 (70.7%)</td>
<td>56 (100%)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>22 (39.3%)</td>
<td>0 (0.0%)</td>
<td></td>
</tr>
<tr>
<td>Pain-relieving methods</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>22 (39.3%)</td>
<td>0 (0.0%)</td>
<td></td>
</tr>
<tr>
<td>Pethidine</td>
<td>17 (30.3%)</td>
<td>28 (49.9%)</td>
<td></td>
</tr>
<tr>
<td>Entonox gas</td>
<td>14 (25.0%)</td>
<td>11 (19.6%)</td>
<td></td>
</tr>
<tr>
<td>Aromatherapy</td>
<td>0 (0.0%)</td>
<td>1 (1.9%)</td>
<td></td>
</tr>
<tr>
<td>The application of more than two methods</td>
<td>3 (5.4%)</td>
<td>16 (28.6%)</td>
<td></td>
</tr>
<tr>
<td>Vaginal bleeding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2 (3.6%)</td>
<td>7 (12.5%)</td>
<td>0.16</td>
</tr>
<tr>
<td>No</td>
<td>54 (96.4%)</td>
<td>49 (87.5%)</td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

This study revealed that mindfulness, as a non-pharmacological method of pain control, can significantly reduce labour pain as well as some complications of labour. These results could be used by midwives to provide holistic care to pregnant women. Given the positive effects of mindfulness and the lack of similar studies, it is recommended that further studies be conducted in this area. In addition, it is recommended that in a study, the attitude of midwives providing pregnancy and childbirth care in relation to the use of this method is evaluated. TPM

Acknowledgements

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Exploring Food Guidance 1. Caffeine Consumption: Advice, Physiology and Evidence

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Summary

This is the first in a new series of articles that are aimed at reviewing the guidelines (or sections thereof) and the underpinning evidence for counselling pregnant and postnatal women around food and drink. Every month, the series will examine the current guidelines for a particular dietary staple, examining how evidence has informed the guideline and revealing where guidance is lacking or conflicting, and suggesting how this might influence practice.

Introduction

Caffeine is consumed in almost every geographic and cultural group, including pregnant women. Many beverages, and some food and medications, contain caffeine including coffee, tea, cola-based products, energy drinks and chocolate. The amount of caffeine in products varies as Table 1 demonstrates. Therefore, the effects, side effects, and recommendations for pregnancy and lactation are important for women to know, and for midwives to discuss with them.

Table 1
The main source of caffeine for adults in the European Union is coffee. In moderation, coffee is considered beneficial to health with some studies citing a reduced risk of endometrial and liver cancer, and a lower risk of developing type 2 diabetes, heart disease and stroke. A moderate coffee consumption is typically classed as three to five cups per day – but depending on which preparation is used, this can vary from 195 – 475 mg per day (see Table 1). People tend to adjust their caffeine consumption based on individual effects or sensitivity. So, someone who feels jittery is likely to consume less caffeine than another person who feels more alert.

### Advice

In non-pregnant adults, 400 mg of caffeine per day is considered safe with advice to limit the consumption in one sitting to 200 mg. The 200 mg dose is about 3 mg/kg based on an adult weighing 70 kg. Doses higher than 300 mg per day have been found to have negative effects such as anxiety, restlessness, insomnia and increased heart rates. The advice on caffeine consumption in pregnancy from reputable sources including the NHS website, European Food Safety Authority and Royal College of Midwives (RCM) is that an expectant parent should limit their caffeine consumption to 200 mg per day.

In August 2020, two reputable UK newspapers reported on coffee consumption in pregnancy. They were reporting on the publication of the same study, but the overarching headlines were starkly different. One headline said there was ‘No safe level of coffee drinking for pregnant women’, the other, seemingly in direct contradiction stated ‘Having some caffeine in pregnancy is fine’. The RCM expert clinical advisory

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### Table 1 Amount of caffeine in beverages, chocolate and medications

