

Midwives' recognition and response to maternal deterioration: A national cross-sectional study

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Abstract

Background: Early warning systems (EWS) are used across health care settings as a tool for the early identification of clinical deterioration and to determine the need to escalate care. Early detection of clinical deterioration and appropriate escalation of care in maternity settings is critical to the safety of pregnant women and infants; however, underutilization of EWS tools and reluctance to escalate care have been consistently reported. Little is known about midwives' use of EWS in the Australian context.

Methods: Using a cross-sectional approach, we elicited the attitudes, beliefs, and behaviors of a purposive sample of Australian midwives ($n = 87$) with respect to the Maternal Early Warning Trigger Tool (MEWT). Participants answered a 25-question Likert scale survey and one open-ended question. Qualitative answers were analyzed using consensus coding.

Results: Midwives reported positive attitudes toward the MEWT, describing it as a valuable tool for identifying clinical deterioration, especially when used as an adjunct to clinical judgment. However, midwives also identified training gaps; 25% had received no training, and only half of those who had received training felt it was effective. In addition, professional tension can create a significant barrier to the effective use of the MEWT. Midwives also reported feeling influenced by their peers in their decision-making with respect to use of the MEWT and being afraid they would be chastised for escalating care unnecessarily.

Conclusions: Although the MEWT is valued by Australian midwives as a useful tool, barriers exist to its effective use. These include a lack of adequate, ongoing training and professional tension. Improving interdisciplinary collaboration could enhance the use of this tool for the safety of birthing women and their infants.

[Correction added on 01 June 2023, after the first online publication: The affiliation for Elaine Jefford has been revised.]

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1 | INTRODUCTION

The tragic death of a 27-year-old pregnant Indigenous woman in 2016 demonstrated the devastating consequences of failure to recognize and respond to clinical deterioration. The coroner reported that it was not known if this young woman was assessed as having a high-risk pregnancy. A pregnancy is defined as high risk when:

...the likelihood of an adverse outcome related to labour (for the woman or the baby) is greater than that of the “normal population”. The level of risk may be determined before pregnancy or arise during pregnancy or during labor and can affect the woman or the baby.¹

In this case, it appeared that the presence of a high-risk pregnancy had not been flagged. In response to this finding, the coroner recommended that training should be implemented on the importance of “safety alerts” and on the monitoring of implicit bias, to ensure the safety of both Indigenous and non-Indigenous birthing women. The death of this young woman is devastating and the short- and long-term impact of such a tragedy on her partner, wider family, the community, and the health workers who cared for her cannot be overstated. This case undeniably highlights that it is imperative for all health care professionals working with pregnant women to be able to recognize deterioration, monitor the situation, and escalate care as necessary.

Midwives around the world are acknowledged and recognized as autonomous health care professionals who are essential to developing, promoting, and evaluating safe perinatal care. The midwife's scope of practice encompasses all aspects of care related to the management and maintenance of the normal physiological processes of childbirth, including the recognition of any deviation from normal.^{2,3} Midwives, when assessing any deviation or clinical deterioration, are mandated to seek medical advice/care as appropriate.² Application of this knowledge was recognized as an important standard in the 2011 *Saving Mothers' Lives: Reviewing Maternal Deaths to Make Motherhood Safer: 2006–2008 Report*.⁴ In the maternity setting, healthy pregnant women can and do develop subtle signs of physiological changes indicating deterioration. Furthermore, clinical deterioration can be rapid, and the lack of recognition can be detrimental to the woman and/or her baby.

