

National Health & Climate Strategy

Submission

Issued July 2023





Australian College of Midwives Submission: National Health and Climate Strategy

Via email: health.climate.consultation@health.gov.au

Introduction

The Australian College of Midwives (ACM) welcomes the opportunity to provide a submission on the National Health and Climate Strategy. ACM is the peak professional body representing midwives in Australia. ACM is focused on ensuring better outcomes for women, babies, and their families, through improved choice and access to quality maternity care close to home and supporting the profession by enabling midwives to work to full scope of practice.

ACM recognises the urgency of action to mitigate climate change. Midwives in Australia work in a range of models of care including hospital based, primary health, community, private practice, and homebirth. Midwives work across metropolitan, regional, rural, and remote geographical locations. Midwives are impacted by extreme weather events and natural disasters and therefore play a role in local disaster planning, preparedness, response, evaluation, and research. Environmental health affects all people and ACM believe midwives are essential in supporting and educating women, their families, and the profession to understand and be aware of the impacts of climate change and steps they can take to reduce this impact.

ACM has responded to the Consultation paper questions that have the most impact on midwives and midwifery.

Consultation Paper Questions:

1. How could these objectives be improved to better support the vision of the Strategy?

Measurement of agreed objectives are essential to continuously inform and improve outcomes in healthcare. Identification of knowledge gaps and including experts across adjacent professions to review the strategy at regular intervals is essential. Standardised monitoring, recording, and reporting ensure accountability and demonstrates implementation of the Strategy. Benchmarking and national trends enable healthcare facilities to compare their performance to industry standards to drive quality improvements, efficiency, and patient experience.

Mitigation of workforce issues is an ongoing challenge in the health sector. Embedding climate education into health professionals' orientation and development as a long-term strategy may increase retention.

Leaders should encourage a sense of community amongst staff through joining special interest groups and portfolios. Adequate resourcing is required to ensure already stretched personnel can implement transformative change.

Adapting and translating evidence to fit context of practice is essential across all objectives. University education is one sector where mutually beneficial sharing of information can quickly improve learning outcomes and grow knowledge amongst communities. Innovation and research in healthcare are ways to prioritise a commitment to climate action.

Health in all Policies. Health impacts from a public and private perspective are necessary to ensure equity is valued and access to healthcare improved. A whole of government commitment and approach to policy, practice and research is required to ensure a just transition and fair and equitable funding and incentivisation. Importantly, the whole of health workforce, infrastructure, transport, consumables (including pharmaceuticals) and consumers are represented, offset, and embedded into National Safety and Quality in Healthcare Accreditation Standards and business as usual.

2. How could these principles be improved to better inform the objectives of the Strategy? First Nations leadership at all levels must underpin the vision of the strategy. ACM supports the Uluru Statement from the Heart and the three tenets of Voice, Treaty and Truth. Contribution and participation by Aboriginal and Torres Strait Islander people from diverse backgrounds and not just the voices of established leadership figures, will help ensure the Voice is representative of the ever-evolving needs of all First Nations people in Australia which includes their knowledge, wisdom, and contribution to climate change in this country. Mapping inequities across Australia and identifying the regions where closing health gaps are most prominent must be led and monitored by experts who are culturally informed and in consultation with consumers with lived experience.

Tackling health inequities by considering those most vulnerable first; First Nations families, pregnant women; immunocompromised, priority populations including CALD communities as well as the elderly and frontline health workers. Rural and Remote Australia are the most vulnerable regions in Australia and must be prioritised as part of this strategy, incorporating evidence-based midwifery continuity of care as a model that can contribute to positive climate change. Targeted health interventions utilising innovation is essential.

Population Health and prevention. The public health perspective must highlight midwifery led care as the primary maternity care for well women. Midwifery care is a preventative health measure and optimises outcomes for women and babies that have impacts across the lifespan on the chronic burden of disease.

The premise of *One Health* is easily understood and should be promoted at a National level from primary school age in the education sector. Including a global health perspective within this principal would further capture understanding. The <u>State of the Worlds Midwifery Report</u> (2021) is an example of global maternal awareness. Partnering with low-income countries to reduce maternal and neonatal morbidity and mortality rates can impact global climate change at a local level while maintaining an awareness of biodiversity, unintended consequences, and human rights interventions.

Evidence-informed policy making replicates evidence-based midwifery practice in Australia informing, for example <u>ACM consultation and referral guidelines</u> and the newly developing Living Evidence for Australian Pregnancy and Postnatal care (LEAPP) Guidelines.