<table>
<thead>
<tr>
<th>Product</th>
<th>Serving size</th>
<th>Amount of caffeine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instant coffee</td>
<td>1 cup (8 oz)</td>
<td>65 mg</td>
</tr>
<tr>
<td>Brewed coffee</td>
<td>1 cup (8 oz)</td>
<td>95 mg</td>
</tr>
<tr>
<td>Espresso (coffee shot)</td>
<td>1 shot (1.5 oz)</td>
<td>65 mg</td>
</tr>
<tr>
<td>Tea (black)</td>
<td>1 cup</td>
<td>47 mg</td>
</tr>
<tr>
<td>Tea (green)</td>
<td>1 cup</td>
<td>28 mg</td>
</tr>
<tr>
<td>Tea (decaffeinated)</td>
<td>1 cup</td>
<td>2 mg</td>
</tr>
<tr>
<td>Chocolate</td>
<td>1 oz</td>
<td>24 mg</td>
</tr>
<tr>
<td>Coca-Cola/Diet Coke</td>
<td>1 can</td>
<td>40 mg</td>
</tr>
<tr>
<td>Medications: headache or migraine relief&lt;br&gt;Varies: Anadin Original or Extra; Beechams cold and flu remedies; Benylin cold and flu remedies; Hedex Extra; Lemsip Max</td>
<td></td>
<td>25 – 65 mg</td>
</tr>
</tbody>
</table>
group published a briefing in 2020 to counter this controversy. Our article expands on the advice, bringing together the maternal physiological effects of caffeine in pregnancy and for the fetus, so that readers have a comprehensive understanding to support the conversations they have with women.

At the end of pregnancy, the half-life of caffeine is three to four times longer than before pregnancy.

**Physiology**

Caffeine exerts a wide range of effects on the body – both positive and negative. These include the stimulation of the central nervous system which increases alertness, concentration, energy and cognition. However, it can also cause sleep disturbances, nervousness, jitteriness and irritability. It raises the blood pressure by vasoconstriction and heart rate slightly and is also a diuretic.

The small intestine absorbs caffeine, rapidly dissolving it into the body’s water and fat molecules within 45 minutes of consumption. It is distributed in all body fluids including the umbilical cord blood, amniotic fluid and breast milk. It crosses the blood-brain and placental barriers, and in men, the blood-testicular barrier too.

Caffeine is metabolised by the liver and excreted in urine. It can remain in the blood from two to nine hours, depending on an individual’s metabolic speed. The half-life, which is how long it takes for a substance to reduce within the plasma by half, is approximately four to five hours. However, there is marked variation in how individuals metabolise caffeine; some of the differences are genetic, others environmental. These include age, sex, hormones, weight, smoking and diet. For instance, daily coffee drinking and smoking are associated with increased clearance; in other words, the caffeine is metabolised faster. Oral contraceptives and being female are associated with reduced clearance. Food in the gut can also delay caffeine absorption.

Caffeine passes through the placenta, and both the pregnant woman and fetus have a reduced capacity to metabolise caffeine, so it remains in their systems for longer, especially in the third trimester (up to 15 hours). Some of this reduction is due to the increased presence of progesterone and oestrogen hormones. This affects the half-life. At the end of pregnancy, the half-life of caffeine is three to four times longer than before pregnancy. This means the concentration of circulating caffeine in the pregnant woman’s blood and fetal blood circulation would be higher than a non-pregnant woman with the same caffeine consumption. Within a couple of weeks after birth, the caffeine clearance has returned to pre-pregnancy rates, but if women are breastfeeding, the limit of 200 mg per day is still recommended.

After drinking 200 mg caffeine, blood flow within the villi of the placenta reduces by 25%. This physiological response relates to the evidence of reduced birth weight that follows. With higher consumptions of caffeine, the placental blood flow is likely reduced further, thus having a greater impact on the fetus reaching its potential birth weight. The body can develop a tolerance to regular ingestion of caffeinated products, which can reduce its stimulant effect unless higher amounts of caffeine are consumed. A rapid withdrawal of caffeine, like other substances, can cause headaches, irritability, agitation and fatigue. These symptoms take about a week to subside. Therefore, reductions in caffeine intake may be best if they are incremental rather than rapid. Conversations about caffeine consumption are as important for couples trying to conceive as they are for pregnant women, because as stated above, caffeine crosses all barriers and reduction is recommended. The advice is to limit the caffeine consumption to 200 mg a day for men and women planning a pregnancy.

The RCM briefing indicates that only two of several links between caffeine consumption and adverse pregnancy outcomes are supported by the evidence base. These are high caffeine consumption (above 300 mg per day) and spontaneous abortion or miscarriage, and high caffeine intake and low birthweight.
Although a more recent paper also observed links with stillbirth and high caffeine consumption. The links and evidence will be explained here.

