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Exploring rural maternity clinicians' views of an interprofessional education program

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Abstract

Purpose: *Maternity and Newborn Emergencies (MANE), a two-day face-to-face interprofessional education program, aimed to improve the safety culture of maternity services in rural and regional health services across Victoria, Australia. An evaluation of the program was conducted between 2017 and 2020. The aim of this study was to explore clinicians' views of the impact of MANE on safety culture and clinical governance.*

Methodology: *This study used a qualitative design, including focus groups and an online survey, at five health services – one in each Victorian rural health region. Data were thematically analysed using an inductive approach.*

Findings: *Data were collected between 2018 and 2020, via four focus groups and one online survey (due to COVID-19 restrictions), with a total of 46 participants. Three themes were identified: MANE was a high-quality professional education program; led to changes in clinicians' confidence, skills, and behaviour; and had a positive impact on clinical governance and safety culture.*

Research implications: *Clinicians reported that MANE improved the safety culture and clinicians' understanding of clinical governance, with the delivery by external experts considered key to program success. These findings support previously reported outcomes of the MANE evaluation in which participants reported an improvement in knowledge and confidence.*

Practical implications: *Education programs like MANE appear to improve clinical governance and safety culture in health services.*

Value: *This study adds to the evidence for strategies that health services can consider to strengthen their clinical governance structures and safety culture.*

Limitations: *Data from one health service were obtained by written response to the questions which did not allow for participants to respond to their colleagues' views. Most focus group attendees were midwives or nurses, with only one doctor attending one focus group. This study was conducted only one month after MANE, therefore it is unknown whether these views were sustained.*

Keywords: clinical governance, interprofessional education, emergencies, safety culture, maternity emergencies, neonatal emergencies

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INTRODUCTION

INTERPROFESSIONAL MATERNITY EDUCATION

The effectiveness of interprofessional maternity emergency education programs for improving clinical practice is well established. A 2019 systematic review into the effectiveness of training in maternity emergency care included 101 studies and found that interprofessional emergency maternity care training increased the knowledge and skills of healthcare providers, and led to their longer-term retention (Ameh et al. 2019). Evaluations of PRactical Obstetric Multi-Professional Training (PROMPT) and Advanced Life Support in Obstetrics (ALSO) provide two examples of interprofessional simulation-based maternity training program evaluations conducted in Australia (Walker, Fetherston & McMurray 2015; Kumar et al. 2018). PROMPT is an interprofessional training program for maternity care providers that is delivered across the state of Victoria. Developed in the United Kingdom, PROMPT uses a 'train-the-trainer' model, in which educators receive education to deliver the training within their health service (PROMPT Maternity Foundation 2023). An evaluation of the PROMPT program in metropolitan Melbourne, Victoria found the program provided a positive learning experience and an improvement in clinical and non-technical skills (Kumar et al. 2018). A 2016 prospective mixed-methods study explored clinicians' perceptions of another maternity emergency training course, known as ALSO (Walker, Fetherston & McMurray 2015). Clinicians reported that their confidence improved, and that they gained a deeper understanding of the importance of teamwork, communication, respect and understanding. Changes to clinical practice resulting from the ALSO training were not explored. Neither study investigated clinicians' views of the impact of the education program on workplace safety culture or clinicians' understanding of clinical governance.

Safety culture is defined as:

> ... the product of the individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety programs management (Tullo 2010).

There is some evidence that health services with strong safety cultures have better clinical outcomes than those with poorer safety cultures (Vikan et al. 2023). Additionally, while some studies have found an improvement in safety culture resulting from education programs, few studies that were identified explored the impact of the education program on clinicians' understanding of clinical governance. A pre-post assessment of safety culture using the Hospital Survey on Patient Safety Culture (HSOPSC) tool to evaluate the effectiveness of an education program called Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) in two Swiss maternity wards included 90 respondents to a pre-program questionnaire, and 99 to a post-program questionnaire (Staines et al. 2020). The program led to significant improvements in patient safety culture in only one of the 12 dimensions of the HSOPSC in the ward receiving the intervention compared to the control ward. The response rate was high in this study (82.6% pre-program, 72.3% post-