Clinical deterioration is defined as:

...a patient who moves from one clinical state to a worse clinical state, which increases their

individual risk of morbidity, including organ dysfunction, protracted hospital stay, disability or death....⁵

This definition, however, was developed for the acutely unwell adult patient, not the pregnant woman, and thus fails to capture some of the challenges in recognizing and responding to this cohort. Recognition and response to clinical deterioration in the maternity care differ from other populations as a result of several factors: (1) Pregnant and postpartum women may appear well with only subtle signs of illness before sudden, severe deterioration^{6,7}; (2) signs and symptoms of deterioration may be mistaken for “discomforts of pregnancy”⁸; and (3) the number of women of childbearing age presenting with severe comorbidities is increasing.^{6,7,9} One or all of these factors can delay recognition and response to maternal deterioration, impacting negatively on maternal outcomes.¹⁰

Knight et al.¹¹ concluded that improvements in care processes would have made a positive impact on patient outcomes for 106 (52%) of the 203 reported direct maternal deaths in the United Kingdom between 2009 and 2012. In New Zealand, more than 35% of maternal deaths were identified as potentially avoidable.¹² Yet surprisingly, information on preventable maternal deaths has not yet been published in Australia, so we must refer to national and international nursing literature for guidance on the recognition of and response to deteriorating patients. Failure to recognize and respond to patients at risk in acute care has been described as “suboptimal care”.^{13–16} Several contributing factors have been identified, including failure to appreciate clinical urgency, failure to seek advice, lack of knowledge, lack of supervision, and failure of the organization to ensure that workplace conditions foster an environment in which midwives can provide optimal care.^{16,17} Track and trigger tools and algorithms of care, known as **Early Warning Systems (EWS)**, were developed and implemented in response to suboptimal care incidents and failure to recognize and respond to clinical deterioration events.¹⁸ **Early Warning Systems** use the patient's vital sign measurements to predict clinical deterioration and have been used within the non-maternity context since 1999.¹⁸ The patient's vital signs are scored and added to calculate a total score with assigned clinical responses according to the final score.¹⁹

Within the maternity context, many variations in this concept are currently in use. The United Kingdom uses the **National Early Warning Score system (NEWS)**, whereas Ireland uses the **Irish Maternity Early Warning System (IMEWS)** and New Zealand uses the **Maternal Early Warning System (MEWS)**.^{20–23} Within the Australian context, there are also variations in the terminology,

such as the **Modified Early Obstetric Warning Scores (MEOWS)**,²⁴ the **Maternal Early Warning Trigger tool (MEWT)** for which Queensland has both an antenatal and intrapartum version (Q-MEWT), and more recently, the **Birth Early Warning Tool (BEWT)** (Clinical Excellence Queensland Health, 2017). For the purposes of this study, when referring to EWSs used in the maternity context, the term **Maternity Early Warning Tool (MEWT)** will be used.

The MEWT aims to improve the identification and subsequent management of clinically deteriorating pregnant women. The track and trigger mechanisms built into the MEWT encourage early recognition of pregnant women at risk, enhance multidisciplinary communication, and clarify expectations for escalation of care.²⁵ Midwives are pivotal to the success of MEWT because it is often a midwife who is the first responder, recognizing and activating a response, and escalating care in the presence of clinical deterioration. However, underutilization of early warning scores and reluctance to escalate care has been consistently reported in acute care settings.^{26–28}

Research is lacking in the use of EWS tools in the Australian maternity care context despite growing evidence in other countries^{25,29–31} that a MEWT can positively impact maternal outcomes and improve morbidity and mortality. This significant gap in current knowledge makes it difficult to appropriately support midwives in gaining the skills and knowledge to recognize and respond to the deteriorating maternal woman, allocate health resources, and develop effective evaluation and quality assurance activities. The purpose of this study was to explore Australian midwives' use of, and attitudes toward, the MEWT for recognizing and responding to maternal deterioration, with the goal of determining what factors impact midwives' use of the MEWT in Australian maternity care settings.

2 | METHODS

We undertook a national cross-sectional study to elicit Australian midwives' attitudes toward recognizing and responding to maternal deterioration and to identify factors that influence their decision-making. Ethical approval was granted prior to the initiation of research activities (SCU HREC:2020/041).