**Miscarriage risk**

Lyngso et al. analyzed 27 case-controlled and cohort studies that provided sufficient data on the effects of caffeine consumption and spontaneous abortion. The source of caffeine consumption was defined as coffee or caffeine from multiple sources. The literature that was included ranged from 1986–2015 (16 studies were pre-2000), from several countries which included low and high caffeine intakes in their populations. They included a variety of samples: the smallest looked at 58 women with a history of miscarriage, to the largest being 86,282 pregnant women. The majority of included studies were controlled for maternal age, some also controlled for cigarette or alcohol use, previous miscarriage, gravidity, and determinants of socio-economic status including education level or employment. A few also considered whether women had nausea in the first trimester and its intensity. The reason these confounding variables are important is because they are independent variables for miscarriage (age, smoking, previous miscarriage) or theoretically preventative. The link between nausea and successful pregnancies theorizes those women reduce their caffeine intake due to nausea. A viable pregnancy may produce more symptoms of nausea, and this may cause an aversion to coffee. Coffee intake is also associated with decreased hormones, specifically oestrogen and human chorionic gonadotrophin. This may impact on cell development and placental blood flow, and it may be these effects which cause the miscarriage.

The evidence from the pooled results is that high rates of caffeine consumption are associated with an increased risk of miscarriage. This relative risk is significantly increased above the 300 mg threshold, compared to no caffeine/coffee or 100 mg per day. The relative risk of miscarriage with 300 mg of caffeine per day is 1.37 increasing to 2.32 with 600 mg of caffeine per day. This means the risk of miscarriage increases with higher consumptions of caffeine. One of the criticisms of this study, and others, is that women self-report caffeine intake. This is seen as less reliable and a potential source of bias, however, one could argue that women are likely to report consumption accurately.

The advice on caffeine consumption in pregnancy from reputable sources including the NHS website, European Food Safety Authority and Royal College of Midwives (RCM) is that an expectant parent should limit their caffeine consumption to 200mg per day.
Birthweight and caffeine consumption

The link between the maternal circulation and fetal growth or birthweight is well known for conditions such as preeclampsia, but perhaps less discussed for caffeine consumption. Two studies will be explored in detail here due to the limited word count of this paper: the CARE prospective study of 2,635 women and Chen et al systematic review of 90,747 participants. Their conclusions are similar: higher caffeine consumption is associated with a higher risk of a lower birthweight baby. Details of the other studies that found associations with lower birthweight are cited in the RCM briefing.

The two studies classified caffeine consumption in slightly different ways. Less than 100 mg, 100 – 199 mg/day, 200 – 299 mg/day and over 300 mg; compared to low consumption (50 – 149 mg/day), moderate intake (150 – 349 mg/day) and high (above 350 mg/day). Despite their differences, a higher caffeine consumption is above 300/350 mg and this aligns with the RCM briefing that considers less than 200 mg low consumption.

It was interesting that the mean caffeine consumption before pregnancy was 238 mg reducing to 139 mg per day in the first 12 weeks. So women tend to halve their caffeine consumption in pregnancy. However, the intake gradually increased to 153 mg per day in the third trimester. Furthermore, most of the caffeine came from tea consumption (62%) rather than coffee(14%). These findings suggest that most women’s caffeine consumption is low and below the recommended amount.

Caffeine consumption above 200 mg per day was associated with a reduction in birthweight of about 60 – 70 g, with a greater reduction seen with higher caffeine intakes. In the moderate (150 – 349 mg) caffeine intake group, birthweight was 33 g lower or associated with a 38% risk of lower birthweight, increasing to 69 g lower or a 60% higher chance when more caffeine was consumed (above 350 mg). Each additional cup (which is equivalent to 100 mg) was associated with a higher risk of low birthweight. While the reduction in fetal weight may seem small, in a compromised fetus this could be significant.