program), however only two wards were included in the study. The study also did not control for other quality improvement projects that may have also led to improvements in the safety culture (Staines et al. 2020). In Australia, a retrospective cohort study evaluated the PROMPT program implemented in eight public maternity units in metropolitan and regional Victoria between 2008 and 2011 (Shoushtarian et al. 2014). The study aimed to assess any changes in organisational culture (measured using the Safety Attitudes Questionnaire [SAQ] (Sexton et al. 2006)) and improvements in clinical outcomes (Apgar scores, cord lactate, blood loss and length of baby's hospital stay) resulting from the PROMPT training. Significant improvements were seen across three domains of the SAQ (teamwork, safety and perception of management), as well as some of the clinical outcomes (1-minute Apgar, cord lactate, length of baby's hospital stay) (Shoushtarian et al. 2014).

MATERNITY AND NEWBORN EMERGENCIES (MANE)

In Australia, perinatal death is defined as the death of a fetus or neonate born at 400 g or more, or from 20 completed weeks gestation up to 28 days after birth (Australian Institute of Health and Welfare [AIHW], 2024a). Australia has one of the lowest perinatal mortality rates in the world, with 10.2 perinatal deaths per 1,000 in 2022. In the state of Victoria, the perinatal mortality rate is 10.7 per 1,000 (AIHW 2024b). When measurable safety outcomes in hospitals have been assessed, the Victorian health system has consistently performed as well as, or better than, the rest of Australia (Ham & Timmins 2015). However, in 2015, a cluster of avoidable perinatal deaths at a health service in outer metropolitan Melbourne was identified. Poor clinical governance and poor oversight of the health service were identified as important factors that led to these deaths (Duckett, Cuddihy & Newnham 2016). This resulted in the state government implementing a number of initiatives to improve safety in publicly funded health services across the state (Zugna et al. 2021). One of these initiatives was the introduction of the MANE education program.

MANE was a two-day inter-disciplinary workshop facilitated by senior midwifery educators and obstetric consultants from the Maternity Services Education Program (MSEP) based at the Royal Women's Hospital (a tertiary maternity referral hospital in Melbourne), and senior nurse educators and neonatal consultants from Paediatric Infant Perinatal Emergency Retrieval (PIPER) based at the Royal Children's Hospital (the major specialist paediatric hospital for Victoria in Melbourne). The program was delivered to maternity and newborn clinicians including midwives, nurses, obstetric trainees, obstetric consultants, paediatricians and anaesthetists at all regional and rural maternity services with a service capability level of 2 to 4 (low to medium risk). These levels are defined by the Capability Frameworks for Victorian Maternity and Newborn Services (which determine the capability of each service in regards to complexity of care, infrastructure, workforce, diagnostic services, support services, clinical governance, service links, and education and research) (Department of Health 2023a).

MANE aimed to improve the safety culture of maternity services by providing maternity and neonatal emergency training, as well as educating clinicians on recognition and response to clinical deterioration and improving their understanding of and engagement with clinical governance and risk management principals. The workshop consisted of didactic

presentations, workstations and simulations and concluded with a 'Review and Response' tool in which the MSEP facilitators led a discussion where clinicians identified and highlighted strengths as well as areas of improvement for their health service. A detailed description of the MANE program has previously been published elsewhere (Cullinane et al. 2020). While MANE was similar to PROMPT in that it was a simulation-based interprofessional education program focusing on obstetric and newborn emergencies, there were some important differences between the two programs. MANE was facilitated by external experts from MSEP and PIPER, whereas PROMPT used a 'train-the-trainer' model where educators from within the health service facilitated the education program. Furthermore, MANE had a stronger focus on clinical governance education and awareness, with didactic presentations on this, as well as the Review and Response session.

