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# Regional Implementation of Strategies to Improve Clinical Escalation in Intrapartum Care: Lessons from A Mixed Methods Evaluation across the Midlands Region

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**Dr Nimarta Dharni**

**Ms Fiona Cross-Sudworth**

**Professor Sara Kenyon**

Applied Research Collaboration West Midlands - Maternity Theme, Department of Applied Health Sciences, University of Birmingham

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# Background

Over the last decade, several maternity safety reports and inquiries (Draper et al 2019; Knight et al 2019; Rowe et al., 2020; NHS Resolution 2019; HSIB 2020; Ockenden 2022; Kirkup 2015; 2022) have highlighted problems with multi-disciplinary team-working and communication, particularly the timely and effective escalation of clinical concerns, as key contributory factors to avoidable harm to women, birthing people and their families during labour. Inter-professional tensions and conflict, professional hierarchies, incivility and fear of being chastised or dismissed, are recognised barriers to effective clinical escalation. Psychological safety, 'a belief that one will not be punished or humiliated for speaking up with ideas, questions, concerns or mistakes, and that the team is safe for interpersonal risk-taking,' (Edmondson 1999) has been highlighted as key to improving safety culture in maternity services. To address these issues, the Department of Health and Social Care funded the Royal College of Obstetricians and Royal College of Midwives to develop a 'Clinical Escalation Toolkit', designed and tested by frontline maternity clinicians in 16 NHS Units across England between 2019-2021. Underpinned by behavioural science, three strategies were designed to address the most common barriers to clinical escalation:

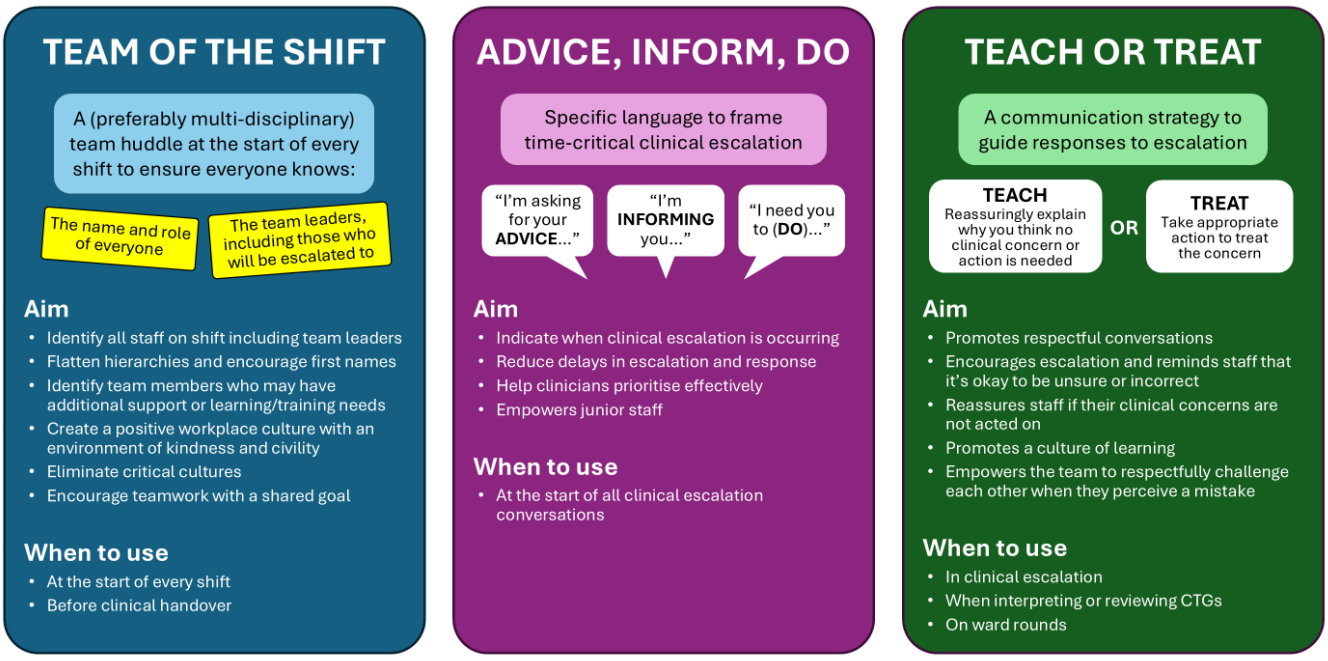


*Figure 1: Interventions in the Clinical Escalation Toolkit*

## Implementation approach in the Midlands

In November 2022, the NHSE Midlands Perinatal Service requested implementation of the toolkit in all 21 provider Trusts in the region. Prior to implementation, a virtual meeting to officially launch the clinical escalation toolkit in the Midlands region was held with clinical directors, heads of midwifery, safety champions, labour ward obstetric leads and labour ward coordinators, with representation from the majority sites across the region. The aim of the launch was to provide an overview of the expectations of participating sites, clinical escalation toolkit, implementation, and evaluation overview. Following this event, each site was requested to nominate a midwife and obstetrician to lead implementation in their respective sites. Roles of suggested site implementation leads included labour ward obstetric leads, labour ward coordinators or fetal monitoring leads. Implementation began in January 2023 and remains ongoing.