Remember fetal growth is exponential which means most of the growth is in the last six to eight weeks. Combine this with the longer-lasting effects of caffeine in the maternal and fetal circulation, especially in the third trimester, with a potential increase in consumption and it is understandable how caffeine has the potential to reduce birthweight.
Stillbirth

The logical conclusion of this line of thinking is that the decreased placental flow, which contributes to a reduced fetal weight, could be associated with stillbirth. The most recent evidence, published in 2021, found an independent association between caffeine intake and late stillbirth, particularly when the intake was above 300 mg. This study was interesting because it cited increased intakes of instant coffee, cola and energy drinks. Tea was not associated. The authors considered other constituents in cola and energy drinks (sugar, sugar replacements and taurine) that may be responsible for the association with stillbirth. They reiterate the message that pregnant women should be advised to reduce their caffeine consumption in pregnancy, with midwives best placed to share this information with women.

The evidence from the pooled results is that high rates of caffeine consumption are associated with an increased risk of miscarriage.

Postnatal period

While most of the research focuses on the effects of caffeine consumption in pregnancy, the advice in the postnatal period, if a birthing parent is chest-feeding is to maintain a caffeine consumption of 200 mg per day. This is based on the effects for the neonate as caffeine is found in breastmilk and the neonatal clearance of caffeine is low. The neonatal half-life of caffeine is between 65 – 130 hours due to immature kidneys – to produce urine and immature liver for its metabolism. Furthermore, the first 1,000 days from pregnancy to the child’s second birthday are accepted as being crucial for optimal child development, so limiting caffeine consumption while breastfeeding is seen as the best advice. If maternal caffeine consumption in pregnancy exceeds eight cups per day, the neonate could exhibit withdrawal symptoms.

The last reason some postnatal women may want to maintain a low caffeine consumption is because of its diuretic effect. Women who have pregnancy induced or pre-existing urinary symptoms such as incontinence may find they increase with a higher caffeine consumption.

Conclusion

This article hopes to help you make sense of the headlines and the research behind them so you can have conversations with women to support them make decisions about what is safe and acceptable for them. The advised limit of a maximum of two cups of coffee or 200 mg caffeine per day may be considered too high for some women. Therefore, the midwife should tailor the information to the woman and her personal circumstances. For instance, a woman who has had one or more miscarriages may want all the available information on reducing her chances of this happening again. For her, a lower caffeine threshold or abstinence may be preferred. It is important to explore with women all the sources of caffeine they consume. For now, the best available evidence recommends a 200 mg per day caffeine threshold is safe for women contemplating pregnancy, during their pregnancy and the breastfeeding period.
An Actionable Framework for Midwives and Healthcare Professionals to Help Reduce Sedentary Behaviour in Women in their Perinatal Period

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Summary

Being physically active during the perinatal period has many benefits for both the birthing parent and baby. Current Department of Health guidelines of 150 minutes a week can be abstract and broad for a lot of women. There are no clear pathways within the antenatal and postnatal care system to improve provision and support for women who may find enough exercise challenging to achieve. This article argues the need for a dedicated perinatal exercise science specialist within the care team for all women. The author also presents a simple framework modified from the World Health Organization (WHO) smoking cessation model to incorporate during routine appointments.

Introduction

As much as pregnancy and new motherhood is a time for positive health changes, most women find it hard to implement lifestyle changes that they may recognise as beneficial to them and their babies. Current Department of Health’s guidelines of 150 minutes of moderate intensity activity a week can be abstract,
broad and inapplicable to a lot of women. Data suggests that even in normal circumstances, people are seven times more likely to go to an exercise class and 12 times more likely to become more physically active when the suggestion comes from professional quarters. At a time when we are all recognising the importance of physical, mental and emotional health in our chances of getting pregnant, having a fulfilling pregnancy and reducing risks at birth, healthcare providers have a golden opportunity to engage perinatal women in a more active lifestyle. Yet 72% of GPs do not pregnant and new mothers). Key barriers seem to be lack of knowledge, confidence and resources.

Why do we not talk about exercise?

In a recent study, midwives who were interviewed identified a lack of specific knowledge and training on giving exercise advice and guidance. They also said that physical activity was a ‘tick box’ for the booking appointment and there are no recurring prompts to discuss exercise throughout antenatal care. Antenatal care teams have specialist dietitians who can advise on food intake for women who need extra support. But we do not have qualified exercise specialists who know the nuances of pregnancy and postnatal exercise requirements. This omission has caused many care providers to shoulder the responsibility of promoting physical activity when they do not feel appropriately qualified to do so. Unfortunately, this leads to advice that can be generic, laden with personal bias and preferences, and that can cause a sense of anxiety in professionals who are not trained in exercise prescription. Considering the burden of sedentary lifestyles on the health of women and their families, we have an urgent need for specially trained physical activity promotion champions within the antenatal and postnatal care pathways. Now is the time to invest in more than posters and prompts. We are beginning to recognise the importance of the role of a trained mental health midwife; we need to see the benefits of the confluence of physical and mental health promotion holistically.