Partnership-based working across all levels of government and beyond: Peak professional bodies such as ACM are key contributors to a nationally consistent response to climate change. Consultation and implementation ensure both clinical and strategic contribution from the profession including ready and widely disseminated information sharing between members and professional networks.

3. Which of the various types of greenhouse gas emissions discussed above should be in scope of the Strategy's emission reduction efforts?

Maternity care is impacted by Scope 1, 2 and 3 emissions and other greenhouse gas emissions, such as patient and visitor transport. Therefore ACM believes all emissions should be in scope and included in the National strategy.

4. What existing First Nations policies, initiatives, expertise, knowledge, and practices should the Strategy align with or draw upon to address climate change and protect First Nations country, culture and wellbeing?

National Aboriginal and Torres Strait Islander Health Plan 2013-2023: This plan recognises the importance of addressing the social determinants of health, including climate change, and the need for culturally safe and responsive health care.

'Birthing on Country' seeks to provide culturally safe and responsive care to Indigenous mothers and families in their own communities, with a focus on maintaining cultural connections to country and community. The approach recognises the importance of empowering Indigenous women and communities to make decisions about their own care and health (Kildea et al., (2021).

A key premise of the Birthing on Country RISE principles is that Aboriginal and Torres Strait islanders have access to birthing close to home in a culturally safe environment. Evidence shows that access to birthing close to home with midwifery continuity of care improves health outcomes for indigenous mothers and babies (Sandall et al., 2016). This includes pre-term birth rates reduced by 50%, It reduces pregnancy loss/neonatal death by 16%, Reduces intervention at birth (e.g., induction, forceps, caesarean), Increases breastfeeding rates, antenatal visits attendance and perinatal mental health. Redesign maternity services, Invest in workforce, Strengthen family capacity and Embed community control. Birthing on Country results in;

- More babies born healthy and strong
- More mothers and babies stay together through strengthened family capacity.
- Expanded First Nations maternal and infant health workforce.
- Increased First Nations governance over services delivered during this critical stage of life (Best Start to Life (2022)).

Birthing on Country and Birthing in our Community models are driving system-wide reform, aimed at transferring funding and control of maternity services for First Nations families from mainstream services into First Nations hands through community-controlled health services. Birthing on Country recognises the importance of a First Nations workforce to drive a strengths-based service and provide birthing services that are clinically and culturally safe.

There are additional innovative approaches to reducing First Nations Health inequities, such as <u>Djakamirr</u> training in NT and consultation here should be led by experts, in a culturally safe approach, with insight and expertise in designing and implementing these programs.

Growing Deadly Families strategy in Queensland through Queensland Health focuses on valuing cultural traditions, values and beliefs of Aboriginal and Torres Strait Islander people and listening to the needs of their communities as essential elements to providing culturally focussed and safe maternal health services for mothers of Aboriginal and Torres Strait Islander babies through co design, woman-centred, comprehensive, and culturally capable maternity care and a culturally capable workforce (Queensland Government, 2019).

5. What types of governance forums should be utilised to facilitate co-design of the Strategy with First Nations people to ensure First Nations voices, decision-making and leadership are embedded in the Strategy?

The best methodological approach includes yarning methods among a group of targeted First Nations stakeholders, in conjunction with performing in-person consultation sessions within the broader community. Expert advisory groups must include First Nations midwives, Elders, and knowledge holders, as well as academics and other experts in relevant fields. These groups must be included to provide ongoing advice and guidance to ensure that the Strategy remains responsive to First Nations perspectives and needs. As discussed in question 4, there are existing First Nations Maternity strategies underpinned by community co-design and control.

6. No response

7. What additional data and information is required to support targeted emissions reduction efforts within health and aged care?

Clinical waste management is not standardised or measured nationally and there are barriers to recycling accessibility and capability in local, regional, and state jurisdictions across Australia, worsening with remoteness of geographical location.

A national approach should be implemented as a published metric with targeted emission reductions.

The National Health Reform Agreement Review is an opportunity to include climate health targets in this space, to incentivise or require jurisdictions to target emissions reduction.

Midwives collect statistics through systems such as perinatal data to contribute to the collective understanding and improvement of health outcomes for women and babies in Australia as published in the annual AIHW Mother and Baby reports (2021). Adding to this equipment, consumables, and resource usage to inform data and projects may help to understand accountability towards reducing emissions.