Implementation was supported by Patient Safety Collaborative leads in the East and West Midlands Health Innovation Networks, the Midlands Perinatal team, and Dr Nina Johns (Royal Wolverhampton NHS Trust), Dr Susie Crowe (NHS England), and Dr Susie Al-Samarrai (NHSE Midlands). NJ, SA, SC together with ND (University of Birmingham) were all involved in the development of the toolkit. Six online webinars/action learning sets were held between January-December 2023 to build a community of practice and support site leads with implementation planning, initiation and ongoing delivery. In October 2023, the Midlands Perinatal Service appointed a midwifery and obstetric clinical advisor to provide more bespoke implementation support to sites encountering challenges.

## Evaluation Aims

The University of Birmingham undertook an independent evaluation of the implementation and impact of the clinical evaluation toolkit on a regional level between January 2023 to July 2024. Implementation outcomes studied included acceptability, appropriateness, feasibility, fidelity, adoption, coverage, and sustainability of the clinical escalation toolkit. Table 1 summarises the evaluation objectives and data collection timelines.

Table 1: Evaluation objectives and data collection overview

| Objective | Questions | Data collection method | Timing of data collection |
|---|---|---|---|
| 1. | How was the implementation of the clinical escalation toolkit across the 21 Midlands sites in terms of the delivery, fidelity, reach, feasibility, acceptability, adoption? | Qualitative interviews with site leads | Nov 23-Feb 24 |
| 2. | What strategies were used to facilitate implementation, were any adaptations required?<br>What challenges were encountered and how were they overcome? | Qualitative interviews with site leads | Nov 23-Feb 24 |
| 3. | What internal and external contextual factors (including organisational and wider societal factors) affected implementation? | Qualitative interviews with site leads<br><br>Qualitative interviews with regional support leads | Nov 23-Feb 24<br><br>July 2024 |
| 4. | How did frontline maternity staff perceive the toolkit and what was the impact on their practice?<br><br>How acceptable, feasible, sustainable are the interventions in the toolkit?<br><br>How can we maximise scale and spread? | Pre and post attitudes and behavioural questionnaire survey with staff across the 21 sites<br><br>Interviews with staff across selected maternity units<br><br>Qualitative interviews with site leads and regional support leads | Baseline survey: Feb-April 2023. Follow up survey: Feb-April 2024<br><br>Nov 2023-Feb 2024<br><br>Feb-July 2024 |
| 5. | What was the impact of the provided implementation support perceived by site leads?<br><br>How could support be maximised for other teams? | Qualitative interviews with site leads | Nov 23-Feb 24 |

# Methodology

A mixed methods evaluation was undertaken involving:

1. Interviews with implementation site leads prior to implementation and 9-12 months after implementation initiation
2. Interviews with frontline maternity staff across 7 selected sites 9-12 months after implementation initiation
3. Baseline and follow-up surveys with maternity staff across all sites
4. Interviews with regional support leads

Ethical approval was obtained from the UoB ethics committee (ERN_2022-0555). We worked with the ARC West Midlands Maternity Theme Patient and Public Involvement and Engagement (PPIE) group who were involved in advising the study team throughout the research process.

## Qualitative interviews

Both obstetric and midwifery site leads for all sites were approached to participate in either joint or individual interviews at baseline. Site leads who participated at baseline were re-contacted to participate in the follow-up interviews where they were still in post. Sites for staff interviews were selected based on site leads self-reporting whether they had fully, partially or had struggled to implement the toolkit during follow-up interviews. All interviews were held remotely via Microsoft Teams, audio-recorded and transcribed verbatim. Recorded verbal consent was obtained from all participants prior to data collection. Participants were offered a Costa Coffee gift voucher as thanks for their participation.

Anonymised transcripts were managed using the QSR NVivo 12 software programme (QSR International Pty Ltd, 2020). The full qualitative analysis was based on the Consolidated Framework for Implementation Fidelity (Damschroder et al 2022). The findings included in this report are presented as a content analysis of the barriers and facilitators of implementation alongside the reported impacts of the toolkit. Transcripts were coded systematically and iteratively until data saturation was achieved.

## Quantitative Survey

Online baseline and follow-up surveys were disseminated by site leads to all relevant multi-disciplinary staff within their organisations. The survey was largely based on the survey used in the original evaluation of the clinical escalation toolkit (RCOG, 2022). Questions were based on the Capability Opportunity Motivation behaviour change framework (Michie et al 2011) and a validated measure of psychological safety (Edmondson, 1999).