A supportive framework

As a starting point, we can at least begin to have meaningful conversations with women on increasing their activity levels during their perinatal period. The 5As model was developed by the WHO, and has since been used successfully in many fields, such as smoking cessation and obesity management, where GP contact is high but there are short appointment times. Based on my work in this area, I think this framework can also be successfully used in encouraging pregnant women and new mothers to be more active.

The 5As: ask, assess, advise, agree and assist

Ask

It is important to start by asking permission to talk about PA and its impact on pregnancy, birth and the baby’s future health. Approach this phase with non-judgemental curiosity and refrain from giving advice or talking about the benefits of PA. Not all women feel comfortable answering questions on their exercise regimes as many come from a legacy of trial and failure in a world of diets and exercise fads. We need to frame our questions to retain the sense of normality about PA. Vocabulary is key. Using terms such as ‘active’, ‘mobile’ and keeping things informal will allow for the conversation to open up.

Example: Are you keeping active?

Key points:

- ask questions and minimise statements
• use non-judgemental curiosity
• do not insist on talking about the benefits of PA at this stage.

Assess

There are no standard PA levels for pregnant or postnatal people and they should be developed. However, at this point a simple low/moderate/high assessment will suffice to ascertain the starting point.

This is also a good time to explore barriers to PA – both intrinsic and extrinsic – and perhaps explore drivers and motivations. It might seem daunting to assess barriers and motivations, but simple open-ended questions will enable you to identify key concerns.

Example: Is there anything that concerns you regarding doing exercise in pregnancy?

Key points:
• assess the root causes of sedentary behaviour – beliefs (intrinsic) and barriers (both intrinsic and extrinsic)
• assess any points that may motivate them – such as their own desire to be healthier or their baby’s health. Let them tell you.

The Ask and Assess stages create a collaborative relationship, demonstrating empathy and creating an environment where PA advice would be receptive and personal. Generic guidelines or posters can be ignored, or worse, can increase confusion, lack of connection and vagueness.

Advise

Ask permission to give advice but make sure your advice is clear and authoritative for meaningful impact. This is a great time to present the key benefits of PA for pregnancy/birth/baby. If you can suggest benefits that may be personally motivating to each individual woman based on your conversations, then your advice is likely to be more powerful and less like the generic posters in the media.

It might be beneficial to highlight the difference between ‘exercise’ and staying active through lifestyle choices, allowing the woman to look at her activities holistically as part of her day rather than yet another chore. This in turn reduces guilt and increases adherence to a plan.

Example: Now that I have a better understanding of your situation, can I recommend a plan of action to create more opportunities to be active in your day?

Key points:
• the advice needs to be clear and authoritative for it to have meaningful impact on a woman’s choices
• reduce guilt by suggesting active lifestyle choices rather than setting exercise regimes.
Agree

It is important to get agreement on an action plan. The woman herself needs to set PA as a priority in her life. If it’s not, she will disengage from the process. It is also important to get her to buy into the advice you give with the confidence that the advice is given with her particular situation in mind. She should not feel that her care provider themselves has any biases or barriers when they give the advice. Both of you need to agree on a plan that will bring realistic changes to improve PA levels. Target clear levels of PA that can be followed up on, and put in place behavioural changes that may need to be addressed in order to meet the PA levels agreed upon. Sometimes it takes more than one appointment to gain agreement – it should come through a trusting relationship that is based on the welfare of the woman.

Example: Walking your older children to school and back at least three days each week instead of driving is a great idea. As you say, you will be able to encourage your kids to walk a bit more too and your whole family will benefit.

Key points:
- the woman needs to identify PA as a priority in her life before agreeing on any plan of action
- you need to make sure your conversation does not bring in your personal preferences and biases of PA to ensure a high level of trust.