An independent evaluation of the MANE program was conducted by a multidisciplinary team of researchers (mostly with backgrounds in midwifery and maternity services' research) between 2017 and 2020. Seventeen Victorian regional and rural health services that received MANE between 2018 and 2019 were included in the evaluation. Part of this evaluation included surveys sent to clinicians prior to, and at three time points after MANE (immediately post-MANE, 6-months post-MANE and 12-months post-MANE). The surveys found that MANE delivery resulted in both short-term and sustained self-reported improvements in knowledge of, and confidence in managing maternity emergencies (Cullinane et al. 2022). The clinician surveys also included the SAQ to measure any changes in safety climate resulting from the MANE program (included in surveys pre-MANE and 6-months and 12-months post-MANE). No significant changes in SAQ scores were found; however, there were both consistently strong and poor performing health services, although response rates were low. The evaluation also explored the views and experiences of MANE from the maternity managers and educators from the 17 health services and found that maternity managers and educators valued the external facilitation offered by the MANE program, believed that MANE improved clinical practice and clinician awareness and understanding of clinical governance, and that there was value in maintaining the program (Zugna et al. 2024).

Very little is known about clinicians' views of the impact of interprofessional education programs on safety culture and understanding of clinical governance. While the surveys focused on self-reported improvements in knowledge and confidence following delivery of MANE, as well as the SAQ, it was also important to undertake a more in-depth exploration of clinicians' views of the program itself given clinicians play a key role in workplace culture and safety. Therefore, as part of the MANE evaluation, five of the 17 health services included in the MANE evaluation were selected and asked to be part of an in-depth exploration of clinicians' views and experiences of MANE.

METHODS

PARTICIPANTS

One health service from each of the five Victorian rural health regions within the state (Barwon South-western, Grampians, Loddon Mallee, Hume and Gippsland) (Department of Health 2023b) was purposively selected to

be included in an in-depth exploration of views and experiences of the MANE program. The researchers chose the site within each of these five regions to ensure that each maternity capability level was represented, and the timing of MANE delivery worked for the evaluation (i.e., the programs were not too close together in timing, or the key data collection points were not during holiday periods when participants were less likely to be available). The included health services varied in level of capability, with two level 4 facilities (medium risk), one level 3 (low to medium risk) and two level 2 facilities (low risk) included.

AIM AND STUDY DESIGN

The aim of this study was to explore the views of maternity care clinicians of the MANE program and the perceived impact it had on safety culture and clinical governance. Focus groups were identified as the method of choice due to their ability to obtain rich data within a relatively short time period (Holloway 2020), with plans to conduct one focus group at each of the five health services selected. The focus groups were open to all clinicians who provided maternity care at the health service, irrespective of MANE attendance.

ETHICS AND RECRUITMENT

Approval for the study was granted by the La Trobe University Science, Health and Engineering College Human Ethics Sub-Committee (project number HEC18123). Written consent for the health service to participate in the in-depth analysis was obtained from the chief executive officers at each health service, and each health service was also invited to gain study approval from their own ethics committee if necessary (which none sought).

Maternity managers were contacted by the research team to arrange a convenient time and venue at the health service to conduct the focus group around one-month post-MANE delivery. Managers forwarded an email from the research team with participant information and an invitation to participate to eligible maternity care clinicians. Written consent from attendees was obtained at the commencement of the focus group.

Due to the COVID-19 pandemic and associated travel and health service visitor restrictions, the fifth focus group was unable to be conducted. The health service declined to have this conducted via zoom, as the pressures of the pandemic on staffing meant they could not release staff from clinical duties for this period of time. Given these factors, maternity services staff were sent the same questions included in the focus group schedule via an online link through Research Electronic Data Capture (REDCap, Vanderbilt University, Nashville, TN, USA) (Harris et al. 2019).

For the clinicians who completed the online survey, a participant information and consent form was completed prior to commencement.

DATA COLLECTION

The focus groups were conducted approximately one month after MANE delivery at the respective health services. Either two or three members of the research team (MC, SZ & HM) were present at each focus group. One member of the research team moderated the focus group while the other member/s took field notes. Prior to the focus group commencing, all

participants completed a brief anonymous questionnaire to collect demographic information such as position at the health service, age, and years of experience.