Individual responses came directly back to the University of Birmingham and participants were anonymous. As the survey was repeated, participants were asked to include a unique identifier only known to them e.g. the first letter of their surname and the number of the month of their birth, so their baseline and follow-up questionnaires could be accurately matched. Quantitative survey data were analysed using descriptive statistics for both pre- and post- groups. Unpaired t-tests were performed to describe the difference in means between these groups. Subgroup analyses were completed based on professional background and years of experience. For a subset of participants matched between pre- and post- observations, additional analysis was completed using paired t-tests to describe the differences in means between the matched groups.

Data from all sources were triangulated to build an overall understanding of the implementation and impact of the clinical escalation toolkit in the Midlands.

# Results

A total of 78 interviews were conducted prior to implementation and approximately 9-12 months later. Sample sizes for the different evaluation phases and participants' demographic details are presented in table 2. Overall, the majority of participants were midwives as were the majority of implementation site leads. Site leads' professional roles included fetal monitoring leads, intrapartum care matrons, patient safety midwives, practice development midwives, quality improvement midwives, senior obstetric trainees and consultant obstetricians. Twenty-seven frontline maternity clinicians were interviewed in seven purposefully selected site based on self-reporting of whether they had fully, partially or had struggled to implement the toolkit during follow-up interviews.

Table 2: Qualitative interview participant demographics

| Interview phase | Participants | Sample size |
|---|---|---|
| 1. Pre-implementation with site leads from 19 NHS sites* | Midwife site leads<br>Obstetrician site leads<br>Total | 20<br>3<br>23 |
| 2. Post-implementation with site leads from 20 NHS sites* and regional support team | Midwife site leads<br>Obstetrician site leads<br>Regional support team<br>Total | 20<br>4<br>4<br>28 |
| 3. Frontline maternity clinicians from 7 NHS Trusts | Grade 5 Midwives<br>Grade 6 Midwives<br>Grade 7 Midwives<br>Matrons<br>Consultant Obstetricians<br>Senior Obstetric Trainees<br>Total | 5<br>6<br>7<br>3<br>4<br>2<br>27 |

**4 joint interviews with site leads during pre and post implementation phases*

## Interview Findings

*Relevance and need for the clinical escalation toolkit*

Problems with clinical escalation were well recognised in sites with almost very site reporting examples of cases where clinical escalation failures had led to poor outcomes for women and babies. Reported barriers to effective clinical escalation included anxiety and a lack of confidence to escalate amongst junior staff, incivility and receiving negative responses to escalations, professional hierarchies and a lack of clear and concise escalation language used by staff. The toolkit was widely reported to be both relevant and feasible to implement by site leads.

*It's relevant to every unit, because time and time again we are seeing themes in … poor outcomes cases, in HSIB cases where it's constant communication, lack of escalation, unable to get the response that we wanted, or you felt that you were asking but nobody was listening… we absolutely need to do something to stop it from happening.* Midwife site lead

*One of the overwhelming themes was how incivility and negative staff behaviours impair good escalation, and we had a member of the team write that they hadn't escalated appropriately in the event of a neonatal death, because they were concerned about the attitudes of the person that they had to escalate to.* Obstetrician site lead

*Benefits of the toolkit for frontline staff*

Benefits of the clinical escalation toolkit were widely reported in interviews with both site and frontline staff. Key benefits included improved clinical escalation through clearer, standardised communication between staff of all levels, all leading to improved safety overall.

*It's all about promoting the safety isn't it? And that is key in our unit, and whatever that takes in the form of better community, clearer communication, the appropriate response, the actions taken, that's absolutely key in the values that we have of giving the best care to our women and babies and families, and the safest…* Midwife site lead

*It's something that's so worthwhile to everybody… not just to the doctors, midwives, and everybody in the unit, but obviously the end result is it is going to provide safer care for women and their families.* Midwife site lead

Whilst all staff groups were reported to benefit, a consistent finding was the improved confidence and empowerment to escalate using the toolkit strategies, particularly for junior and newly qualified midwifery staff.

*when you've got junior midwifery staff, when they're almost armed with that terminology…' I'm asking you to come and review, I'm documenting that I've asked them to come and review, so therefore I'm asking them to do something.' So it's almost empowering them*. Midwife site lead

*…just the confidence more than anything, and feeling more empowered to change. So I definitely think the midwives have benefitted the most. I think it's benefitted everybody, but I would say that's where I get the best feedback from is the midwifery team.* Midwife site lead

Several participants also reported positive impacts on psychological safety and attempts at flattening hierarchies, particularly for Teach or Treat, which were welcomed and reported as much needed in enabling kind and professional discussions where there was a difference of opinion. However, there were reports of lack of willingness to participate in teach or treat by some obstetric colleagues in interviews with frontline midwifery staff.