Assist

Assistance can be provided in the form of authoritative resources that have credibility. You can thus validate any recommendations you make based on the evidence. This is key, as most women will have heard many different things about exercise and don’t know what to trust. The source of your recommendation will reassure them, and also help educate her in seeking good quality information for herself, further enabling her to make her own choices.

Point to appropriate professional support if needed and arrange for regular follow-ups for accountability. This can be delegated within the community setting and reported back on a regular basis, creating a 360° setting of accountability reporting. This will ensure the woman feels supported in her decisions and when things get hard, she has the level of support needed to reconnect with her plan without feeling dejected or defeated.

Example: There is no data or good scientific evidence that suggest that moderate levels of PA can harm your pregnancy or cause miscarriage.

Key points:
- assistance should be evidence-driven, minimal but consistent
- create a 360° accountability setting of support via community and GP buy-in if possible

Midwives who were interviewed identified a lack of specific knowledge and training on giving exercise advice and guidance
Conclusion

Knowing the benefits of PA across our lifespan, the impact of incorporating a PA pathway in all pregnancy and postnatal care packages, not just high-risk categories, is hugely important. I hope that with this simple, yet effective framework, we can start the conversation about more active lifestyle choices for women at antenatal and postnatal clinics. However, it is not enough to just start the conversation – it is important to keep the momentum going. Without a commitment to support women becoming and staying active throughout their lives, it will inevitably fall by the wayside.

In the UK we have amazing exercise science expertise. However, we need to focus this expertise on the perinatal period, as it is not just about serving women, but also getting it right for our future generations. The health impact, the long-term financial benefit to our health services and a collective culture of being active across all age groups starts with mothers and the babies in their wombs. **TPM**

References

The Management of Group B Streptococcal Infection: A Balanced Discussion

Kate Braye - Midwife and Midwifery Lecturer
@gROUPBStrepSupport

Jane Plumb - Chief Executive of Group B Strep Support
@JanePlumb

Introduction
The management of maternal Group B Streptococcal (GBS) infection has been vigorously debated for a number of years. In this blog midwife Kate Braye RN, RM, PhD and Jane Plumb, Chief Executive of Group B Strep Support, present and discuss their positions in the ongoing debate.

Biography
Kate Braye RN, RM, PhD is an English midwife who moved to Australia in 1985 and now resides in Newcastle, New South Wales. She has been a midwife for 37 years and works clinically at the local tertiary hospital birthing unit, is a member of the district ethics committee and lectures at University of Technology Sydney. Her PhD is titled: “A study of the management of group B streptococcal colonisation in pregnant women: Benefits and risks of preventative modalities”. Her latest paper, “Intrapartum antibiotic prophylaxis for women who are screened positive for group B streptococcal colonisation: Clinical compliance with the guideline”, showed less than one third of women reviewed received the recommended regimen of IAP for GBS risk after
universal screening.

The “management of GBS” - Debate and Contention

In 2021, amidst all other health crises, debate continues around the best way to manage the risk of early-onset group B streptococcus infection (EOGBSI) in term babies. Maternal GBS colonisation in pregnant women is common and nearly always benign. EOGBSI in term babies is rare, estimated at 1 in 5000 livebirths in the UK. It would be comforting to believe that if we could identify and treat every instance of maternal GBS, we could eradicate every instance of EOGBSI. Unfortunately, preventing GBS infection is not that straightforward. We know EOGBSI has been diagnosed in babies whose mothers returned a negative screen. Conversely, some GBS positive mothers that are provided with inadequate or no intrapartum prophylactic antibiotics (IAP) during labour, do not have babies who succumb to EOGBSI. The reality is, regardless of screening method or IAP regime, we cannot prevent all cases of EOGBSI.

This notwithstanding, many high-resource countries have followed the lead of the United States and recommend that clinicians offer universal screening, rather than the alternative risk-based approach to detect maternal GBS colonisation and then provide IAP to all women who return a positive result. Women are routinely informed that the screen will identify the presence of GBS colonisation, and that colonisation is an important risk factor for EOGBSI. However, they are less likely to be informed that they may decline the screen or, even more controversially, decline IAP in the circumstances of a positive result. Despite significant pressure from politicians and GBS support charities, the UK National Screening Committee (UKNSC) has resisted a shift from the risk-based approach to universal screening as they consider research has been unable to demonstrate that the benefit of providing all women positive for GBS with IAP outweighs potential harms of this intervention.

