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Sustainability of rural Victorian maternity services: 'We can work together'

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ABSTRACT

Background: Rural maternity service closures and service level reductions are continually increasing across Victoria. There is limited understanding of how rural board members and executives make decisions about their maternity service's operations and sustainability.
Aim: To examine perspectives of rural Victorian board members and executives on the sustainability of rural maternity services.
Methods: This was a qualitative study. Interviews were conducted via Zoom™ with 16 rural Victorian hospital board members and executives. Data were thematically analysed.
Findings: Severe shortages in the rural maternity workforce, primarily midwives, have contributed to service sustainability decisions. Challenges in offering midwifery workforce incentives cause difficulty in overcoming workforce shortages. A rural maternity workforce strategy harnessing connection with regional services was called for. Innovative models of maternity care were often actioned at the point of service suspension or closure. Participants requested a government policy position and funding for innovative, safe, and sustainable models of care in rural settings.
Discussion: There is an opportunity for workforce planning to occur between regional and rural services to ensure the development of sustainable maternity models such as midwifery group practice and incentivise the workforce to address current deficits and sustain service provision.
Conclusion: Models of care developed with rural communities, in collaboration with regional services, have the potential to strengthen the delivery of safe, sustainable maternity services. Workforce modelling and centralised government policies aimed at arresting workforce deficits are suggested to provide rural health service leaders with strategic and operational directions to support the delivery of safe, sustainable maternity services.

Statement of Significance

Problem

A gap exists in understanding how health board members and executives make decisions about the sustainability of their maternity services across rural Victoria.

What is already known

Rural Victorian maternity services continue to reduce service provision or close due to the ongoing workforce deficits and the issues related to existing models of care.

What this paper adds

Board members and executives of rural Victorian health services continue to work on maintaining and sustaining their maternity

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services. Maternity workforce modelling and policy is suggested to provide directives for rural maternity service sustainability.

Introduction

The sustainability of rural and remote maternity services across Australia has been an ongoing concern. Over 250 Australian rural maternity services have closed in more than two decades [1]. In the Australian state of Victoria, 25 rural maternity services closed or reduced their capability level in the same timeframe [2]. Service disparity, inequity of access, centralisation of health services, and workforce shortages have impacted sustainability [3,4]. Historically, rural maternity service closures have occurred in response to increased risk aversion [5,6]. While reducing risk has been used as a justification for rural maternity service closure, it has arguably displaced this risk on women and families, forcing them to travel long distances to access care and burdening them financially, emotionally, and physically [4]. Strategic decisions in sustaining maternity service delivery are often consciously or unconsciously weighed against legal, clinical, or operational risk. [5,7]. A key resource influencing operational pressure is the maternity workforce.

Maternity research has recognised critical deficits in the maternity workforce due to reduced employment fractions (EFT) alongside increased rates of retirement in response to the COVID-19 pandemic [3]. New models of care as well as other strategies are needed to attract and retain midwives, particularly in rural settings. Increasing continuity of midwifery care models is identified as one solution for overcoming workforce disparities, sustaining services, and ensuring safe care in Australian rural and remote locations [6].

Australian jurisdictions are separated into states and territories. The Australian health system is predominantly nationally funded; however, it is managed at a state and territory level. Jurisdictional health systems vary from centralised to decentralised across the nation [8]. This means that how maternity care is operationalised and what activity is undertaken to improve sustainability is also variable, dependent on state and territory policy and/or priority [9]. A maternity service is operationalised using a maternity capability framework, which outlines service requirements according to set capability levels [10]. Levels of maternity capability range from level one, no maternity service or antenatal/postnatal care only, to level six, tertiary care acuity [8]. Most rural Australian maternity services operate between level one to level three: operative capability and birth service [8]. Efforts to arrest service closure across Australia have largely been led at a jurisdictional level, however, a national approach aimed at sustaining rural maternity services has been called for in a recent forum [11]. Prior to this, the Queensland state government's task force had set targets to reopen select rural maternity services (level one) using continuity of care midwifery models in a variety of forms, determined largely by requirements of each area or community [6,12]. Maternity service sustainability activity aimed at evaluating and reopening maternity services has stimulated the development of an interactive decision--making framework and toolkit, a means to aid maternity service evaluation or re-establishment of rural maternity services in the form of continuity of care models [12]. In the Victorian sector, a critical review into a cluster of perinatal deaths [13], followed by the 'targeting zero' report [14], signified an intense focus on health service quality and safety and the formation of Safer Care Victoria (SCV) [15]. While SCV has significantly improved clinical governance in the Victorian health system, rural maternity service reductions and closures have continued. Maternity service suspension and restructuring of some rural Victorian maternity services have been linked to community demand [2]. Media discourse led by a demand for sustained maternity services in rural communities has reflected a changing narrative, championing the necessity of rural Victorian maternity service access [2]. Re-establishing woman-centred maternity care, using a continuity model with demonstrated positive outcomes for women and babies [16,17], embodies the national maternity strategy and is operationally supported using current state and territory maternity capability frameworks [8,18].