*Teach or Treat it's obviously in the guidelines, because I felt that just to promote civility and psychological safety and escalation that needed to be in writing and in there so that staff know it's absolutely fine to challenge in a professional manner.* Midwife site lead

*So it's about saying to the doctors as well, "Look, it doesn't matter what band these midwives are, it doesn't matter how junior they are, if they're worried and they're contacting you, you should be*

*going, you should be seeing that patient, and if it is okay, you should be reassuring that midwife by giving her a thorough explanation. Not just 'it's fine, stop worrying about it'."* Midwife site lead

*Improved MDT relationships*

Another notable benefit of the toolkit, particularly of team of the shift, was improvement in teamwork and relationships across different professions and departments such as theatres and neonatal care.

*The relationship with the neonatal team was something that we really wanted to use the tool to improve, and we had to ideally we wanted emergency theatre presence at both morning and evening…. I think part of the success of this has been listening to people and working out exactly how much they can commit, and accepting that level of commitment.* Obstetrician site lead

*It's [toolkit] built a lot of bridges I think and made a lot of communication improvement between our theatre staff groups, and actually possibly the midwifery clinicians on the department.* Midwife site lead

*Implementation of the toolkit*

Most participants reported encountering some degree of challenge with implementation. There was also widespread variation in the number of interventions implemented by sites with just over half implementing all three interventions to some extent (see table 3). Furthermore, six midwife site leads changed during the course of implementation due to changing roles, organisations and maternity leave. Whilst the majority were replaced by new site leads, one site did not nominate a replacement.

Table 3: Implementation progress and Interventions implemented by Midlands sites

| **Self-reported implementation progress of toolkit by site leads** | **Number (%)** |
|---|---|
| Embedded | 4 (20%) |
| Partially embedded/ making progress | 6 (30%) |
| Partially embedded/ experiencing challenges | 9 (45%) |
| Not embedded | 1 (5%) |
| **Interventions implemented** | |
| All three interventions | 11 (55%) |
| AID, Teach or treat | 7 (35% |
| Team of the shift & Teach or Treat | 1 (5%) |
| Team of the shift | 1 (5) |
| Total | 20 sites |

*Barriers and Facilitators of Implementation*

Despite the positive impacts reported in terms of benefits, acceptability, and relevance of the clinical escalation toolkit, many site leads encountered challenges in implementation and sustainment of the toolkit. The most commonly reported barrier was the lack of protected time to drive implementation amongst existing heavy workloads.

*"…although we have a team it's run on people's goodwill rather than having the time to do it, and that makes it very difficult to roll something out if it's alongside another job rather than having the dedicated time to be able to do it."* Midwife site lead

*"I'm finding it really difficult to find a) the time, and b) the motivation from other staff. Because I'm only one person, you can only do so much can't you as a one person? And you need people behind you"* Midwife site lead

Whilst every site had nominated a named midwife and obstetrician to jointly lead implementation of the toolkit, implementation was led by midwives in most sites. Several midwifery site leads reported feeling alone and overburdened as their obstetric colleagues were not able to contribute proactively with initiation and implementation of the toolkit. The lack of obstetric involvement, often due to staffing challenges, further hindered the toolkit from being utilised and embedded across the multi-disciplinary workforce, resulting in resistance and a lack of engagement from some staff groups.

*I think the obstetric buy-in's been a massive block if I'm honest. I think if they had been really pro it, it would have been easier. Or just done more for the implementation really. I think everyone knows it needs to be done, but then it's like going to and saying, "Well actually what can we do? How can we get the obstetricians on-board?" That's been really challenging.* Midwife site lead

Further reported barriers to implementation included a high number of competing priorities and quality improvement initiatives, overwhelmed colleagues and ongoing staffing shortages.

*There are just so many other things going on, there's an outpatient induction quality improvement project going on, there's improving our triage, which has big changes to the way we're running the unit, we're doing a PPH study, there's so many different things that people are involved with … I don't think anybody is willing to or got the capacity to pick this up as a separate thing.* Obstetrician site lead

*I tried to get champions in the areas, but … I feel like you need to be respectful of the environment that people are working in at the minute, that we've been massively understaffed for quite a long time, and there's champions for everything that people ask for and stuff… I think that's probably my*

*conscious decision to avoid asking people to do more than they're doing already kind of thing.* Midwife site lead

As outlined earlier, several site leads changed during implementation. Whilst most were replaced, this was not always immediate and led to a loss of momentum and implementation gap. Regional support leads highlighted the need for more internal accountability and governance around implementation of the toolkit to ensure continuity when site leads were absent or replaced.

*So we've seen a lot of places that have had as happens lots of maternity leave, sick leave, people moving on, and what we've seen is that creates a bit of a vacuum…and it just falls through the gaps, because there's no strong governance over it. So if it goes in places where it goes to governance every month they will say, "Okay we've got an action plan for Each Baby Counts, where are we at with it?" It doesn't matter who the fetal monitoring lead is at the time, or if somebody's off sick, it's not just completely sat by the wayside.* Regional Support Lead

Staff engagement and reluctance to change longstanding habits in some staff groups were reported as further barriers to adoption of the toolkit interventions. Site leads and frontline staff highlighted the need for reciprocal buy-in for the interventions from staff escalating concerns and those receiving them to truly embed.