A large and growing body of evidence demonstrates that antibiotics, once thought harmless, are not without risk. Antibiotics have been associated with many adverse health impacts. They have been associated with reduced diversity of the maternal microbiome and a resulting reduction in the diversity of the baby’s seeding microbiome (an important factor in the baby’s developing immune system). Approaches to GBS mitigation must recognise the growing association between antibiotics and on-going immune related health issues in children. Furthermore, important considerations include the unnecessary medicalisation of birth, antimicrobial stewardship, and the risk of anaphylaxis. To date, all these risks have not been adequately weighed in the debate regarding GBS screening and IAP.

While association is not causation, we must present these potential harms to women when we discuss GBS management with them. A woman may decide she would prefer not to have prophylactic antibiotics as she perceives the chance of infection is, for her, vanishingly low and that the risks of IAP outweigh the benefits. Women, in high-resource settings, are expertly monitored in labour by midwives trained to detect deviation from normal. This includes signs of infection in a woman and/or her baby. Some women may prefer this “wait and see” approach to GBS management, considering the effective treatment that can be provided if clinically indicated. Alternatively, a woman may decide to accept prophylactic antibiotics as, to her, the risk of EOGBSI is one she is not prepared to embrace.

Women (and clinicians) have a right to be provided with all information regarding any birth intervention, including GBS management.

Conclusion

I will continue to advocate for a more nuanced, individualised approach to GBS management, where women are provided with clear and relevant information to enable an informed decision about screening and prophylaxis for GBS and offered timely antibiotics when appropriate to signs and symptoms.
References


Biography
Jane Plumb is Chief Executive of charity Group B Strep Support, which works to stop group B Strep infections in babies. She has a passion for getting into the detail of the data about group B Strep, and is supported in this by an expert multi-disciplinary Medical Advisory Panel, which ensures the information the charity provides is accurate and up to date.

Jane is a member of the World Health Organization’s Extended Technical Taskforce on Defeating Meningitis By 2030, Vice Chair of the Royal College of Obstetricians & Gynaecologists’ Women’s Network, a Trustee of the Meningitis Research Foundation, Chair of the Confederation of Meningitis Organisations and sits on the International Symposium on Streptococcus Agalactiae Disease 2021 Conference Local and Scientific Organising Committees, leading the Patient Voice Stream.

Jane has been a member of several National Institute of Health & Care Excellence guideline development committees and was a member of the Department of Health’s priority setting workshops for group B Strep research in 2015/6, which led to several trials being commissioned, including the GBS3 Trial.

Preventing group B Strep infection in babies - where are we now?

Outline of the debate/contention around the management of GBS

There is universal agreement that the best way to reduce the risk of early-onset group B Strep (EOGBS) infections (those in the first 6 days of life) is to offer pregnant women intravenous antibiotics in labour. When started at least four hours before birth, this reduces the risk of EOGBS infection by 91% among term and 86% among preterm babies. It is highly effective preventative medicine.

In the UK, there is debate over which of the following two strategies should be used to select to whom the IV antibiotics in labour should be offered:

A risk-based screening strategy – IV antibiotics are offered to women in labour when risk factors are present, including preterm labour, GBS detected from any maternal sample in this or a previous pregnancy, a previous baby had GBS infection, or maternal fever in labour.

A test-based screening strategy – all pregnant women are offered a GBS-specific test of vaginal and rectal swab samples late in pregnancy (typically 35-37 weeks’ gestation). Intravenous antibiotics are offered in labour where:

- the test result is positive; or
- key risk factors are present (preterm labour, GBS bacteriuria this pregnancy, previous baby with GBS infection); or
no test result is available and clinical risk factors are present (maternal fever or prolonged rupture of membranes).

The debate in the UK is unusual since globally, the issue is mostly regarded as settled. Most high-income countries use a test-based screening strategy, while low-income countries unable to provide the infrastructure for routine testing use the risk-based screening strategy, or have no prevention strategy at all. Countries using the test-based screening approach have seen their rates of GBS infection fall substantially. In the US, for example, EOGBS infection fell from 1.7 per 1000 live births in the 1990s to 0.25 per 1000 live births in 2015.

