



Supporting Information

Supplementary material

This appendix was part of the submitted manuscript and has not been peer reviewed.
It is posted as supplied by the authors.

Appendix to: Tongs GM, Ludbrook I, Martin JH, et al. Climate and environmental crisis: effects on ear and hearing health in Australia and for Aboriginal and Torres Strait Islander peoples. *Med J Aust* 2025; doi: 10.5694/mja2.52689.

Consolidated criteria for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) statement¹

Governance	
1.	<i>Describe partnership agreements between the research institution and Indigenous-governing organization for the research, (e.g., Informal agreements through to MOU (Memorandum of Understanding) or MOA (Memorandum of Agreement)).</i> The University of Newcastle is committed to becoming the leading university for global Indigenous comparative studies, research, and educational approaches. The research environment aims to challenge Aboriginal and Torres Strait Islander stakeholders to innovate in culturally affirming, globally aware ways. Research activities are informed by the <i>Universities Australia Indigenous Strategy</i>, the <i>University of Newcastle Indigenous Higher Education Framework</i> and the University's <i>Reconciliation Action Plan</i>.
2.	<i>Describe accountability and review mechanisms within the partnership agreement that addresses harm minimization.</i> The collaborative nature of this research has allowed for the use of culturally safe languages and harm minimisation, including minimisation of deficit discourse and focus on a strengths-based approach to achieving health and wellness priorities.
3.	<i>Specify how the research partnership agreement includes protection of Indigenous intellectual property and knowledge arising from the research, including financial and intellectual benefits generated (e.g., development of traditional medicines for commercial purposes or supporting the Indigenous community to develop commercialization proposals generated from the research).</i> No financial benefits stand to be gained from this research. Intellectual benefits will be shared between the authors, including First and Last Authorship representative of Indigenous leadership. Indigenous representatives within the research project will be responsible for feeding back outcomes to the academic community following publication, in order to realise the potential for this project in multiple areas of surgery.
Prioritization	
4.	<i>Explain how the research aims emerged from priorities identified by either Indigenous stakeholders, governing bodies, funders, non-government organization(s), stakeholders, consumers, and empirical evidence</i> Adapt NSW, the Climate Council and the National Institutes of Health recognise Aboriginal and Torres Strait Islander populations are disproportionately affected by climate change. Recent published literature collates these findings to highlight climate change as a key issue facing Indigenous Australians (Standen JC, Spencer J, Lee GW, et al. Aboriginal Population and Climate Change in Australia: Implications for Health and Adaptation Planning. <i>Int J Environ Res Public Health</i>. 2022;19(12):7502). Hearing loss among Aboriginal and Torres Strait Islander populations, particularly as it relates to hearing loss in children, is recognised as a top policy priority in multiple Australian Government publications, including Closing the Gap reports. The prevalence of otitis media in Australia's Indigenous populations is widely acknowledged in the international literature as the highest in the world (Leach AJ, Morris PS, Coates HL, et al. Otitis media guidelines for Australian Aboriginal and Torres Strait Islander children: summary of recommendations. <i>Med J Aust</i>. 2021;214(5):228-233. doi:10.5694/mja2.50953).
Relationships (Indigenous stakeholders/participants and Research team)	
5.	<i>Specify measures that adhere and honour Indigenous ethical guidelines, processes, and approvals for all relevant Indigenous stakeholders, recognizing that multiple Indigenous partners may be involved, e.g., Indigenous ethics committee approval, regional/national ethics approval processes.</i>