2.1 | Survey tool

The online survey used in this study was delivered by way of a link to SurveyMonkey®. The survey was a modified version of the previously developed and tested Satisfaction

with Simulation Experience Scale (SPSSES) survey tool, used to elicit attitudes and sociocultural factors influencing nurses and doctors' recognition and escalation of care when clinical deterioration presents.³² Modification was undertaken so the tool reflected and was consistent with the philosophy of midwifery. The survey consisted of two parts. Part 1 sought demographical data such as the type of midwifery model the participant was employed within, their geographical location, in which country they obtained their primary midwifery qualification, and their highest qualification. The second part consisted of 25 questions related to MEWS, linked to safety, clinical practice, and beliefs, as well as one open-ended question soliciting feedback. Answers were provided through free written text and a 5-point Likert scale from disagree/never to strongly agree/always. The modified survey was pilot tested with a convenience sample of six midwives. The tool was reviewed for face and content validity and subsequently the questions were refined and approved by a pool of four experts³³ and amended as necessary. Cronbach alpha coefficient was calculated to measure internal consistency with coefficients of over 0.75 considered acceptable.³⁴

2.2 | Participants

A purposive sampling approach was used to recruit Australian midwives registered with the Australian Health Practitioner Regulation Agency (AHPRA) and currently practicing in an Australian maternity setting, irrespective of the model of care. Participants were recruited by means of direct email or a newsletter through several leading professional organizations (including the Australian College of Midwives (ACM), Queensland Nursing and Midwifery Union (QNMU), and Midwifery Research Forum) and social media. Researchers also distributed flyers at targeted conferences and through their own professional networks.

2.3 | Analysis

Quantitative analyses were conducted using SPSS Version 26. Frequencies and percentages of responses were calculated to describe the sample with means and standard deviations calculated to estimate average responses to single items and aggregated scales. Within-group means, comparisons were conducted using repeated measures t-test and analysis of variance (ANOVA) with resulting *p* values below 0.05 interpreted as statistically significant. Comparisons of percentages were conducted using chi-square tests.

Open-ended responses were analyzed using an interpretative inductive approach as guided by Braun and Clarke.³⁵ Initially, members of the research team individually read responses to become familiar with the data and then identify initial codes, patterns, or ideas, which are driven by the data rather than being “researcher” driven. Codes were collated into themes and parsimoniously reduced so that all data were accounted for. Reviewing and consensus were then sought within the research team so a clear thematic map could be generated. The final naming of themes occurred.³⁵ After the inductive analysis and to demonstrate the reliability of the interpretation, examples of participant voices are presented within the study.

3 | RESULTS

3.1 | Demographics

There were 87 completed surveys returned, with 89.6% of participants offering a total of 169 written responses to clarify their survey responses. Many of the midwives identified as female (98.9%), aged between 21 and 70 years ($M = 53.4$, $SD = 12.4$), and had been practicing midwifery for an average of 20.4 years ($SD = 13.8$; range 1–50). The majority (82.8%) of the group obtained their original midwifery qualification in Australia, comprising: a hospital certificate (39.1%), graduate diploma (23%), or bachelor's degree (34.5%) (Table 1). Almost half were employed on a part-time basis (46%) or in a metropolitan setting (48.3%).

3.2 | Use of and attitudes toward MEWT

Much of the sample (93%) had worked in a clinical capacity in the past 6 months and reported that their role had involved documenting on a MEWT chart (97.7%). Midwives had used the tool when working in the birth suite (37.9%), postnatal unit (34.5%), or across multiple areas (20.7%).

Overall, the participating midwives ($n = 87$) reported positive attitudes toward using the MEWT when recognizing and responding to maternal deterioration because they believed it could improve outcomes and safety. Virtually undisputed, survey responses and overarching themes indicated that the MEWT was a valuable tool for identifying clinical deterioration.

Specifically, the MEWT was viewed as an adjunct to the midwife's clinical judgment, and the safety of the woman was the main motivator for using it. The following participant quotes are typical of those provided:

...effective, efficient tool that is **ESSENTIAL** for safe care...we owe them [women] our vigilance and this tool is one of the simplest, most effective and objective tools we have....

(P3)

it is so important especially if conditions change quickly

(P52)

I believe it's a vital part of our assessment in complex midwifery patients

(P45)

Factors influencing midwives' attitudes were identified as: (1) education and training; (2) views on documentation; and (3) escalation and influence of others.