While sustainability activity is occurring in varying forms at individual state health department levels, the appetite to re-evaluate maternity services with the view for them to remain open has not been understood from the perspective of the health service board members and executives. There has been limited evidence outlining how health executives understand the provision of safe maternity services, particularly in the rural sector. It is also important to explore how senior management, i.e., health service board members and executives, understand maternity risk as it is relatively unknown [6]. The lack of discussion from the position of operational decision makers around workforce deficit, maternity service reduction and closures, and documented government activity to re-establish previous maternity closures suggests a gap in understanding of maternity service executive decision-making [19]. This research considers the perspective of health service board members and executives in the rural Victorian context to examine the sustainability and delivery of safe maternity care.

Methods

Research aim and study design

The aim of this study was to understand health service board members' and executives' perspectives regarding the sustainability of rural Victorian maternity services. This study is the qualitative component of a larger concurrent mixed-methods study. The broader study comprised of a survey with option for interview. This article will discuss the qualitative interview findings. An interpretive qualitative approach was used to inform a deeper understanding of participant experiences through their stories and recollections related to operationalising, sustaining or decision to close a Victorian maternity service [20].

Participants, inclusion and exclusion criteria

This research study included health service board members and executives in rural Victorian health services that provided maternity services or had experienced the closure of maternity services since 2010. Individuals were ineligible for participation if they were non-executive health service staff (i.e., Nurse or Midwifery Unit Manager), not engaged at a rural health board or executive level, or members of metropolitan health services. Participants were recruited from 52 rural health services in Victoria. Interview participants were recruited via the broader study survey (reported elsewhere) that recruited 44 maternity health service board members and executives. Participants who completed the survey were invited to nominate to participate in an individual interview. The researcher responded via email or phone and negotiated a convenient appointment time with participants interested in proceeding with an interview.

Data collection

The research team developed a semi-structured interview guide from a review of the literature. The interview guide was rigorously critiqued using expertise from the research team, which comprised of policy, health service, and research expertise. A review of the literature was undertaken, which informed the development of the semi-structured interview guide (see Fig. 1) [21,22]. The interview guide was critiqued by two After-Hours Hospital Coordinators (AHC) who operate as a proxy to health service executives out of hours. A pilot interview to test the interview guide and flow of questions was conducted with a separate AHC. Due to geographical diversity, all interviews were conducted via Zoom™. The interviews were audio recorded using Zoom™ [23] and then transcribed using Otter AI™ [24] software. Each transcript was

1. How would you describe your professional background?
2. How would you describe your connection to the local area?
3. How would you describe your maternity service? How does/did it operate?
4. How would you describe the health services' appetite for risk in maternity care?
5. What does safety in maternity care mean to you?
6. How would you respond if maternity closure was considered at your local health service?
7. What is the most common concern brought to your attention when considering maternity sustainability?
8. Did you find a workable solution? If so, what was it?
9. What types of support do you need to sustain your current maternity service?
10. Who would you describe as influential to decision making around your maternity service?
11. What improvements have you made, if any, to your current maternity service?

Fig. 1. Semi-structured interview guide.

carefully checked and edited where needed against the audio recording to ensure accuracy. All transcripts were de-identified prior to analysis. [25] The interviews lasted 30–40 minutes.