	Due to this piece being a perspective paper based on current existing evidence and lived experience, no formal research ethics process was pursued.
6.	<i>Report how Indigenous stakeholders were involved in the research processes (i.e., research design, funding, implementation, analysis, dissemination/recruitment).</i> Dr Georgia Tongs (Wiradjuri) was involved in research analysis and manuscript writing. Prof Kelvin Kong (Worimi) was involved in project planning and manuscript editing.
7.	<i>Describe the expertise of the research team in Indigenous health and research.</i> Dr Georgia Tongs is a Wiradjuri woman and medical doctor who completed a Bachelor of Medical Science/Doctor of Medicine in 2023. Prof Kelvin Kong is a Worimi man and Otolaryngologist/Head and Neck Surgeon as well as Professor at the University of Newcastle, Macquarie University and University of New South Wales. He has published widely on otitis media with a focus on advocating for treatment for Aboriginal and Torres Strait Islander peoples with over 50 published works.
<i>Methodologies</i>	
8.	<i>Describe the methodological approach of the research including a rationale of methods used and implication for Indigenous stakeholders, e.g., privacy and confidentiality (individual and collective)</i> As a perspectives article, the methods used included review of current published literature, drawing upon lived experiences, and publicly available findings survey collected during the Otitis Media Australia (OMOZ) Conference 2024 (convened by Prof Kong). This survey was conducted anonymously with the individuals' identities blinded from the conference research team. The survey participants were attendees at the OMOZ Conference and they were invited, though not necessitated, to disclose Indigenous identity during the survey.
9.	<i>Describe how the research methodology incorporated consideration of the physical, social, economic and cultural environment of the participants and prospective participants. (e.g., impacts of colonization, racism, and social justice). As well as Indigenous worldviews.</i> Due to this piece being a perspective paper based on current existing evidence and lived experience, no interventional methodology was performed.
<i>Participation</i>	
10.	<i>Specify how individual and collective consent was sought to conduct future analysis on collected samples and data (e.g., additional secondary analyses; third-parties accessing samples (genetic, tissue, blood) for further analyses).</i> Due to this piece being a perspective paper based on current existing evidence and lived experience, no interventional methodology was performed.
11.	<i>Described how the resource demands (current and future) placed on Indigenous participants and communities involved in the research were identified and agreed upon including any resourcing for participation, knowledge, and expertise</i> A focus was put on using the research process to elevate Indigenous participation, knowledge, and expertise. One young Indigenous medical researcher has taken leadership of this project and translated it into an opportunity for greater research skills and academic networks.
12.	<i>Specify how biological tissue and other samples including data were stored, explaining the processes of removal from traditional lands, if done, and of disposal.</i> Due to this piece being a perspective paper based on current existing evidence and lived experience, no interventional methodology was performed.
<i>Capacity</i>	
13.	<i>Explain how the research supported the development and maintenance of Indigenous research capacity (e.g., specific funding of Indigenous researchers).</i>

	Leadership of this research by an early career Indigenous researcher aims to develop capacity for future research development.
14.	<i>Discuss how the research team undertook professional development opportunities to develop the capacity to partner with Indigenous stakeholders?</i> Engagement with the NSW Environmental Health Unit including other Indigenous academics was conducted early in the research process to inform scope and research goals.
<i>Analysis and interpretation</i>	
15.	<i>Specify how the research analysis and reporting supported critical inquiry and a strength-based approach that was inclusive of Indigenous values.</i> The collaborative nature of this research has allowed for the use of culturally safe languages and harm minimisation, including engagement with and exploration of Indigenous perspectives of sustainability and wellness.
<i>Dissemination</i>	
16.	<i>Describe the dissemination of the research findings to relevant Indigenous governing bodies and peoples.</i> Participants at the OMOZ Conference 2024 will be made aware of research publication at a general level to allow engagement opportunities. It is the goal of the project authors that the manuscript will encourage further contributions from medical researchers in adjacent fields also seeking solutions to healthcare provision to this priority population amid the climate crisis.
17.	<i>Discuss the process for knowledge translation and implementation to support Indigenous advancement (e.g., research capacity, policy, investment).</i> Leadership of this research by an early career Indigenous researcher and collaboration with a senior Indigenous researcher aims to develop capacity for future academic research and networking.

Reference

1. Huria T, Palmer SC, Pitama S, et al. Consolidated criteria for strengthening reporting of health research involving indigenous peoples: the CONSIDER statement. *BMC Med Res Methodol* 2019; 19: 173.