*"When there's been conflict, and perhaps there's been a 'well this is my opinion and that differs to your opinion', and perhaps a bit of a reluctance to do the Teach and Treat and actually explain to everybody… And then escalating to the next level, the person receiving the escalation has also got to be amenable and open to what they are being asked to do, and so sometimes there's a bit of conflict there."* Obstetrician site lead

Despite the widely reported challenges, we were able to glean insights underpinning successful implementation from several site leads. Facilitators of implementation included joint and active promotion by obstetric and midwifery leaders, inclusion in mandatory training and integration of the toolkit interventions within established norms, practices and policies further increased engagement and acceptance from staff. For example, Teach or Treat was commonly combined with existing practices with 'fresh eyes' reviews, and Team of the Shift was incorporated within handovers, fostering familiarity and reduced feelings of additional burden amongst staff.

*I think one of the best things about it was it's built into stuff that we were doing already, so we added it to our civility, we added it to our training, so we added it to our human factors aspect. I think when*

*you relate that to your own areas, and you relate that to what you've got embedded already I think that helps to ease it in a bit better.* Midwife Site Lead

*There's one or two people who are just like well it's not the policy, it's not a guideline, why do I need to do this? So we decided that we'd make it policy, so that it was included in the guidelines. … we've updated the guideline, we've got all three toolkits in there...* Obstetrician site lead

Some sites had also integrated the toolkit interventions into existing digital and/or electronic patient record systems as further prompts or as mandatory fields to be completed.

*Teach or Treat we've changed some of our EPR documentation … So where we actually do all out CTG interpretations we've now got a prompt for Teach or Treat to remind midwives that every single escalation review or fresh eyes … But it is a mandated field so it means they can't actually save their review unless they're documented if they've done Teach or Treat or not applicable.* Midwife site lead

All site leads highlighted the importance of having a wider multi-disciplinary team (MDT) to support and help drive implementation forward. In sites where implementation was going well, wider MDT involvement and support from practice development midwives, patient safety, quality improvement and transformation teams further enhanced implementation. However, as discussed earlier this was not the case for all sites as staffing shortages and reports of low staff morale were widespread which impacted the motivation of frontline colleagues to support the toolkit and act as champions.

*The whole maternity culture development team were responsible for supporting me implementing Team of the Shift in particular… Part of the culture development team are also our midwifery educators, and they have been crucial in embedding the AID and Teach or Treat in PROMPT ... So it's been a real collaborative effort from an obstetric perspective in that I very much pushed through Team of the Shift, but from a midwifery perspective there's been a lot more involvement in AID and Teach and Treat.* Obstetrician site lead

*I embedded them within my full teaching day, and then so that was quite easy for me to get those into the teaching sessions. Then I liaised with the practice development midwife to get them into PROMPT, and I have weekly CTG meetings. So I utilise the tools within that as well, so I'm talking about all of them. So at every opportunity I'm talking about the tools as much as possible.* Midwife site lead

Successful implementation was also underpinned by role-modelling by site leads whilst working clinically using a variety of prompts and resources such as posters, promotional business cards, social media posts, competitions, tea trolley rounds, formal/ informal meetings, emails, newsletters, and clinical champions. Most sites launched the toolkit on a specific day, week or over a period of time, creating excitement and interest with merchandise, cakes and direct staff engagement.

*… we do hot weeks on-call, so you would then be doing it, and I would need obviously the support of the probably the band seven midwives and the midwifery matron, and it would probably just be modelling it and doing that on a daily basis… But just probably doing it, and modelling it, and then handing over for the next person next week to keep doing it.* Obstetrician site lead

*"With AID we actually put stickers on all our phones in the department. They're bright yellow, just with the acronym, just says 'oh, you're making an escalation call' and then 'advise, inform, do'. So whenever you go to pick up a phone it's right there, bright yellow, you can't miss it."* P7, midwife site lead, follow up

Assessing needs prior to implementation was a strategy used by some site leads who had successfully embedded the toolkit. Surveying staff and having direct conversations on the challenges around effective escalation helped further engage staff and gather feedback on implementation progress.

*"Actually when we first started, we did a baseline survey of all of our staff to find out exactly what escalation meant to them… I wanted to know everything that staff had to say about escalating so that we could pick out the themes for that. We did a proper thematic analysis on that, and it confirmed what we thought, and it helped staff to recognise and articulate it as well …It's really important, I think, to show that we've heard responses and what we're doing about it. So we did say 'Thank you for doing the survey, this is what we're doing'… and that's when we launched."* P15, Midwife site lead

Senior leadership support, understanding and endorsement gave further credibility and importance to the toolkit to site leads and frontline teams. In sites where this was missing, there were notable differences in how well adopted the toolkit had become. Regional leads highlighted the importance of proactive monitoring of progress by senior leadership teams to ensure momentum would not be lost and to ensure the longer-term sustainment of the toolkit.