3.3 | MEWT education/training beliefs

Although three-quarters (74.7%) of participants had received MEWT training, only half (51.7%) reported that the

TABLE 1 Sample characteristics: Individual and role ($n = 87$)

Item	<i>n</i>	%
Qualification completed to be eligible for registration		
Hospital Certificate in Midwifery	34	39.1%
Graduate Diploma in Midwifery	20	23.0%
Bachelor of Midwifery	30	34.5%
Masters of Midwifery	2	2.3%
Other	1	1.1%
Highest midwifery qualification		
Certificate/diploma	8	9.2%
Undergraduate	22	25.3%
Postgraduate	54	62.1%
PhD	3	3.4%
Country where qualification awarded		
Australia	72	82.8%
United Kingdom	13	14.9%
Other	2	2.3%
Employment status		
Full time	35	40.2%
Part time	40	46.0%
Casual/Agency	12	11.8%
Location of primary hospital/facility		
Metropolitan	42	48.3%
Regional	30	34.5%
Rural/remote	15	17.2%

^aMore than one response permitted—percentage total does not equal 100%.

training was useful, with lower levels of training reported with regards to documenting and responding to temporary/chronic modifications (Table 2). For those who did receive training, face-to-face delivery was the preferred platform (76.2%).

Whereas participants agreed they themselves had received sufficient training, the majority of participants believed new staff (59.1%) and casuals/locums (75.8%) did not receive sufficient training. Overwhelmingly, qualitative responses within the survey highlighted the importance of training in terms of their and others' compliance with MEWT. This is evidenced by some of the participants' comments. For example:

...very often [I] come across new staff - midwifery & clinical - who don't know/understand the significance of MEWS criteria & scores...

(Participant 7)

and

... Many of the agency midwives (particularly overseas) have no idea how to fill it out, what

it means or how to escalate [care] for mothers and babies...

(Participant 48)

3.4 | Views on MEWT documentation

Overall, there were strong levels of agreement about the value of MEWT documentation ($M = 3.65$; $SD = 0.55$), particularly when a woman's condition was thought to be deteriorating (90.8%). This included:

- the MEWT is clear and concise (72.4%),
- should be accurately completed in each observation round (89.3%), and
- is an excellent tool that aids in the detection of clinical deterioration (78.5%).

A very small percentage (3.1%) of participants, however, viewed MEWT as a waste of time or said that it was just more paperwork to complete (12.3%). On average, participants tended to "usually" or "always" document an accurate value for each of the individual MEWT items ($M = 4.57$, $SD = 0.64$). However, when the participating midwives found it challenging to comply with the MEWT charting, the reasons offered were related to:

- insufficient time (58.8%),
- choosing to rely on personal clinical judgment (51%),
- believing it was not necessary (29.4%),
- believing it would not make a difference to the clinical outcome (29.4%),
- access to equipment (29.4%), or
- concern that the score would trigger a response that they did not believe warranted (25.5%).

Interestingly, when comparing participants' personal beliefs with their perceptions of the beliefs of their working colleagues, the participating midwives believed they were more likely than their colleagues to agree that the MEWT documentation system is an excellent tool that aids the detection of clinical deterioration $t(48) = 4.38$,

TABLE 2 Midwives views on the sufficiency of MEWT training

I have had sufficient training on... (n = 51)	M	SD
Document observations and calculate a score on the MEWS chart	4.27	1.10
Understand the actions required according to MEWS score section	4.12	1.14
Use the target/default systolic blood pressure section	4.08	1.07
Complete the pain and sedation section	4.00	1.20
Respond to temporary modifications when they are documented	3.94	1.10
Document interventions on the MEWS	3.92	1.23
Respond to chronic modifications when they are documented	3.86	1.15

Notes: Range 1–5: 1 = strongly disagree, 3 = neither, and 5 = strongly agree.