A deeper dive into midwifery scope of practice and understanding trends around primary out of hospital and institutionalised care by midwives may contribute to a deeper understanding to inform emission reduction efforts in the profession. Individual health providers ability to measure their own waste impact and calculate emissions may lead to a stronger commitment to reduce carbon footprint and contributes

to both the individual and collective organisation level climate strategy adherence resulting in a more significant impact.

Mitigation

8. What do you think of these proposed focus areas for emissions reduction? Should anything else be included?

Consideration needs to be given to;

Human Resources – staff recruitment and retention, employee satisfaction and changing generational expectations must factor into future planning, efficiencies and carbon footprint cost to an organisation. Priority must be given by government to reduce the reliance and dependence on the locum workforce for obstetrics and midwifery as these increase environmental impact, cost and reduces continuity of care.

Asset Management should be considered from an environmental, recycling and cost perspective. Equipment exchange programs across Australia and internationally to low-income countries should be considered prior to destruction.

Leadership – strong midwifery leadership ensures best practice appropriate models of care are implemented, evaluated and sustained, including adherence to clinical governance and policy and procedure compliance (e.g., climate strategy). Leadership also ensures oversight with appropriate testing and admissions, reducing the likelihood of overservicing, over testing or unnecessary hospital admissions. Hospital in the home and virtual clinics, online antenatal education are further examples of efficiencies in the maternity sector.

Chemical use – cleaning and emergency response (e.g., use of fire extinguishers)

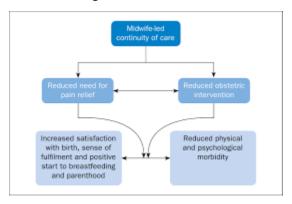
9. Which specific action areas should be considered relating to the built environment and facilities (including energy and water)?

New hospital builds must meet a minimum standard of planning, environmental and structural design, material, community growth, surge or multi-purpose ability with technology that allows for digitisation and efficiencies. Birthing suites and maternity services must have external access, where women and families can labour indoors and outdoors, connecting with country where possible. Maternity services that are stand alone, community based and external to hospital wards and theatres should be considered or additional to traditional maternity spaces. Birthing pools to cater for water birth and water immersion should be economical and part of a routine birth space. Renewable energy options and restricting single

use products without compromising infection control and patient safety should be prioritised. Hospital environments should also contribute to the overall mental health and wellbeing of both staff and consumers. Midwives and consumers of maternity care must be included in new design and re-design.

10. Which specific action areas should be considered relating to travel and transport, over and above any existing policies or initiatives in this area?

Implementing Continuity of Midwifery Care models such as Midwifery Group Practice and Birthing on Country models and accessing telehealth as an intervention to reduce poor outcomes for women and babies in rural and remote Australia supports climate action. There is an overall reduction in transport usage when a midwife works within the community. Continuity of Midwifery Care improves perinatal outcomes including a 24 % reduction of preterm birth and by 50% for First Nations babies and improved perinatal mental health (Sandall et al., 2016; Kildea et al., 2021 & Cummins et al., 2022). These models are therefore positively associated with a significant reduction in the use of neonatal retrieval services.



Continuity of Midwifery Care model is identified as the best practice model for improved choice and outcomes for women, babies and their families. This model of care has been shown to reduce need for pain relief, intervention rates and maternal and neonatal mortalities.

Increased interventions at birth such as medical induction and caesarean equals more emissions and single-use plastics waste. Maternity care intervention rates in the past decade have increased (AIHW). Predicting the ongoing increase to enable modelling with the aim of mitigating this is essential.

Consumers of maternity care need to be able to access sites close to public transport and not be restricted by parking and access barriers. Extremes in weather (heat, cold, rain, cyclones) need to be factored into consumer and staff access to facilities. Travel and transport (e.g., Patient travel schemes) for care outside of the local community are large contributors to increased cost, time delays, poorer clinical outcomes, aeromedical and road retrieval costs. Rural and remote areas should factor in return trip travel, car and

bus pooling/servicing, include car seats and wheelchair access, living away from home family accommodation outside of hotels for women relocating to access birthing services.

Retrieval services bordering state and territory geographical markers should consider a memorandum of understanding for accessing a closer tertiary hospital outside of local or state jurisdiction (e.g., Broome to Perth, Western Australia versus Broome to Darwin, Northern Territory).