Data analysis

The interview data were analysed using thematic analysis methods. The Braun and Clarke [26] six-step process, including data familiarisation, coding, generating initial themes, reviewing themes, naming themes and writing up an analytical narrative, was used [27]. Data saturation was deemed by the research team as met when no new themes were generated and sufficient depth, richness, and breadth of data associated with themes was achieved [28]. Interview data was initially examined independently by the primary researcher. Once completed, the research team conducted a review of the codes and initial themes. Themes were modified until there was agreement within the team.

Findings

Sixteen participants from across all of the Victorian health regions, Barwon South Western (n=3), Gippsland Region (n=1), Grampians Region (n=3), Hume Region (n=2) and Loddon Mallee Region (n=7) participated. Approximately one-third had previously advised for or had been employed in rural maternity services in other regions of Victoria. Eleven participants identified as female and five male. Participants (n=13) commonly lived in the region where the rural maternity service they were serving on the board was located. Three participants lived in a metropolitan area. Most participants were linked to maternity services providing level three maternity capability (n=7), which provides care for women with uncomplicated pregnancies in the antenatal, birth (>37- weeks), and postnatal period. The remaining participants sat on boards of level two services (n=5), which provides antenatal, labour and birth (>37 weeks), and postnatal care to low-risk women but does not have theatre capability, or level one service (n=4), which provides antenatal and postnatal care but no labour and birth care. Most of the participants (n=13) sat on the boards of hospitals with birth rates between 0 and 149 per year.

Four themes were generated from the data analysis: 1) chronic to critical: an exacerbation of rural workforce deficit; 2) sustainability of maternity services and timely innovation; 3) incentivisation of rural midwifery workforce; and 4) a call for long-term workforce strategy and policy position.

Chronic to critical: an exacerbation of rural workforce deficit

Consistently in all interviews, the crisis with the maternity workforce, primarily midwifery, was a key feature associated with decisions related to sustaining their maternity services. The focus on the need for skilled midwives and doctors to safely staff a maternity service weighed heavily in discussions. The exacerbation of the current maternity workforce crisis by the COVID-19 pandemic was also reported. When participants were asked about key issues relevant to sustaining rural maternity services, the workforce was the first factor identified by each participant. Simply put, Participant Three stated, *'we don't have enough midwives.'* Participant Eight confirmed the state of the workforce deficit, saying, '*We're just running out of midwives and doctors.'* When asked how the maternity service continued to function in a traditional 8-hour shift-based maternity model with critical levels of midwives and General Practitioner Obstetrician (GPO), Participant Eight suggested that paying for locum medical coverage was the only option in the short term, *'small services like us use locums…we're just hanging on. It's a couple of years till the next crop of* [rural generalist] *doctors comes out.'* The sentiment of 'hanging on' described by Participant Eight alongside the effect of COVID-19 on workforce availability, was echoed by Participant 14, who stated, *'with COVID and furloughing, there's not enough midwives…we've got 20 shifts* [monthly roster] *without staff on it.'* Participant Three confirmed a perspective of consistent midwifery deficit across rural Victoria and indicated this concern escalated to the executive daily. Participant Eight reiterated this, stating *'no-ones waiting for work'*, indicating staff managing daily human resource shortfalls (sick leave) often had no staff left to call in to cover shifts. The strength and consistency of COVID-19 pressure were continually identified. Participant 15 recognised how close maternity services felt to necessary service suspension or closure, commenting, *'somebody gets COVID, for example, and then you're just out of business.'*

While the workforce pressure in rural maternity services was

described as chronic, the impact of COVID-19 was evident in two phases. The first phase was during the early stages of the pandemic (pre-vaccination), and then the second phase was the period of successive lockdowns in Victoria. Participant Two described the midwifery workforce generally across the previous three-year period as *'pummelled'*. When asked why this was so, Participant Two described emotional fallout and mismatch between community expectations and health department regulations (i.e., restricted family access to the mother and newborn baby during an inpatient stay). The pressure felt by midwives during periods of lockdown or personal circumstances was described by participants as a tipping point within the industry. Participant Five suggested a loss of midwifery staff employed by rural maternity services began with the personal impacts of COVID-19 and then led to staff *'just not wanting to do midwifery anymore'*. Some participants suggested COVID-19 lockdowns and health policy, particularly during 2020 when vaccinations were not yet distributed, had led midwives nearing retirement to leave their midwifery roles. Participant Seven commented that chronic workforce pressure had been well-known for many years, however, *'COVID brought things out into the light'*.