*People have been very supportive, and in fact … our head of midwifery, deputy matron, director, they all… delivered some tea trolley training as well. Because I just think how best to get our message across than see it coming from not just me … it's not a one-man band.* Midwife site lead

*For successful implementation what I'd say it's having a thorough understanding of what it is you're trying to implement, because actually a lot of people don't or didn't, understand why you're trying to implement it. So tell me why you want to implement this, and what benefits you think it might bring, and that will tell me if you understand what it is you're trying to implement, and that not only do you*

*need a project team who's in the clinical area, you need your senior leadership team to understand both of those things too. Without those you'll be a single view and … and it wouldn't work. So I think that's it, understand what it is, and why it is, and that your senior leadership team need to understand that to enable you to be able to implement it.* Regional Lead

Finally, the regional approach to implementation was widely reported as an important strategy in bringing together teams from across a wide region to learn, share and support one another. Six online webinars, hosted by the regional support leads, were held to provide in-depth training and background to the toolkit interventions, provide hints and tips for successful implementation and strategies to overcome challenges. However, attendance at the webinars wavered as time progressed and a lack of face-to-face contact, particularly at the start of the project, was cited as a barrier to cultivating a true community of practice.

*"I think what we've had has been helpful, and I think how other units have adapted, and what they've done has been incredibly helpful, because it's a good way of sharing ideas. I think sometimes if you're feeling a bit stagnant it makes you feel a little bit inadequate, and oh yes… but also it can also give you the ideas to take away and share in your own unit."* Midwife site lead

## Survey Findings

There was variation in the number of responses received to the baseline and follow-up surveys and not all sites disseminated the survey. At baseline, 490 responses were received across 18 sites (range of 8 to 54 responses per site) and at follow-up, 420 responses were received across 20 sites (range of 5 to 45 responses per site). After removing duplicates, there were a total of 818 survey participants across baseline and follow-up of which 99 participants (11%) had completed both surveys. Table 3 below displays the demographic characteristics of survey participants. The majority of survey participants were from a midwifery background with a large proportion being band 6 midwives.

Selected findings from both matched and unmatched data are presented below and must be interpreted with caution due to small sample size and magnitude of differences detected.

*Table 4. Characteristics of survey participants*

| **Characteristics** | **Baseline, (n=490) n (%)** | **Follow up, (n=420) n (%)** |
|---|---|---|
| **Number of sites** | 18 | 20 |
| **Professional background** | | |

| | | |
|---|---|---|
| Midwifery | 429 (87.6) | 344 (81.9) |
| Midwifery Support | 12 (2.5) | 19 (4.5) |
| Nursing | 2 (0.4) | 1 (0.2) |
| Medical - Obstetrics & Gynaecology | 42 (8.6) | 50 (11.9) |
| Medical – Anaesthetics | 5 (1.0) | 4 (1.0) |
| Medical – Neonatal | 0 (0.0) | 1 (0.2) |
| Other | 0 (0.0) | 1 (0.2) |
| **Professional role** | | |
| Matron | 12 (2.5) | 14 (3.3) |
| Band 5 midwife | 23 (4.7) | 22 (5.2) |
| Band 6 midwife | 243 (49.6) | 167 (39.8) |
| Band 7 midwife | 116 (23.7) | 91 (21.7) |
| Labour ward coordinator | 27 (5.5) | 41 (9.8) |
| Maternity support worker | 12 (2.5) | 16 (3.8) |
| Neonatal nurse | 1 (0.2) | 1 (0.2) |
| SAS doctor | 1 (0.2) | 0 (0.0) |
| Speciality trainee ST1 - ST2 | 2 (0.4) | 4 (1.0) |
| Speciality trainee ST3 - ST7 | 10 (2.0) | 16 (3.8) |
| Consultant | 33 (6.8) | 35 (8.3) |
| Other | 10 (2.0) | 16 (3.8) |
| **Years in profession** | | |
| <1 year | 33 (6.7) | 20 (4.8) |
| 2-4 years | 70 (14.3) | 51 (12.1) |
| 5-9 | 112 (22.9) | 89 (21.2) |
| 10-19 | 143 (29.2) | 152 (36.2) |
| 20+ | 132 (26.9) | 108 (25.7) |
| **Normal place of work (multiple answers allowed)** | | |
| Birth centre | 67 (13.7) | 46 (11.0) |
| Labour ward | 280 (57.1) | 256 (61.0) |
| Theatres | 57 (11.7) | 70 (16.7) |
| Home birth team | 4 (0.8) | 4 (1.0) |
| Continuity of Carer team | 25 (5.1) | 10 (2.4) |
| Maternity Assessment Unit/Triage | 121 (24.7) | 103 (24.5) |
| Community | 59 (12.1) | 44 (10.5) |
| Induction suite | 56 (11.5) | 58 (13.8) |
| Other | 129 (26.4) | 127 (30.2) |