The MEWT documentation system is...	I believe...		People I work with believe...		p [^]
	M	SD	M	SD	
An excellent tool that aids detection of clinical deterioration	3.96	0.87	3.39	0.81	.000*
Just more paperwork	2.14	1.08	2.92	1.12	.000*
A waste of time	1.65	0.75	2.74	0.95	.000*

[^]Based on a repeated measures *t* test * Significant at $p < 0.001$ Range 1–: 1 = strongly disagree, 3 = neither, and 5 = strongly agree.

TABLE 3 Participating midwives' views and perceptions of peer's views on MEWT documentation

$P < 0.001$, and less likely to agree that it is just more paperwork $t(48) = -4.76$, $P < 0.001$, or a waste of time $t(48) = -8.13$, $P < 0.001$ (see Table 3).

In qualitative responses, participants noted the tool's limitations in being able to recognize the woman as an individual entity or to take into consideration midwives' knowledge or experience. Furthermore, the tool was either explicitly and implicitly linked to being an inhibitor of or an adjunct to midwives' clinical judgment, for example:

It is an adjunct to the use of good clinical skills and decision making

(P56)

No place for gut feelings "intuition", usually based on experience; pattern recognition and no recognition of the woman's "bad feeling", she is her own expert on her body & her baby

(P34)

3.5 | MEWT escalation and influence of others

When asked about their experiences with escalating care according to the MEWT protocol, the degree to which participants agreed with escalating care ($M = 3.89$, $SD = 0.71$) suggests that participants tended to have positive experiences with escalating care (Table 4).

3.5.1 | Difficulties escalating care

On average, participants "never" to "rarely" ($M = 1.46$, $SD = 0.54$) experienced difficulties in escalating care

TABLE 4 Experiences with escalating care

In my experience, escalating according to MEWT protocol ($n = 51$) ...	M	SD
Can improve women's outcomes	4.24	0.81
Improves patient safety	4.16	0.88
Results in a change to the plan of care	3.78	0.81
Leads to process and system improvements	3.71	0.97
Undermines clinicians' clinical judgment	2.63	1.23
Takes too much time away from clinical work	1.94	1.07
Summed score ^a	23.31	4.25
Mean score ^a	3.89	0.71

Notes: 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, and 5 = Strongly agree.

^aNegatively worded items have been reversed in calculating the summed score.

(Table 5). Of note, the use of clinical judgment instead of escalating was a key factor that impacted the participating midwives' (35.3%) compliance with escalation requirements during the 10 most recent times escalation was indicated as per the MEWT chart. Other factors included: the midwife did not believe it was necessary (21.6%), they felt the ward could manage the situation (21%), or they were concerned with being chastised (11.7%). A minority (4%) believed that escalation of care would affect their workload.

Tension with peers and other health care professionals inhibiting escalation was highlighted within the qualitative comments. For example:

...at times when escalation occurs due to deterioration of score the medical team can be a little non-compliant and demeaning to staff...

(P46)

3.5.2 | Perceived difficulties with documentation and escalation

Participants were equally likely ($P = 0.84$) to report difficulties related to choosing to rely on clinical judgment when documenting (51%) and escalating care (52.9%). Although not statistically different, a small percentage of participants were more likely to agree/strongly agree to experience more difficulties escalating care compared with documenting when: they did not think it was necessary (41.2% vs. 29.4%; $P = 0.22$), they felt stressed (21.6% vs. 13.7%; $P = 0.30$), or they were fatigued (25.5% vs. 13.7%; $P = 0.64$).

TABLE 5 Difficulties escalating

Indicate how often any of the following situations made it difficult for you to comply with MEWT escalation requirements	M	SD
When I decided to trust my clinical judgment instead of escalating	1.94	1.01
When I did not believe it was necessary	1.69	0.95
When I felt our ward could manage the situation	1.69	0.93
When I was concerned about being chastised	1.35	0.80
When I was feeling fatigued	1.35	0.69
When I was feeling stressed	1.29	0.64
When my peers do not escalate based on MEWS, therefore I do not	1.24	0.71
When it would increase my workload	1.14	0.63
Mean score	1.46	0.54

Notes: Range 1–5: 1 = never, 2 = rarely, 3 = sometimes, 4 = usually, and 5 = always.