Rather than resign from a rural health service, participants described how midwives took the opportunity to work in alternative areas within health services, such as COVID-19 vaccination clinics. This led to reduced availability of midwifery employment fraction (EFT) for clinical work on the maternity ward, creating difficulty for executives when forecasting long-term planning of maternity services. In contrast, some participants described an influx of metropolitan staff who relocated to rural areas after successive lockdowns, seeking better living conditions. This comment was made only by two participants and reflected a return of workforce EFT from crisis (closure) to chronic *'pain point' (*Participant Four) of EFT midwifery shortage. This small population of participants suggested that their maternity service was not experiencing a crisis due to a form of 'rural lifestyle incentivisation' under Victorian pandemic conditions, which led some people to relocate from metropolitan areas due to intense social distancing rules. This also demonstrates a normalisation of chronic workforce shortage as a consistent problem that participants felt could not be fully rectified despite a temporary reprieve.

Sustainability of maternity services and timely innovation

Participants discussed the limited availability of midwives, a rural midwifery workforce culture that did not readily embrace alternative models of care, and a lack of incentives for rural midwives. Participant Three who also noted critical midwifery staffing levels stated, *'we might need to do something different with the model* [of maternity care] *over the next 10 years…I don't know how we might respond to that yet.'* The models of maternity care were often discussed as a challenging operational factor. When participants were asked to consider solutions to the midwifery workforce deficit, introducing models of care, such as Midwifery Group Practice (MGP), was often seen as a last resort. Participant Eight stated, *'It might be something that we need to look at down the track…'* when current models of maternity care were no longer an option. Participants from services that had remodelled to MGP described this as occurring before or in the wake of service suspension and was associated with community demand. Participant 13 described a service review leading to a restructuring of maternity services: '*The service stopped, and we reviewed and developed a new model* [MGP] *with Safer Care [Victoria (SCV)].'* Participant 13 indicated that the community were concerned about the permanent closure of the maternity service when service suspension occurred. This pressured the board to consider strategies for keeping the service open.

> *'We completely shut it down [suspended for review]… we were the worst in the world. I didn't go to the supermarket for a few weeks because, rightfully so, all the young mums in town got 'a bee in their bonnet'[-worried] because they'd done the research and [believed] once [hospital board and executive] stopped the service they never reopen it.' (Participant 13)*

Participant 10 also described *'community backlash'* that occurred with service suspension due to *'a loose clinical governance framework and protocols not aligned to industry best practice'*, ultimately leading to external consultation and MGP remodelling. Participant 10 suggested an earlier review and *'true engagement'* with the community to offer a *'safe maternity service'* would have been a better course of action for board members and executives than *'having to apologise to the community… that's the lesson learned.'* The pressure to source a maternity service advisor once an organisation had suspended operations was stressed by Participant Five. At the time of the interview, Participant Five had suspended their rural maternity service pending consultation. They said, *'we're looking at a lot of different places* [models of care]. *I need to talk to someone in the health department… I know they've found somebody to work with us to look at a different model* [MGP]*… It's important we retain our birthing service.'*

Comparatively, Participant 12 represented a service that actioned external reviewers' advice, moving from a traditional model of care to an MGP service. Participant 12 described a carefully planned change to sustain their maternity service. The time for the change process to occur was 18 months to 2 years. *'We've undergone a significant amount of work in the last two years turning around our service because we were unable to recruit midwives*' (Participant 12). A desirability of MGP by the midwifery workforce was described by Participant 12 to encourage their service to remodel to an MGP and to sustain a high quality, safe service.