11. Which specific action areas should be considered relating to supply chain, over and above any existing policies or initiatives in this area?

Local supply chain options should be prioritised over offshore options wherever possible.

12. Which specific action areas should be considered relating to medicines and gases, over and above any existing policies or initiatives in this area?

Nitrous oxide (N2O) is used by more than 50 percent of Australian women to relieve pain during labour, followed by epidurals and opioids according to the Australian institute of Health and Welfare (AIHW). The Australian and New Zealand College of Anaesthetists have recently advocated for a reduction in N2O in an attempt to improve environmental sustainability, however further research and alternative solutions such as nitrous oxide destruction systems should be considered so as to not unintentionally impact maternal and neonatal outcomes and to substitute a less invasive pain relief option with a more invasive one (UniSA). The review of Nitrous oxide use in maternity should be duly considered based on existing national and international recommendations in the context of the labour and birth / maternity care setting. Continuity of Midwifery Care has been shown to reduce the levels of pain relief women use including artificial oxytocin. Non-pharmacological pain relief methods should be promoted as a climate action.

Investing in the Endorsed Midwifery workforce will increase the number of midwives in Australia with a qualification of endorsement for scheduled medicines, meaning increased access by women across Australia to a skilled and trained health professional who can prescribe medication, pathology and diagnostics. This supports a depleted obstetric maternity workforce, and also increases access by women to abortion pill—as seen in the recent roll back or restrictions by the TGA for the prescribing and dispensing of MS-2Step. **Recommendation**—harmonisation of the Poison's Act nationally and expansion of the Pharmaceutical Benefits Scheme medication list for Midwives and an increase in the Medical Benefits Schedule item numbers for midwives.

13. Which specific action areas should be considered relating to waste, over and above any existing policies or initiatives in this area?

An evidence-based guide to procurement, recycling, infection control and waste reduction in maternity care is required. Clinical equipment and consumables for professional development and training should form part of the workplace reporting and clinician awareness on cost per item is necessary for an intentional commitment to reducing unnecessary waste. Regular auditing and accountability are required. Encouraging the use of digital prescribing systems to reduce paper waste.

14. Which specific action areas should be considered relating to prevention and optimising models of care, over and above any existing policies or initiatives in this area?

Midwives provide care from pre-pregnancy, antenatal, labour and birth and postnatal to the first 1000 days of life. Scope of practice extends to sexual and reproductive health and child, family and maternal health. Midwives are experts in the provision of primary maternity care and therefore provide a critical link to the establishment of a climate strategy that will impact across the lifespan.

Access to publicly funded homebirth across Australia. Queensland and Tasmania are the only two jurisdictions in Australia not providing women the choice of publicly funded homebirth. A study by Hu et al 2023 demonstrates significant cost savings to government if 5% of women accessing a birthing hospital in Queensland, had access to and birthed at home compared with standard hospital care.

ACM promotes breastfeeding as the gold standard for infant feeding and nutrition. This position is reflected in ACM facilitation of the <u>Baby Friendly Health Initiative (BFHI)</u> program nationally. The ACM position aligns with the WHO Code. The College does not advertise or endorse formula, bottles or teats. ACM recommends that the BFHI program be a jurisdictional requirement nationally to promote breastfeeding rates and thereby improve long-term health outcomes and reduce the excessive manufacturing and disposal of plastics required for artificial feeding.

15. What can be done to involve private providers within the health system in the Strategy's emissions reduction efforts?

Providing incentives for private practicing midwives to adopt sustainable midwifery practices can help encourage their involvement in the Strategy's climate emission reduction efforts. This should include funded rural and remote placements during student midwives' clinical placements and incentivising the midwifery workforce to work in continuity of care models.

Private practicing midwives should be included in the co-design process of the Strategy to ensure that their unique perspectives are considered. This could involve engaging with the Australian College of Midives and other networks to ensure that private practicing midwives are represented in the design and implementation of the Strategy.

Consumers can play a key role in promoting sustainable practices and advocating for climate action. ACM advise that consumers may not be aware of the impact that healthcare has on the environment and the importance of reducing emissions. Providing education and information on sustainable healthcare practices and the impact of climate change can help consumers understand the importance of emissions reduction and how they can contribute to the effort. Encouraging consumer advocacy through community engagement events, social media campaigns, and other outreach efforts can help raise awareness and promote action. Consumers can be involved in the implementation of sustainable practices in healthcare facilities by providing feedback via surveys and making suggestions for improvement. Engaging with consumer organisations through partnerships and outreach efforts can help raise awareness and promote action. Involving consumers within the health system in the Strategy's emissions reduction efforts will require education, advocacy, implementation of sustainable practices, incentives, and engagement with consumer organisations.