In the UK, a risk-based screening strategy which is demonstrably not working. Since it was introduced in 2003 both the UK’s rate and number of EOGBS infections have increased; a rise of 37% in the total number of babies infected between 2000-1 and 2014-15 and a 19% rise in the rate per 1,000 live births. The UK’s EOGBS infection rate is now more than twice the US rate and higher than the estimated worldwide rate of 0.41 per 1,000 live births.

Other countries using risk-based screening have also seen poor results compared to test-based screening. In the Netherlands a risk-based approach was introduced in 1999 and GBS infection in babies increased from 0.11 per 1,000 live births in 1987 to 0.57 per 1,000 live births in 2017.

One of the reasons there is debate over which approach to use in the UK is a lack of large-scale randomised controlled trials (RCTs) demonstrating the benefit of a test-based screening strategy over a risk-based screening strategy. RCTs reported so far show a significant reduction in infection but were too small to show a significant reduction in mortality.

The charity successfully lobbied the UK Government to plug this research gap, securing £2.8m funding through the National Institute for Health Research (NIHR) for the GBS3 Trial, currently underway. This trial is comparing the effectiveness of the UK’s current risk-based approach with two test-based approaches – bacteriological testing at 35-37 weeks of pregnancy or polymerase chain reaction (PCR) testing at the start of labour. The trial will involve 80 hospitals in England, Wales and Scotland and 320,000 women and their babies. The results, expected in 2024, will inform future GBS prevention policy in the UK and beyond.

**Group B Strep Support’s position about how GBS should be managed**

The charity’s view, after reviewing all available evidence, is that the UK should adopt a test-based screening strategy. A recent systematic review and meta-analysis included 17 observational studies covering 11 million live births and 3798 cases of EOGBS infection. It reported that testing-based prevention strategies were associated with lower incidences of EOGBS infection compared with risk-based strategies, with no significant benefit of risk-based strategies compared with no policy. It also found that test-based screening was not associated with significantly higher antibiotic administration rates (31% versus 29%).

The main problem with the UK’s current approach is that risk factors are poor predictors of GBS carriage. A UK study reported 22% of women had risk factors, and 21% carried GBS, but importantly these were not the same women. Only 29% of the women with risk factors also carried GBS: the overlap was only 6% which means that a risk-based screening strategy misses most of the women carrying GBS. Furthermore, risk factors have been shown to be poor predictors of whether a baby will develop EOGBS infection – 65% of babies who developed EOGBS infection were not flagged as at risk according to RCOG guidelines.

Test-based screening strategies mean a similar proportion of women are offered the IV antibiotics in labour. However, the antibiotics are offered to women whose babies are at highest risk of EOGBS infection – women who are most likely to be carrying GBS when they give birth. One of the key arguments against test-based screening has been that you risk ‘overtreating’ women with antibiotics when they don’t need them. But using a risk-based screening strategy means giving antibiotics to a similar proportion of
women, few of whom carry GBS. Testing allows us to narrow the focus to women whose babies are genuinely at higher risk, helping us to protect more babies and steward our antibiotic usage.

It is important that we listen to what pregnant women want. Surveys over the last several years have consistently shown that over 95% of pregnant women in the UK want to be told about group B Strep and to be offered GBS testing by the NHS.13

What we all ultimately want is a safe and effective maternal vaccine against GBS infection. But vaccine development has progressed slowly, in fits and starts, since the 1970s. Vaccines suitable for licensed use are likely at least 10 years away. Effective vaccines will be a significant improvement on any antibiotic-based prevention strategy, preventing most EOGBS infection, plus GBS related maternal infections, stillbirths and late onset GBS infections (in days 7-90 of life) which cannot currently be prevented.

A maternal vaccine with 80% efficacy and 90% coverage could prevent 107,000 stillbirths and infant deaths worldwide.2

Conclusion

Too many babies are suffering from preventable EOGBS infections. Risk-based screening is not working. Test-based screening has been shown to be better because it:

- prevents more EOGBS infections
- targets a similar level of antibiotic use to where it can protect most babies – to the women who are most likely to be carrying GBS when they give birth
- is what women say they want

A key barrier to test-based screening being introduced in the UK has been the lack of large-scale RCT data. We look forward to the GBS3 trial giving us the highest-quality data when it reports in 2024 and settling this issue for the UK and beyond.

References