> '*As part of a review*, [external reviewer] *made a number of recommendations for the future sustainability and continued safety of the service, and these have formed the foundation of the design of the new model of care. Introducing a new MGP model of care has improved the long-term sustainability of the service.'* (Participant 12)

Participant 11 also commented on the viability of MGP and the attractiveness of the model for rural women. At the time of the interview, Participant 11's rural maternity service was set to re-open with an MGP model after a short suspension. While not yet reopened, women had begun to book in for pregnancy care explicitly because of the revised model of maternity care. Participant 11 commented, '*Now that we're getting closer to implementing* [MGP]*, women are now actually booking in because they've heard we've got an MGP model of care happening.'*

The necessity for innovative thinking around the operationalisation of safe, sustainable maternity services in rural Victoria was broadly articulated. Participants appeared to consider MGP as an evidence-based service solution to promote service longevity, commonly once a review was necessary due to critical workforce pressure. Strong commentary suggested a change was needed to workforce culture, particularly inclusivity in the midwifery workforce, to attract and incentivise single registered midwives to the rural sector.

Incentivisation of rural midwifery workforce

Incentivisation was not largely considered a productive strategy to improve the recruitment of midwives when considering long-term service sustainability. Two concepts related to the financial remuneration of the midwifery workforce were identified. The first was that incentivisation for midwifery staff was inhibited by the Enterprise Bargaining Agreement (EBA) in Victoria, which includes registered nurses and registered midwives under the same agreement. The second limitation was that incentivising midwives in the rural sector would mean increased costs due to the necessity to incentivise all staff in the organisation. The implication was that all staff would envy midwives incentivised to work in rural health services.

The value of midwifery was discussed as a necessary attribute in workforce culture required to retain or recruit midwifery staff. Participant One clarified this, stating, *'We want to make it a place people want to*

come to work.' Statements by participants emphasised the importance of the midwifery staff feeling *'supported and valued'* (Participant Seven), or that all employees were *'valued and accountable'* (Participant Six). Incentivisation, in addition to current remuneration to demonstrate that midwifery knowledge was valued, was considered an unrealistic avenue to support midwifery recruitment to sustain rural maternity services.

Participant 16 also identified the nurses' and midwives' Victorian EBA [29] as a key element when considering executive responsibilities such as professional development and leave as they apply to midwifery staffing arrangements. Participant One suggested that if midwifery inducements were established, a health service could not negotiate an '*end point*', nor did they have the authority to restrict this to a single discipline due to the combined nature of the EBA. Participant One elaborated. *'The award* [EBA] *is the award, and if you start saying we're gonna pay your award plus 5% or 10%. where does it stop? How do I explain that a midwife is worth more than a cleaner.'*

In contrast, financial inducement to recruit medical staff was generally accepted. Interviewees described medical clinicians as *'talent'*, emphasising a level of skill attached to the person (Participant Six). Participants with a clinical background commonly referenced recruitment in terms of role description or in association to the respective EBA. Participant 14 spoke of the accepted practice of incentivisation for medical staff; however, reflected (with frustration) that it was not possible for midwifery staff, who are separate to nurses, stating, '*you talk about things like 'all nurses'… And they [midwives] aren't seen as a strong profession on their own that needs to be attracted [rurally].*' This indicates that, in the EBA, midwifery should be treated as an independent profession recognised in a separate EBA to accommodate remuneration and incentivisation of midwives into the rural sector. The idea of discipline-specific EBAs in Victoria was suggested by Participant 14 as an action that should be part of a larger state-based workforce strategy. A need for greater professional recognition and respect for midwifery practice and its role in rural communities was identified by Participant 14.

> *'Midwives <u>are</u> strong and independent practitioners and [they] are as valuable as a doctor in community… It's a problem that the profession [midwifery] is still tied to nursing awards… They use money incentivisation for pharmacists, and for allied health. It's about being tied to it [nursing EBA] because if they incentivise midwives, they'll have to incentivise everybody, and there's not the same shortage of nurses in the rural community. (Participant 14)*

Participant 16 indicated a historic preference for a dual-qualified workforce as a recruitment strategy linked to EBA conditions stating, '*I started the dual graduate midwife/registered nurse* [role]. *It's more of a long-term approach… They* [rural maternity services] *all have those types of workforce strategies for midwives, obviously supported by professional development and their EBA requirements.'*