16. Where should the Strategy prioritise its emissions reduction efforts?

- a. How should the Strategy strike a balance between prioritising emissions reduction areas over which the health system has the most direct control and prioritising the areas where emissions are highest, even if it is harder to reduce emissions in these areas? No response
- b. Which of the six sources of emissions discussed above are the highest priorities for action? Action is required across all priority areas; however an impact assessment and environmental scan may provide tools for prioritising the six sources into priority areas and/or phasing.

17. What 'quick wins' in relation to emissions reduction should be prioritised for delivery in the twelve months following publication of the Strategy?

The prioritisation of a climate strategy is essential for all health practitioners. Immediate climate and sustainability action, education and awareness campaign are required so that visible impacts are felt at an

individual and local level and medium- and long-term commitments and goals are measurable, achievable, and realised.

ACM as a quick win, strongly advocates for the roll-out of continuity of midwifery models of care nationally, including the increased support and funding of the workforce, in both public and private midwifery settings, including endorsed midwifery, to sustain this in rural and remote areas of Australia. The birth rate in Australia is stable at just over 300 000 births/year. Continuity of care, and the utilisation of endorsed midwives to their full scope of practice is a significant and evidence based monetary saving that could be re-invested into climate response and sustainability.

Adaption

18. What health impacts, risks and vulnerabilities should be prioritised for adaptation action through the Strategy? What process or methodology should be adopted to prioritise impacts, risks and vulnerabilities for adaptation action?

The Sustainable Healthcare Module by the Australian Commission on Safety and Quality in Healthcare should form the basis of a further development of an education toolkit around climate risk recognition, mitigation, and adaptation.

Health leadership requires the implementation of climate strategy and process into management practices, culturally safe care, governance and safety and quality portfolios.

19. Should the Australian government develop a National Health Vulnerability and Adaption Assessment and National Health Adaption Plan?

As vulnerable populations are disproportionately affected by climate change, these assessments could better inform and strengthen access to quality healthcare, disaster response and infectious control measures are prioritised. However, many vulnerable populations would greatly benefit immediately if currently available heath practice models were implemented in rural and remote areas such Continuity of Midwifery Care and high-quality health care for all Aboriginal and Torres Strait Islander people. The time, effort and expense should be invested in already successful evidenced models of care.

20. Would there be value in the Australian government promoting a nationally consistent approach to vulnerability assessment and adaption planning for health systems specifically, for instance by issuing

guidance and associated implementation support tools for states, territories, and local health systems? If yes, what topics should be covered to promote a nationally consistent approach?

Yes – as discussed above

21. What immediate high-priority system adaptation actions are required in the next 12 – 24 months?

Workforce development, training and leadership and a climate risk assessment.

Health in All Policies

22. What are the key areas in which a Health in All Policies approach might assist in addressing the health and wellbeing impacts of climate change and reducing emissions?

Health research incorporating climate action messaging needs to be highlighted and distributed across sectors to improve the evidence base and inform future education.

23. What are the most effective ways to facilitate collaboration and partnerships between stakeholders to maximise the synergies between climate policy and public health policy? What are some successful examples of collaboration in this area?

ACM suggests drawing on the strengths of a collaborative network is the most effective way to advance climate and public health policy. This could involve developing a shared understanding of the importance of addressing climate change and its impact on maternal health, as well as identifying shared goals for emissions reduction and sustainable healthcare practices.

Engaging the health workforce in conversations about climate change is essential and an important step towards climate action. Successful examples of collaboration in this area include the Birthing on Country model of care in Australia, which involves collaboration between midwives, Indigenous communities, and health facilities to provide culturally safe and responsive maternity care in Indigenous communities.

Conclusion

As demonstrated, midwives must be acknowledged as a standalone profession to nursing with a unique and essential contribution toward climate action. Inclusion of midwives' voices in all future consultation where the health and safety of women and babies is discussed is essential. Thank you for this opportunity

to provide feedback on the Australian Government's National Health and Climate Strategy consultation paper.