Consistent with findings from qualitative interviews, the baseline survey findings also suggested there was a need for the clinical escalation toolkit in terms of reducing incivility and tensions within teams, unfamiliarity with colleagues, worries about responses to escalations, and psychological safety in relation to how mistakes were handled. Key descriptive findings included:

- 56% staff reported always/often observing tensions between team members
- 37% staff were unfamiliar with their team members & their roles on a shift

- 28% staff were always/often worried about response they might get to escalation
- 31% staff reported feeling that mistakes were held against them

Analysis of the follow-up survey and comparison with baseline responses revealed some key albeit small changes for all participants in the unmatched analysis including:

- Increased number of appropriate responses to escalations (OR 0.13, 95% CI 0.02-0.24, $p<0.05$)
- Increased staff confidence to escalate concerns (OR 0.25, 95% CI 0.09-0.41, $p<0.05$)
- Increased feelings of being listened to and respected amongst staff (OR 0.15, 95% CI 0.03-0.27, $p<0.05$).

For the limited sample size of matched baseline and follow up participants (n=99), there were again some similar and small significant changes in terms of:

- Increased staff confidence to escalate concerns (OR 0.17, 95% CI 0.01-0.33, $p<0.05$)
- Easier to contact the appropriate person to escalate concerns (OR 0.22, 95% CI 0.03-0.41, $p<0.05$)
- Reduced worries on responses to escalated concerns (OR -0.25, 95% CI -0.46 - -0.04, $p<0.05$)

Further sub-group analysis was undertaken by participants' professional role which suggested significant differences for a combined group of band 5 and 6 midwives (n=266 baseline, 189 follow-up) in terms of:

- Increased clarity on who to contact for clinical escalation for this group (OR 0.18, 95% CI 0.03-0.33, $p<0.05$)
- Increased confidence to escalate concerns (OR 0.19, 95% CI 0.08-0.30, $p<0.01$)
- Increased feeling that speaking up about care concerns was part of their role (OR 0.11, 95% CI 0.01-0.21, $p<0.05$)

No other differences by participants professional role were found, again this may have been due to small sample sizes of sub-groups.

# Conclusion and Recommendations

Our evaluation findings highlight the positive impact on clinical escalation behaviours, staff confidence and psychological safety of the implementation of the Clinical Escalation Toolkit – all contributing towards a positive workplace culture. However, for these benefits to be realised for all sites and staff groups, protected time, support and resources are required for teams driving successful implementation, together with regional support. Furthermore, our findings highlight the importance of both midwifery and obstetric leadership in implementation alongside role modelling and constant reinforcement of desired behaviours. Despite having nominated midwifery and obstetric leads at the start, lack of involvement and engagement from obstetricians was a key barrier to implementation success for the majority sites. In several sites, there was a lack of senior leadership teams' understanding of the toolkit coupled with a lack of monitoring and accountability of progress meaning senior leaders were not always aware when momentum had been lost.

Finally, implementing the toolkit as a whole Midlands region was a key strength of this project with support from multiple stakeholders and it was evident from webinars that site leads gained a lot from learning and sharing ideas to overcome challenges with each other.

## Recommendations for successful implementation

1. **Regional/network approach to implementation**: This involves active support for sites from regional Maternity PSC teams, coordination of a community of practice between site leads including face-to-face meetings, providing in-depth training on the tools, associated benefits and conditions required for implementation, resources such as pens and posters and ongoing support with challenges.

2. **Early engagement and buy-in of senior leadership teams**: It is important senior leaders understand the implications and benefits of implementing the toolkit in their sites to ensure accountability, tracking of progress, and momentum is not lost. Early engagement of senior leaders by regional support teams helps secure buy-in and facilitates engagement of frontline staff for implementing the toolkit.

3. **Importance of motivated and obstetric and midwifery leadership:** there should be midwifery and obstetric leads in every site who understand the toolkit and benefits, are given protected

time to jointly plan, launch and continuously monitor implementation. Midwifery implementation leads should be at least band 7 level and obstetricians should be either Consultants or senior trainees to ensure the toolkit is cascaded by credible sources for the different professional groups.

4. **Undertake local diagnostics:** prior to implementation, site leads should spend some time understanding the contributory factors to poor issues with clinical escalation in their site and how the toolkit can benefit their teams. This could be done through reviewing serious incidents where problems with clinical escalation have been identified and speaking to frontline staff directly about their escalation challenges to help identify which intervention should be implemented first according to local need e.g. if teams report unfamiliarity with colleagues and uncertainty about the appropriate person to escalate to, they may benefit from implementing team of the shift first.

5. **Involvement of wider MDT and frontline staff in implementation:** Having a whole team approach ensures the messages of the toolkit remain and facilitates the feasibility, expanded reach and sustainability of the toolkit, given the number of competing priorities juggled by teams and ever-changing staff roles and teams. Implementation teams could include labour ward coordinators, practice development midwives, patient safety midwives, QI/transformation leads, fetal monitoring midwifery and obstetric leads, consultant obstetricians, senior registrars, and nominating frontline staff as 'clinical escalation champions'.