Overall, staff inducement and incentivisation was discussed as a problematic subject to substantially address in the rural sector due to perceived remuneration and funding limitations. Participant perceptions and comments reflected that recruitment and retention of midwives and the ultimate sustainability of rural maternity services depended on the prioritisation of individual executive and board members. Participant Nine highlighted the tension between support for continued maternity provision in a fiscal climate without guaranteed additional department funding, stating, *'we have to put money into maternity. And that may mean that some other service has to go.'* Participant 15 was also resolute that more funding was necessary for rural maternity service survival, stating, '*the whole thing is half a million dollars short. If the government made a conscious decision to fund these small obstetric services regardless of the cost, that makes them more survivable.'*

A call for long-term workforce strategy and policy position

Participants expressed a view that the Victorian Health Department required an explicit workforce strategy that included measures for the rural maternity workforce. A call for a health policy position on adopting continuity models of care was also voiced, with MGP specifically identified as a possible model for implementation. Participant 12 reflected a strong will for rural maternity services to adopt MGP models of care as a flexible and respected workforce, stating, *'let's put all the midwives on salary and make sure that they can cover those* [women's care] *…It's valuing midwives as professionals, not as factory workers that clock in and out.'* This view was supported by Participant 14, who commented, *'obviously a really excellent model for rural services is a continuity care model MGP.'* When asked to consider a workforce solution that might offset the critical nature of rural maternity workforce pressure, Participant 11 succinctly responded, *'MGP will significantly alleviate this stress.'* When asked to elaborate on this conclusion, Participant 11 added that an MGP model of care has the opportunity to future-proof against obstetric workforce pressure as well as midwifery concerns. Participant 11 stated, *'whilst our service has fantastic GPOs and obstetric cover, I know that the position of our service could change and future proofing* [model of care] *is crucial.'*

A strong sense reflected by participants was that rural boards and executives were struggling with a chronic and largely unrelenting maternity workforce deficit, and each rural maternity service was tackling this independently of one another. A distinct message was that rural workforce strategies were also localised to individual maternity services and primarily driven by personal executive preferences or priority towards a known, traditional model of maternity care (i.e., rotational shift-based midwifery roster, linked to nursing work). Participants considered the structure of the Victorian public health sector as decentralised. Maternity workforce recruitment by individual services was described as an attempt to *' control our own little piece of the world'* (Participant Five). While several participants described recruitment activity to attract a maternity workforce, most indicated that despite their efforts, the deficit of midwifery and the medical workforce was a reoccurring theme that infused every board meeting. Participant Nine articulated the depth of workforce strategy over many years and the critical nature of the workforce as the most important issue relevant to rural maternity sustainability. Participant Nine stated, *'Everything that comes to us is around the workforce. How do we get more midwives that are engaged?. If we don't have a workforce, we close maternity services.'*

The need for a broader state-wide approach supporting a national strategy towards workforce recruitment and sustainable collective rural maternity operations was strongly advocated for. Participant Four stated individual maternity services *'shouldn't be struggling to do this on our own.'* She described requesting ministerial funds to support a workforce specialist to consult with her service to consider strategies their board members and executives had potentially missed. Participants indicated that while this level of support was welcome, workforce recruitment and retention strategies were still conceptualised at ground level, largely unable to address the crux of the problem. Participant Four suggested that arresting the critical issue of the midwifery workforce, in particular, was multi-layered and required levels of collaborative action from the state and federal health departments. Participant Four insisted, *'We can work together; give us a state or a national driven workforce strategy that is going to give us a pipeline of midwives.'*

Participant 16 suggested that any state-wide midwifery workforce initiative was welcome; however, a strategy with greater depth than had been initiated was needed. Participants also indicated that part of a Victorian rural workforce strategy could require health services to work together to provide a maternity service using staff across campuses as a combined workforce. Again, Participant Four stressed a priority to collaborate across services, stating, *'I keep trying to say we need to look at staffing not being entirely just our facility, that it's more of a shared thing across facilities.'*