3.6 | The influence of others and motivation to comply

The influence of peers (other midwives, doctors, and management) significantly affected participants' beliefs and motivations about MEWT documentation and escalation ($F_{(1,44)} = 8.54$, $P < 0.001$). When the source of influence was a doctor, the midwives' beliefs and motivation were significantly lower than when the source of influence was another midwife ($F_{(1,44)} = 9.34$, $P = 0.004$). No significant response by source of influence interaction was apparent ($F_{(1,44)} = 2.27$, $P = 0.109$), suggesting that regardless of the source of influence, participants' level of belief that they should comply with documentation and escalation was higher than their motivation to do so ($F_{(1,44)} = 34.69$, $P < 0.000$) (see Table 6).

Qualitative responses note participants' frustration that they are required to use the tool for all women, particularly in incident-free births. Yet the midwives in this study appear to persist with MEWT compliance despite evidence of criticisms from senior colleagues about midwives' escalation of care because of the tool's use. This statement by one participant reflects the tensions between motivation and personal beliefs:

...I want its compliance overseen and supported but **I DO NOT** want to feel policed or surveyed over it. The people not complying are overworked and overwhelmed putting one fire out after another and chronically feeling like they are failing the women and their babies who put so much trust in us and our care and who are so very vulnerable to our neglect in a setting where we go without

breaks and stay late just to get the essentials done, and even then, not even all of those...

(P3)

4 | DISCUSSION

This study explored Australian midwives' experiences and use of MEWT to recognize and respond to clinical deterioration. As scant literature currently exists related to the use of a MEWT and clinical deterioration of the maternity patient within the Australian context, it should be noted that literature is also drawn from disciplines other than midwifery.³⁶ Nevertheless, what has become apparent in midwifery is that professional tension appears to underpin the findings of our study. Professional tension is identified as a requirement of the midwife to navigate and balance their professional, legal, and organizational accountability while adhering to midwifery philosophy and maintaining safety by means of risk aversion. These elements of midwifery professionalism and accountability are interrelated and connected but at times are in direct conflict and can lead to midwives abdicating their professional accountability^{37–39} when trying to navigate the nexus of the health system and legal priorities, meeting women's needs, and their own professional identity.

4.1 | MEWT training and education

Most participating midwives in our study (over 90%) acknowledged MEWT as essential in identifying deterioration, which was identified as similar in nursing and midwifery.^{26,30,31,40,41} Yet despite almost all participating midwives (97.7%) having used a MEWT within the previous

TABLE 6 Beliefs and motivation to comply with other midwives, doctors, and management

	Believe that I should...		I am motivated to...		Total		P
	M	SD	M	SD	M	SD	
Midwives in my unit					3.52	0.80	
Comply with MEWS documentation	3.98	0.86	3.17	1.12			0.000*
Comply with MEWS escalation protocols	3.78	0.89	3.13	1.02			0.000*
Doctors in my unit					3.17	0.88	
Comply with MEWS documentation	3.63	1.04	2.74	1.08			0.000*
Comply with MEWS escalation protocols	3.60	1.03	2.74	1.12			0.000*
Management in my unit					3.66	0.94	
Comply with MEWS documentation and escalation protocols	4.15	0.89	3.13	1.27			0.000*
$P = 0.000^*$							

*Significant at $P < 0.001$.

6 months, a quarter (26.6%) had received no education and of those who did, only half (51.7%) found it useful. Furthermore, only 23% of participants believed they continued to receive sufficient ongoing training on the topic of maternal deterioration and the MEWT. Therefore, 77% of participants perceived they lacked continuing education or training in the use of the MEWT. The impact on patient safety when there is a failure to implement protocols, procedures, or new tools as a result of inadequate training has been highlighted.⁴² Rodziewicz et al. argue that deficiencies in education, training, orientation, and experience are among the main reasons for undesirable events and poor health outcomes. In the United States, it is estimated that 75% of fatal events in hospitals occur as a result of failure to rescue⁴³ and that many of these errors are caused by poor communication or ineffective teamwork. The lack of effective interpersonal communication could be alleviated with education. In Australia, lack of recognition of patient deterioration is responsible for many preventable deaths in hospitals despite national standards for the recognition and response to deterioration.⁴⁴ Again, education could reduce the failure to recognize clinical deterioration.⁴⁵ Poor health outcomes resulting from failure to recognize and respond to clinical deterioration, ineffective communication, and poor teamwork have been previously reported.^{42,43} However, what is yet to be reported is what impact education has on midwives' ability to recognize maternal deterioration. Further research is required to examine the influence of initial and continuing education on the use of track and trigger tools by midwives.