6. **Integrate toolkit into formal and informal training:** for all staff including in mandatory training, PROMPT, fetal monitoring training, refresher updates by bringing in the practice development team on board with implementation and training. Where possible, there should be an MDT approach to training as the toolkit is for all staff regardless or professional background or grade. Informal teaching through tea trolley rounds by site leads and other team members is also an effective way of engaging staff during their daily routines with the added incentive of a short break whilst they learn about the toolkit interventions.

7. **Incorporate toolkit into guidelines and existing practices** including the toolkit in as many routine practices, guidelines and policies to ensure normalisation and adoption of the interventions by all staff e.g 'incorporating teach or treat with fresh eyes' for fetal monitoring reviews.

8. **Role modelling of positive escalation and response behaviours at all levels:** this is a powerful behaviour change technique where role-modelling of the desired behaviours and interventions by both midwifery and obstetric staff facilitates adoption by all and ensures sustainability of the interventions following the launch/engagement activities. This also helps foster psychological safety within teams when leaders are seen to be behaving and responding with kindness and candour.

9. **Multiple ways to share information and constant reminders**: sharing information with staff using a variety of different mediums such as posters, pens, cards. This also involves site leads making use of the resources on the RCOG website, localising to make them relevant to their respective sites e.g. through branding and launch activities.

10. **Continuous monitoring and collect feedback** from staff: it is important to regularly monitor implementation progress and collect feedback on the interventions from staff to ensure any challenges can be promptly identified and addressed. This information would also be helpful to share with senior leadership teams to obtain any further support or resources required to strengthen implementation. Example data collected may include staff awareness of the toolkit interventions, feedback on use, adoption and outcomes.

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# References


Damschroder, L.J., Reardon, C.M., Widerquist, M.A.O. and Lowery, J. (2022) The updated Consolidated Framework for Implementation Research based on user feedback. Implement Sci 17(1):75 https://doi.org.uk/10.1186/s13012-022-01245-0

Draper ES, Gallimore ID, Smith LK, Kurinczuk JJ, Smith PW, Boby T, Fenton AC, Manktelow BN, on behalf of the MBRRACE-UK Collaboration. MBRRACE-UK Perinatal Mortality Surveillance Report, UK Perinatal Deaths for Births from January to December 2017. Leicester: The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester. 2019.

Edmondson, A. (1999). Psychological Safety and Learning Behaviour in Work Teams. Administrative Science Quarterly, 44(2), 350-383. https://doi.org/10.2307/2666999

Healthcare Safety Investigation Branch (HSIB; 2020) Summary of Themes arising from the Healthcare Safety Investigation Branch Maternity Programme (NLR) accessed at: https://www.hsib.org.uk/documents/224/hsib-national-learning-report-summary-themes-maternity-programme.pdf

Kirkup, B. (2015) The Report of the Morecambe Bay Investigation https://www.gov.uk/government/publications/morecambe-bay-investigation-report

Kirkup, B. (2022) Reading the signals Maternity and neonatal services in East Kent – the Report of the Independent Investigation https://www.gov.uk/government/publications/maternity-and neonatal-services-in-east-kent-reading-the-signals-report

Knight M, Bunch K, Tuffnell D, Shakespeare J, Kotnis R, Kenyon S, Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. Saving Lives, Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2015-17. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2019.

Michie S, van Stralen M, West R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Science. 2011 6(42):1-11

NHS Resolution (2019) A summary of the Early Notification Scheme progress report, accessed at https://resolution.nhs.uk/wp-content/uploads/2019/10/NHS-Resolution_Early-Notification-Scheme-Summary-Report.pdf

Ockenden, D. (2022) Findings, conclusions and essential actions from the independent review of maternity services at The Shrewsbury and Telford Hospital NHS Trust https://www.gov.uk/government/publications/final-report-of-the-ockenden-review

Rowe, R., Draper, E.S., Kenyon, S., Bevan, C., Dickens, J., Forrester, M., Scanlan, R., Tuffnell, D. and Kurinczuk, J.J., 2020. Intrapartum-related perinatal deaths in births planned in midwifery-led settings in Great Britain: findings and recommendations from the ESMiE confidential enquiry. *BJOG: An International Journal of Obstetrics & Gynaecology*.

The Royal College of Obstetricians and Gynaecologists (2020) Each Baby Counts 2019 progress report. Accessed at https://www.rcog.org.uk/globalassets/documents/guidelines/research--audit/each-baby-counts/each-baby-counts-2019-progress-report.pdf

The Royal College of Obstetricians and Gynaecologists (2022) Each Baby Counts Learn and Support Final Evaluation Report. Accessed at https://www.rcog.org.uk/media/fzslblmc/rcog-ebc-learn-support-full-report.pdf