Participant Five remarked that, in her mind, a multisite employment model could be instituted in rural areas for midwifery and other health service areas. Participant Five described a model of employment less concrete than historic employment models for rural midwives,

indicating a multi-service model in which midwives were *'credentialled to work in 'A', 'B' and 'C'*. She explained that the payoff to the community would be access and sustainability of healthcare and a closer working relationship between services. She suggested that she had not achieved this at the local level, *'I've tried and tried, I just get nowhere'* (Participant Five). A new way of viewing workforce mobility was a key element to Participant Five's plead for state workforce innovation to facilitate interconnected maternity service workforces, stating, '*my staff aren't my staff…they can work within the region.'* Participant Five suggested that other rural health service executives needed to '*stop trying to hold on to our little patch and genuinely work together.'* Two participants also recognised that executives needed support from a '*focus group'* or *'task force'* (Participant Two) at a government level to direct services in operationalising models of care that fit their needs and those of their midwifery workforce. A policy position was strongly advocated for by Participant 14, who lamented the weariness of executive to action change, such as restructuring a maternity service to an MGP model. Participant 14 commented that if a state policy to deliver a continuity model (i.e., MGP) in a rural setting was developed, then external advisors would have a foundation for action rather than to just say *'strengthen'* services. Participant 14 stated '*it's* [MGP priority] *very person dependent because it hasn't been embedded into a government policy. That's what it needs.'* Caution in the sequencing of policy action was highlighted. A state-based workforce strategy was considered a priority to support a maternity policy with financial backing for localised project support. Participant 14 articulated this clearly, stating, *'When you have a policy direction, you really want to be behind it with a lot of workforce … Policies can still fail if you don't give them the enabling factors* [funding] *to make them work.'* The overall tone of participant sentiment regarding workforce and maternity care strategy was that this needed to be directed via a policy platform. Participants indicated that the fundamental issue of the lack of workforce was the crucial element that would lead to rural maternity closure decisions.

Discussion

Momentum for Victorian maternity service reduction and closures [1] and workforce crisis has been forecasted over several decades. [30, 31] The chronic nature of the midwifery and medical workforce shortage has been regularly recognised in the rural sector and has continued to impact maternity services. [32,33] Recent research has highlighted critical Victorian midwifery workforce levels. [3] Findings in this study confirm a crisis associated with the maternity services workforce in rural Victoria. Individual health service board members and executive groups also had a strong tendency to attempt to address workforce shortages with limited effect, recognising a need to innovate. Continuity models of maternity care such as MGP, which are positioned to best use and attract a midwifery workforce [34], were often considered by board members and executives late, at the point of service reduction, suspension, or closure. Findings suggested that rural midwifery recruitment using financial incentives is limited due to the current EBA and the connection between the nursing and midwifery professions. A separate industrial agreement may allow innovative incentivised recruitment strategies for midwives that acknowledge the independence of the midwifery profession and its value in rural areas. An EBA specific to the needs of midwives that is relevant to progressive midwifery practice is a consideration that has been argued for some time in Australia [35]. Professional practice criteria to support reasonable caseload arrangements, professional development requirements, and clear financial incentives for endorsed registration detailed in an industrial agreement would enable midwives to better work to their full scope of midwifery practice in the public health sector [36]. A current EBA reflective of autonomous professional identity, midwifery credentialling, and flexible work practice would enable midwifery leaders to streamline the implementation of more models of maternity care [37]. Further research into the functionality of the current industrial agreement, autonomy from nursing constructs, and relevant terms and conditions are required to support a future Australian midwifery workforce and sustainable models of maternity care.