At the commencement of the focus group, all participants were asked to introduce themselves, their role in the health service, the length of time at that health service, and whether they had attended MANE. Facilitators followed a semi-structured focus group schedule, and participants were encouraged to share their ideas and respond to others' comments, ideas and perceptions (Litosseliti 2003). The focus groups were scheduled for one hour and explored clinicians' views of MANE, including their perceptions of the program, and the perceived impact of MANE on their confidence and skills, teamwork and collaboration, governance, and organisational change.

For the health service where the survey was delivered online, a REDCap link was sent to the maternity manager, then distributed via email to all maternity clinicians in the health service.

DATA ANALYSIS

Focus groups were recorded, then transcribed verbatim and checked for accuracy by a second member of the research team. Potentially identifying information about individuals and health services were removed and each health service was identified by a number, one to five. Data were then independently analysed thematically by two members of the research team using an inductive approach (Whitehead et al. 2020). For both the focus groups and the online survey, responses were coded for each question, then codes grouped into categories. The categories for each question were collated, and in turn further collapsed to obtain themes. These were then cross-checked between the two researchers to check for consistency. In the results, direct quotes have been used to illustrate the themes, with the de-identified health service number used. Field notes for focus groups were incorporated into the data analysis as a means of providing contextualisation for the researchers.

RESULTS

PARTICIPANT CHARACTERISTICS

Data were collected between September 2018 and March 2020, approximately one month after the MANE program was delivered at each of the sites.

In total, 46 clinicians participated. Table 1 shows the demographic characteristics of focus group attendees and participants who answered the questions online. Most participants were midwives (n = 31, 67%), and this included eight midwifery educators or managers. Only one participant identified as being from the medical profession (an obstetric registrar). All remaining participants had a role in nursing and/ or midwifery but were either nurses only (15%) or did not clearly state their role (15%). All participants identified as female, most worked part-time, and most (60%) had attended a MANE program, of whom most (94%) at the service where they currently worked. While all clinicians were invited, not all of those who attended the MANE program participated in the focus groups.

Table 1: Demographic characteristics of study participants

Characteristic	Focus Group Attendees (n = 31) n (%)	Online Participants (n = 15) n (%)	Total Participants (n = 46) n (%)
Position within health service (n = 31, 15, 46)			
Medical (obstetric registrar)	1 (3)	0 (0)	1 (2)
Midwife (including dual registered nurse/midwife)	23 (74)	8 (53)	31 (67)
Nurse only	2 (6)	5 (33)	7 (15)
Role in nursing and/ or midwifery but not clearly stated	5 (16)	2 (13)	7 (15)
Gender (n = 29, 15, 44)			
Female	29 (100)	15 (100)	44 (100)
Age (n = 29, 15, 44)			
20-29 years	6 (21)	0 (0)	6 (14)
30-39 years	8 (28)	5 (33)	13 (30)
40-49 years	4 (14)	5 (33)	9 (20)
≥ 50 years	11 (38)	5 (33)	16 (36)
Years of experience in profession, mean (n = 27, 15, 42)	18.9	14.8	17.5
Usual shift (n = 20, 14, 34)			
Morning (0700 – 1530)*	6 (30.0)	3 (21)	9 (21)
Afternoon (1300 – 2130)*	0 (0)	0 (0)	0 (0)
Night (2100 – 0730)*	0 (0)	1 (7)	1 (2)
Variable shifts	14 (70.0)	10 (71)	24 (55)

Characteristic	Focus Group Attendees (n = 31) n (%)	Online Participants (n = 15) n (%)	Total Participants (n = 46) n (%)
Usual job status (n = 28, 15, 43)			
Full-time	6 (21)	3 (20.0)	9 (21)
Part-time	22 (79)	10 (67)	32 (74)
Casual	0 (0)	2 (13)	2 (5)
Previously attended PROMPT (n = 26, 15, 41)	25 (96)	14 (93)	39 (95)
Attended recent MANE program (n = 29, 14, 43)	18 (62)	8 (57)	26 (61)

*Usual times for these shifts (may vary by health service).

FINDINGS

Three key themes around clinicians' perceptions of the MANE program were identified: MANE was a high-quality professional education program; MANE led to changes in clinicians' confidence, skills and behaviour; and MANE had a positive impact on clinical governance and safety culture. Each theme is discussed in detail below.