4.2 | Safety, midwifery, and being with a woman

Participating midwives in our study recognized the MEWT as an important adjunct to support the midwife's clinical judgment and experience when deterioration was acknowledged, with 89.3% of participants agreeing that the MEWT should be accurately completed in each observation round. This view aligns with the Australian Commission on Safety and Quality in Health Care's statement that "monitoring and documenting physiological observations is a key component of recognition and response systems" and ultimately patient safety.¹⁹ Participating midwives emphasized that a MEWT can support the midwife's decision-making processes and clinical judgment, with 51% choosing to rely on their experience and clinical judgment when assessing a patient's condition rather than acting solely on measurements dictated by the MEWT. Furthermore, over a third of midwives (35.3%) used their clinical judgment, when deciding to escalate care instead of following the MEWT exclusively. These midwives may

be alluding to the concept of professional wisdom when focusing their practice on personal clinical judgment.

In 2011, Halldorsdottir and Karlsdottir published an article exploring the evolving theory of professionalism in midwifery.⁴⁶ The authors propose that a midwife's professionalism is constructed from five main aspects. Two of the five aspects require a "good" midwife to be *competent within their professional domain*, and to have *professional wisdom and know-how* (and to know when) *to apply it*. Although participating midwives understood that the main motivator for using a MEWT was the safety of the childbearing woman and/or her baby, the professional safety of the midwife may also have been a consideration.⁴⁷ Hood et al.⁴⁷ explored the influence of midwives' practice when working in an environment based on scrutiny and fear and found that for midwives to "feel safe" professionally, they often adopted defensive decision-making and moved toward a medical philosophy of care. This view aligns with literature on professional or social identity, with midwives expressing that their role has become more limited and their professional identity challenged by technology and other professions⁴⁸ and highlights the need for senior or experienced midwives as well as medical colleagues to role model effective use of a MEWT.

Participants' level of belief that they should comply with documentation and escalation was higher than their motivation to do so ($F_{(1,44)} = 34.69, P < 0.000$). This may be attributed to participants' views that the MEWT fails to recognize the woman as an individual entity, or to take into consideration midwives' knowledge or experience. This understanding may be in direct conflict with the participating midwives' professional ideologies that midwifery is an art,⁴⁹ midwifery is autonomous,² and midwifery is centered on the needs of the individual woman, rather than organizational needs and protocols.² In addition, it could be argued that women's choices and preferences influence the midwife's motivation to use the tool. For midwives, the promotion of optimal birthing conditions in alignment with the woman's preferences is a primary concern and the basis of partnership-centric, equitable midwifery models of care. The balancing of a woman-centered midwifery philosophy that aligns with the preservation of woman's choices may be incongruent with organization policy, and therefore, the use of MEWT. Upholding, facilitating, or maintaining women's preferences may result in an uncomfortable choice for midwives who seek to support this despite a changing clinical status.^{37–39,50}