Results from this research study indicated that the small number of services that were remodelled to an MGP were able to sustain their maternity service rather than closing, and this was achieved in association with community pressure and subsequent community co-design. This suggests that rural boards and executives can be influenced to move towards MGP by engaging and working with their community [2] and by seeing other rural service remodelling. Rural maternity services may also be influenced to explore MGP and other midwifery continuity of care models with support from government policy and workforce strategic directions to provide evidence-based, woman-centred care [18]. Findings from this research identified that largely rural board members and executives hesitate to implement different models of maternity care, including MGP models, unless the maternity service reaches a critical juncture, i.e. service suspension. This suggests a leadership culture in rural Victoria has a preference to remain aligned to traditional models of care, rather than using their limited midwifery workforce more efficiently by allowing midwives to work within their full scope of practice using MGP continuity model. These findings relate to Matthews et al. [3] research which examined midwives and midwifery managers' experience of workplace culture and intention to remain in the profession. While results identified high levels of bullying and occupational violence, a protective factor leading to job satisfaction was proactive initiatives that fostered continuity of care and workforce flexibility [38]. Current evidence has identified that student midwives and early graduates identify work in continuity care, such as MGP, an area in which they would find job satisfaction [39]. Evans et al. [39] consider the link between job satisfaction and work in a continuity of care model an important factor associated with attracting and retaining the midwifery workforce in Australia. The concept of midwifery leadership as a supportive mechanism for workforce satisfaction and quality maternity care has also resonated through literature [40], however, it is consistently discussed at the level of maternity manager [41]. This study's findings focus on the necessity for midwifery voice and leadership at an executive level in rural services to support evidenced sustainable workforce options and improve workplace culture, recruitment and retention [42]. These findings build on concepts presented by Prussing et al [43]. whose research highlights a necessity to 'engage the gatekeepers', discussed as hospital executive management. Rather than 'engage' with staff at an operational level, there is a necessity for midwives to 'be' at this operational level and representative at successive levels of the health system, inclusive of Chief Midwife at state, territory and national levels [44].

A request for a long-term health department-driven Victorian workforce strategy is evident from the findings, with an additional need for policy positions regarding maternity service modelling. A national midwifery workforce analysis, 'midwifery futures', has commenced. This project examines the current Australian midwifery workforce supply and project ongoing demands, leading to recommendations for professional sustainability [45]. To date, individual state and territory-based workforce activity has occurred in other Australian jurisdictions, such as a Queensland rural maternity taskforce, alongside committed funding for MGPs to support and re-establish access in rural and remote areas. [46] Maternity services activity and tools for service operationalisation have been developed through taskforce activity to provide a blueprint for service evaluation and MGP remodelling [12], which could be adapted to support a Victorian-specific strategy. Further, South Australia provides a current example of flexible MGP modelling across multiple birthing sites, a flexible operationalisation of maternity care in response to known maternity closures in rural areas [47]. An opportunity exists to invest in maternity models using innovative regional networks to enhance collaboration and reduce isolation amongst decision-makers working to support rural Victorian maternity care.

Limitations

The authors acknowledge the time-poor nature of health board members and executives alongside service pressure associated with operationalising COVID-19 restrictions and care restructure during the research period. While quality-rich data was collected with input from all Victorian health regions, executive pressures associated with COVID-19 were considered limitations that may have impacted the interview response rate. The interview guide was piloted via Zoom™ [23] with one industry expert external to the research team. The sample size and geographical contexts in this study may limit the generalisability of findings to other rural areas.

Conclusion

Chronic midwifery and medical workforce shortages and further workforce attrition in the profession of midwifery were identified as the most inhibiting factors for rural maternity service sustainability. Innovative models of care, such as MGP, planned and developed prior to reaching the crisis point in consultation with the community, have the potential to support safe and sustainable rural maternity services. Consideration of midwifery incentivisation in rural areas independent of the nursing EBA may be an avenue to enable maternity service sustainability. Rural and regional workforce partnerships and relationship building were also identified as crucial for an overall state-wide maternity workforce strategic plan. The necessity for a state-wide government policy position on the application of MGP in the Victorian rural maternity sector was strongly articulated. Specific policy development to guide maternity service modelling in rural areas is needed to arrest workforce deficit and disincentivise rural maternity service closure.

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Ethical statement

The study obtained ethical approval from Deakin University (Ethics ID code HEAG-H 182_2021).

CRediT authorship contribution statement

Kath Brundell: Conceptualisation, data curation, formal analysis, methodology, project administration, validation, writing- original draft, writing- review and editing. **Vidanka Vasilevski:** Conceptualisation, formal analysis, methodology, validation, writing- review and editing. **Tanya Farrell:** Conceptualisation, validation, writing- review and editing. **Linda Sweet:** Conceptualisation, formal analysis, methodology, validation, writing- review and editing.

Conflict of Interest

Linda Sweet has editorial duties with this journal. To reduce any real or perceived conflict of interest, she had no role in the processing or peer review of this paper.

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