MANE WAS A HIGH-QUALITY, PROFESSIONAL EDUCATION PROGRAM

A clear theme identified was that MANE was viewed by clinicians as a well-run, high-quality evidence-based education program.

> I thought it was run excellently. Everybody was included, everybody participated, which I thought was great. You know whether you were senior, junior, doctor, nurse … it was very good. (Midwife, Site 3)

Clinicians valued the external facilitation in MANE and felt like the program reduced the isolation of smaller health services by linking them with the larger metropolitan health services. For these health services with limited exposure to maternity emergencies, this was considered especially important.

> As a small rural low-risk birthing service, we are rarely confronted with obstetric emergencies. MANE enabled us to participate in real life scenarios, discuss issues, and problem-solve. (Midwife, Site 5)

The benefits of having external facilitators included more buy-in from clinicians, particularly medical staff; being provided with an external perspective on the health service; and the different views and experiences provided by the external facilitators.

> I think it's good to have external review at any organisation … because you can very easily get into 'this is the way we've always done it' mentality, and I think to have that outside review is good [and] makes you look outside of the box. (Midwife, Site 4)

The benefit of having the entire interprofessional team attend MANE was also raised.

> I got to work with a paediatrician in my group and he kind of just validated that I actually knew what I was doing, so that gave me a bit more confidence for when I do have to do neonatal resus[citation]. (Midwife, Site 4)

MANE LED TO CHANGES IN CLINICIANS' CONFIDENCE, SKILLS, AND BEHAVIOUR

The second theme identified was a view that MANE had resulted in changes in clinicians' confidence, skills and behaviour in managing maternal and neonatal emergencies.

> We are regarded as a low-risk hospital. However, we know that … we have emergencies, and they may not be as frequent as … some of the city hospitals, but when they happen you really [want to] have that confidence that you know what you're doing. So, I think for all of us it's so beneficial for us to revisit obstetric emergencies … even if it's a scenario … I think we've really all sort-of picked up on our skills. It's really good. (Midwife, Site 1)

The role that MANE played in improving how clinicians worked as a team was also strongly identified in the data. MANE was considered to improve teamwork, communication, and role allocation in emergency scenarios.

> Each person has … clear roles and that in itself … [that we learned] from … MANE … [has helped] me to be able to go 'yes I know my role in that, and I can do that' … it's been a huge help. (Midwife, Site 1)

> We've actually had two other resuses [resuscitations] [sic] where I've walked in as the third, fourth person and I've … seen … someone taking the lead, communication, things being said out loud, whiteboards being used. So, I've seen an improvement in verbal and non-verbal communication. (Midwife, Site 2)

MANE HAD A POSITIVE IMPACT ON CLINICAL GOVERNANCE AND SAFETY CULTURE.

The final theme generated from the data was that MANE had a positive impact on clinical governance and safety culture. MANE was viewed as being an important factor in both supporting and enhancing the organisation's existing clinical governance structure. Increased adherence to procedures, and to understanding of and involvement in clinical governance activities by clinicians, as well as an improvement in safety culture, were all identified as having occurred as a direct result of MANE.

> MANE has enhanced our commitment to a culture of safety. (Midwife, Site 5)

The benefit of MANE's focus on communication and escalation of clinical situations was also identified.

> This training has made us really very, you know, we're calling [emergency codes], and we're calling clinical reviews and like every day, like we're just doing it all the time now … and people are now confident to, to press the buzzer and everyone goes, 'hey sorry, like it's not as bad as we thought, you can go'. We're sort-of erring on the side of press and then work it out, rather than try and spend five minutes working it out and then press, then you've really got a disaster. You know, so I think, and everyone is learning that. (Midwife, Site 1)

MANE was also identified as prompting health services to instigate improvements in processes and procedures, and to think about how to make their processes more reflective and transparent.

> [MANE has] been amazing … and that's from probably where the governance aspect comes into it, [an issue] gets raised and discussed … it actually does get escalated appropriately through the appropriate committees and it doesn't get to one and stop, it does get where it needs to be heard. (Midwife, Site 1)

Several examples of practical changes to come out of MANE were provided including changes in how emergency codes were called, how clinical case reviews were undertaken within the unit, and improvement in midwifery ratios.