Helen White. Make

Helen White Alison Weatherstone

Chief Executive Officer Chief Midwife

E: <u>Helen.white@midwives.org.au</u> W: <u>https://www.midwives.org.au</u>

References

AIHW (2021) Australia's mothers and babies. Retrieved from https://www.aihw.gov.au/reports/mothers-babies/contents/labour-and-birth/analgesia

AIHW (2021) https://www.aihw.gov.au/reports/mothers-babies/national-core-maternity-indicators-1/contents/labour-and-birth-indicators/caesarean-section

Australian Breast-Feeding Association (2023). 'Want to help the children? Help the parents': Challenges and solutions from the Babies and Young Children in the Black Summer (BiBS) Study. Retrieved from https://www.breastfeeding.asn.au/sites/default/files/2023-06/BiBS%20Study%20Report%20Final.pdf

Australian College of Midwives. National Midwifery Guidelines for Consultation and Referral. 4th Edition. Retrieved from https://www.midwives.org.au/common/Uploaded%20files/ ADMIN-ACM/National-Midwifery-Guidelines-for-Consultation-and-Referral-4th-Edition-(2021).pdf

Australian Living Evidence Consortium (2023). Living Evidence for Australian Pregnancy and Postnatal care (LEAPP) Guidelines. *Terms of Reference*. Retrieved from

 $\frac{\text{https://static1.squarespace.com/static/5c1aeebd9f87705cde7498f1/t/647eaf740849d34f3d834830/16860240535}{57/\text{LEAPP+Governance+Terms+Of+Reference V1.pdf}}$

Baby Friendly Health Initiative Australia (2023) Retrieved from https://bfhi.org.au/

Best Start to Life: A National Gathering Report (2022). Retrieved From https://www.beststarttolifeconference.com/ files/ugd/a9d136 a04918bdff704878982d8c5d1fcded05.pdf

Centre for Sustainable Health Care (2023) How Health professionals can use social media to spread environmental awareness. Retrieved from https://sustainablehealthcare.org.uk/blog/how-health-professionals-can-use-social-media-spread-environmental-

 $\underline{awareness\#:} \text{``:text} = As\%20 frontline\%20 workers\%20 observing\%20 these, harmful\%20 effects\%20 of\%20 climate\%20 change$

Cummins et al. (2023). Does midwifery continuity of care make a difference to women with perinatal mental health conditions, A Cohort study, from Australia. Retrieved from

https://www.sciencedirect.com/science/article/pii/S1871519222003055

 $\label{local-policy} DOH~(2019)~\underline{https://www.health.gov.au/sites/default/files/documents/2019/11/woman-centred-care-strategic-directions-for-australian-maternity-services.pdf$

Hu, Y., Allen, J., Ellwood, D., Slavin, V., Gamble, J., Toohill, J. & Callander, E. (2023). The financial impact of offering publicly funded homebirths: A population-based microsimulation in Queensland, Australia.

https://www.sciencedirect.com/science/article/pii/S1871519223002287?via%3Dihub

Kildea et al. (2021). Effect of a Birthing on Country service redesign on maternal and neonatal health outcomes for First Nations Australians: a prospective, non-randomised, interventional trial. Retrieved from

https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(21)00061-9/fulltext

Pharmaceutical Benefits Scheme retrieved 2023 https://www.pbs.gov.au/browse/doctorsbag

Queensland Government. (2019) Growing Deadly Families. *Aboriginal and Torres Strait Islander Maternity Services*Strategy 2019-2025. Retrieved from

https://www.health.qld.gov.au/__data/assets/pdf_file/0030/932880/Growing-Deadly-Families-Strategy.pdf Riley (2021). https://www.anzca.edu.au/getattachment/a48de2f6-9591-4334-a06f-67d978b302ff/Australasian-Anaesthesia-2021

Sandall J, Soltani H, Gates S, Shennan A, Devane D. (2016). Midwife-led continuity models versus other models of care for childbearing women. Cochrane Database of Systematic Reviews 2016, Issue 4. Art. No.: CD004667. DOI: 10.1002/14651858.CD004667.pub5. Accessed 21 March 2023.

UNFPA, WHO, ICM.(2021) The State of the World's Midwifery 2021. Retrieved from https://www.unfpa.org/publications/sowmy-2021

University of South Australia (2022) <a href="https://www.unisa.edu.au/media-centre/Releases/2022/pain-is-no-joke-in-labour-but-new-study-shows-withdrawing-laughing-gas-has-no-adverse-outcomes/#:~:text=According%20to%20a%20recent%20report,equivalent%20to%20driving%206%20kilometres