4.3 | Influencing factors

It should be noted that more than half the participants (58.8%) identified insufficient time as a barrier to accurately documenting the MEWT. Insufficient time can be

attributed to high workload, inappropriate skill mix, poor staffing levels, lack of education, or insufficient equipment.⁵¹ The participants defined insufficient equipment as challenges in locating a blood pressure (BP) machine or a thermometer, which resulted in a tendency to “skip” an observation such as a BP or temperature. Some participating midwives (4%) expressed that escalation of care would increase their workload, with a fifth (21%) expressing the ward could manage the situation. Although an emergency event involves additional work for the midwife, the increase in workload may have been viewed as justified. Whereas triggering an escalation of care, if unwarranted, may be viewed as increasing unnecessary workloads for all involved. In addition, any action that increases a midwife's workload can result in vital sign observations being neglected, further increasing the chances of failure to recognize and respond to deterioration. A report by Monash University, examining how the escalation of patient deterioration in the hospital setting can be improved, reported that “*high workload has been shown to contribute to failure to identify deterioration due to lack of time to complete adequate observations*”.⁴⁴ Researchers argue these working conditions fall under organizational factors.^{13,16} Therefore, health services need to consider all aspects of safety and quality when considering patient safety, including staffing levels, education, and user friendliness of any early warning tools.

4.4 | Midwives' perceptions

Another barrier to escalation was a lack of belief in the tool's necessity and effectiveness. Almost a third (29.4%) of participating midwives ascertained the tool was unnecessary and makes little difference to the clinical outcome. More than a third (35.3%) believed personal experience and clinical judgment were the key elements when deciding to escalate care, with a fifth (21.6%) stating a MEWT was not necessary. Moreover, a quarter of participants (25.5%) were concerned that adhering to specific MEWT scores would trigger a response that they believed was not warranted. It is beyond the scope of this study to speculate on how these midwives understood expertise concerning deterioration to be achieved and whether the MEWT plays a role in learning to detect clinical deterioration. A possible barrier to the use of the MEWT, although not stated as a barrier by participants, might be the lack of initial or ongoing education around using the MEWT as an adjunct to clinical judgment.

4.5 | Interprofessional influences

The potential for a negative response from peers when triggering an escalation could explain over 21% of midwives

feeling stressed about escalating care, with 11.7% expressing concern about being chastised should the escalation call be unwarranted. This is a common finding in the literature.^{17,41} Midwives report concern that actioning unwarranted triggers could jeopardize their professional standing among peers. Navigating the development of a professional identity is a complex and precarious process influenced by clinical experiences, relationships, opportunities for professional development, and the situational context.⁵² The need to belong to one's professional group is strong and motivates conforming to the cultural norms of the unit. Adopting a workplace culture centered on patient safety will enable staff to escalate care without fearing criticism.⁴⁰

4.6 | Strengths and limitations

A small number of Australian midwives completed the survey. The midwives who self-selected to undertake the survey may have had a particular interest or concern with respect to this issue. The findings therefore cannot be generalized to all Australian midwives. The strength of this study, however, is that it provides foundational insights and shines a light on an area that has not previously been researched within the Australian context.

4.7 | Conclusions

This study indicates the value Australian midwives attribute to the MEWT in identifying clinical deterioration in childbearing people, particularly when used as an adjunct to their own clinical judgment. A woman's safety is highlighted as the main motivator for compliant use of MEWT; however, it appears that there may be a degree of tension between clinical safety and the influence of workplace culture and identity. Navigating cultural norms and professional identity is widely acknowledged in the literature as potentially challenging for nurses and midwives; midwives' views surrounding the documentation and escalation of MEWT in the maternity setting appear to highlight this challenge. What still appears to be lacking, despite some participants attending education sessions, is consistent, ongoing, interdisciplinary education about the use of MEWT. This deficit affects midwives' attitudes, implementation, and interpretation of MEWT, and ultimately compromises patient safety. It is essential, therefore, that education around detection and response to clinical deterioration is universally available for all staff working in the maternity care context, and that it is mandated, standardized, and multidisciplinary to mitigate influencing factors.

ACKNOWLEDGMENT

Open access publishing facilitated by Southern Cross University, as part of the Wiley - Southern Cross University agreement via the Council of Australian University Librarians.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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How to cite this article: Ebert L, Massey D, Flenady T, et al. Midwives' recognition and response to maternal deterioration: A national cross-sectional study. *Birth*. 2023;50:438-448. doi: [10.1111/birt.12665](https://doi.org/10.1111/birt.12665)