> I think we do a lot more talking through it [case reviews] … and there's a decrease in the amount of finger pointing and blame game … now everyone gets a chance to [participate] and it gets put out there so you can add … things into it, so it's a better picture of what actually goes on. (Midwife, Site 2)

The MANE program was not the only factor attributed to changes in safety culture. Attendees at one focus group commented on the importance of leadership in a health service to create change in a workplace. Good leadership was suggested to have more of an impact on safety culture than MANE. Another group identified that management at their health service had contributed to a change in culture, as well as a change in staff.

Improvements to medical equipment and equipment use were also attributed as being directly related to the MANE program.

> Yeah, we have made some changes, like I redid the resus[citation] [sic] cots because during … one of our … scenarios … they couldn't find anything, so now everything's in containers. (Midwife, Site 3)

MANE AND PROMPT

Given the similarities between the two programs, clinicians were asked their views on running both MANE and PROMPT at their health service. Four health services strongly agreed that there was a place for both programs, and they were seen to complement each other, although some overlap in content was also acknowledged.

> I think they complement each other rather than [being] too similar … the different facilitators can add to the knowledge and the skills of the people. (Obstetric registrar, Site 3)

A few participants at one health service considered there was no place for both MANE and PROMPT at their service, acknowledging that MANE would be necessary for smaller organisations without a strong PROMPT program. Despite the acknowledged similarities of the two programs, MANE and PROMPT were identified as being different, with their own strengths. Key differences were the 'external eyes' offered by the MANE program and that MANE was more formal, with high level of expertise resulting in greater 'buy-in' from clinicians.

> [The two programs are] very similar but MANE just added that next level of experience and knowledge. (Midwife, Site 5)

DISCUSSION

This study explored the views of maternity care clinicians of the MANE program and the impact it had on safety culture and clinical governance. Three themes were identified: MANE was considered to be a high-quality, professional education program, it was considered to lead to changes in clinicians' confidence, skills, and behaviour, and it had a positive impact on clinical governance and safety culture.

MANE is unique in that it is facilitated by external experts from the Royal Women's Hospital and Royal Children's Hospital. The Victorian Managed Insurance Authority (VMIA) is the Victorian Government's insurer and currently offers discounts for a health service's medical indemnity premium when 80% of birth suite clinicians attend an approved education program (of which MANE was one) (VMIA 2023a). The VMIA previously supported the Royal Australian and New Zealand College of Obstetrics and Gynaecology (RANZCOG) to hold the licence for PROMPT in Victoria until 2020, and currently health services are still able to access PROMPT resources directly through the PROMPT Maternity Foundation (VMIA 2023b; PROMPT Maternity Foundation 2024). PROMPT, which is delivered by educators from within the health service, is therefore the more common approach to ongoing maternity clinician education across Victoria.

The current study highlighted the advantages of having external expertise in providing education programs within the health service. Participants believed they were receiving high-quality training from highly experienced clinicians who were experts in their fields. There was also a benefit of having someone external to the health service come on site with 'fresh eyes' to help clinicians identify areas of improvement around equipment, policies and procedures.

As outlined in the introduction, MANE was introduced as part of a suite of reforms established in response to a cluster of perinatal deaths at a Victorian health service. Some of the key issues that led to this cluster were poor clinical governance, and poor oversight of the health service (Duckett, Cuddihy & Newnham 2016). Health services with inadequate oversight can be at risk of insularity, which is when patterns of underperformance, such as poor clinical outcomes, go unrecognised (Duckett, Cuddihy & Newnham 2016). Although MANE was not established to 'audit' or 'oversee' health services, the presence of external expertise coming into the health services allowed clinicians the opportunity to recognise deficiencies, speak up, be heard, and have changes implemented. A reduction in insularity has been a focus area for the Victorian Department of Health to come out of *Targeting Zero*, one of the inquiries commissioned in response to the cluster of perinatal deaths which led to the establishment of Safer Care Victoria, the state's lead agency for monitoring and improving quality and safety (Duckett, Cuddihy & Newnham 2016; Safer Care Victoria 2019).

In a recent systematic review on the effectiveness of simulation-based maternity emergencies education in improving technical skills, seven studies were identified, and all showed that individual and team skills increased after simulation-based maternity emergency education training (Yucel et al. 2020). This also aligns with the findings reported in this paper. Like a previous evaluation of the PROMPT program conducted between 2013 and 2015 in Victoria, participants in this study also reported that MANE had led to improvements in confidence and clinical and non-technical skills (Kumar et al. 2018). The qualitative data reported in this paper is also consistent with the quantitative data obtained as part of the evaluation of MANE, in which participants also reported a sustained improvement in knowledge and confidence in managing maternal and neonatal emergencies immediately after MANE, as well as six-months and twelve-months post-MANE delivery (Cullinane et al. 2022).

One of the aims of MANE was to improve safety culture and clinicians' understanding of clinical governance, and the data presented here suggest that this aim was achieved. In the survey component of the evaluation there were no quantitative data to support this, with no significant changes in SAQ scores pre-post MANE. Survey response rates, however, were low, and these surveys were conducted 6- and 12-months post-MANE delivery. The data presented in this paper, which was a more in-depth exploration, did find that clinicians considered that the program improved safety culture at their health service.

The evaluation of the TeamSTEPPS teamwork improvement concept found a slight improvement in safety culture as a result of the education program (Staines et al. 2020). TeamSTEPPS is a set of strategies and tools based on communication, leadership, situation monitoring and mutual support. TeamSTEPPS uses a 'train-the-trainer' model with a number of different teaching methods including discussions and exercises; however, there are no simulations in the program (Agency for Healthcare Research and Quality 2023). The teaching method in MANE differed, with MANE teaching teamwork, clinical governance, and crisis resource management through didactic presentations, which were then supported through simulation and debrief. This suggests that there may be many different approaches that can be employed to improve the safety culture of a health service.

While the current study found that there were perceived improvements in safety culture resulting from the MANE program, whether these changes were sustained long-term is unknown. Managers have been found to have a strong influence on the overall safety culture of a health service (Campbell et al. 2021), and therefore changes in leadership and management, as well as changes in clinicians and team structures, could potentially undo improvements achieved as a result of the MANE program (Rosen et al. 2018).

STRENGTHS AND LIMITATIONS

This study included representation from all five rural health regions across the state of Victoria. The participants from the four focus groups that were conducted face-to-face were relaxed in a familiar environment, and most participants had input into the discussion, meaning a wide variety of views were heard. Data from one health service were obtained by written response to the questions. Although the themes identified were the same as the face-to-face focus groups, the written responses did not allow for participants to respond to their colleagues' views. However, it allowed all participants to respond to each question, with no constraints on time, and participants may have felt more comfortable to express their views more freely than those in the face-to-face focus groups.

Although MANE was open to and attended by the entire interprofessional team, the majority of focus group attendees (including those from the site who completed the questions via online survey) were midwives or nurses, with only one doctor attending one focus group. This means the majority of data collected expressed the views of midwives and nurses only, and other clinicians' views including those of the obstetric team were not reported.

Further, although participants in this study reported that they considered there were improvements in teamwork and clinical governance resulting from MANE, it is noted that this study was conducted only one month after MANE, and whether these views were sustained is unknown.

CONCLUSION

MANE was viewed by clinicians in this study to be a high-quality, professional education program, and the benefits of external expertise provided by the program were consistently reported. MANE was viewed by participants to have improved clinicians' confidence, skills and behaviour and to have had a positive impact in clinical governance and safety culture. This study supports the other findings of the MANE evaluation previously published in which participants reported an immediate and sustained improvement in knowledge and confidence, and also shows that the aims of the MANE program (to improve the safety culture of maternity services, educate clinicians on recognition and response to clinical deterioration and improve their understanding of and engagement with clinical governance and risk management principals) were achieved. This study adds to a body of literature showing that education programs like MANE may be useful in improving the clinical governance and safety culture of a health service.

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Conflict of Interest

The authors declare they have no conflicts of interest to disclose.

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