The 1999 National Environmental Health Strategy and Closing the Gap: lessons learnt, and hope for the future

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In 1999, the National Environmental Health Strategy (NEHS) was published by enHealth. It was intended as a starting point for ensuring all Australians live in safe and healthy environments going into the 21st century.[1] The National Environmental Health Strategy lists five key indicators of poor environmental health in Indigenous communities, including respiratory conditions, urinary calculi in Indigenous children, intestinal worms, trachoma and infectious diarrhoeas. The strategy also states that the costs associated with failing to prevent disease through environmental health solutions generally result in a great cost later in life. These costs are not only financial but also cultural. Despite many successes throughout the twenty years since publication, many areas of the section 'Environmental Health Justice for Indigenous Australians' have not yet been addressed.

Closing the gap

Following the Apology to Australia's Indigenous peoples in 2008, the Council of Australian Governments agreed to six targets for closing the gap between Aboriginal and Torres Strait Islander Peoples and non-Indigenous people. Health-related targets included to close the gap in life expectancy within a generation (by 2030) and to halve mortality rates for Aboriginal and Torres Strait Islander children under five within a decade (by 2018).[2] The 2020 Closing the Gap report aligned with the expiry of four of the objectives including: to halve the gap in child mortality rates; to halve the gap for Indigenous children in reading, writing, and numeracy; to close the gap between Indigenous and non-Indigenous school attendance; and to halve the gap in employment outcomes between Indigenous and non-Indigenous Australians.[3] None of these objectives have been met.[3] This has spurred the agreement to be re-evaluated, with 16 new targets being introduced from 2020. These targets were designed in consultation with Aboriginal and Torres Strait Islander groups and aim to allow Aboriginal and Torres Strait Islander people the chance to determine, drive and own their desired outcomes, alongside government.[4]

Failure to close the gap is interconnected with the failure to address the National Environmental Health Strategy (NEHS)

In the twenty years since publication of the NEHS, many areas of the 'Environmental Health Justice for Indigenous Australians' section have not been adequately addressed. There have been numerous iterations since the 1999 NEHS report, with the most recent report still highlighting the ongoing importance of providing equitable access to healthy environments for Aboriginal and Torres Strait Islander communities.[5] However, this report does not highlight the indicators of poor environmental health, and the lack of progress outlined here highlights a lack of response to the 1999 report. The failure to address these issues is inherently linked to the failure of the Closing the Gap Strategy to achieve health targets. Revisiting the 1999 NEHS in 2020 and addressing successes and shortfalls will be vital to the success of the new Closing the Gap framework.

NEHS progress

Overcrowding and health hardware

The root cause of the indicators of poor environmental health is lack of access to water for sanitation and hygiene hardware (WASH) and overcrowding. Goal Six of the Sustainable Development Goals (SDGs) calls for the availability and sustainable management of water and sanitation for all.[6] The Aboriginal and Torres Strait Islander Health Performance Framework report (HPF) found that 60% of Aboriginal and Torres Strait Islander households that are in very remote locations did not have adequate sewerage systems, whereas only 3.5% of non-Indigenous people living in the same areas did not have adequate sewerage systems.[7] Access to WASH for Aboriginal and Torres Strait Islander people living in remote locations decreased from 2002 to 2015. In 2015, there were more houses without working facilities to support healthy living practices, such as showers, compared with over a decade earlier[7] (Figure 1), indicating that Australia is moving away from achieving SDG 6.

Overcrowding has long been associated with poor health outcomes.[8,9] In the 2014–2015 period, 41.4% of Aboriginal and Torres Strait Islander people living within remote or very remote locations were living in overcrowded dwellings, whereas only 1.9% of non-Indigenous people in the same areas were living in overcrowded dwellings.[7] The creation of the new Closing The Gap Agreement provides a great mechanism for governments and communities to improve housing standards and to establish a formal policy to ensure shared decision-making.[10] Furthermore, there is a widespread assumption within Australia that Aboriginal and Torres Strait Islander people in remote areas deliberately destroy their homes, which continues to persist despite being proven on multiple occasions to be false.[11] Shifting such beliefs as a society, together with focusing on the lack of housing and poor WASH hardware, will pay dividends in improving health.

Status of respiratory disease

Aboriginal and Torres Strait Islander people experience higher mortality and morbidity from respiratory diseases such as asthma, chronic obstructive pulmonary disease, pneumonia and invasive pneumococcal disease than non-Indigenous people.[7] This overrepresentation has been linked to overcrowding in communities.[12] The NEHS also identified respiratory disease as a key indicator of poor environmental health.[1]

Infectious respiratory diseases are associated with low socioeconomic status, crowding and poor long-term health outcomes.[13] Respiratory conditions within Aboriginal and Torres Strait Islander people living remotely remain high. The HPF 2017 found that the prevalence of self-reported respiratory conditions was lower in Aboriginal and Torres Strait Islander people living remotely than non-Indigenous people living remotely. However, Aboriginal and Torres Strait Islander people within remote and very remote communities are much more likely to be hospitalised for respiratory conditions than non-Indigenous people living remotely, indicating it is an ongoing issue.[7]

Status of diarrhoeal diseases

The NEHS lists infectious diarrhoeal diseases as pervasive within Aboriginal and Torres Strait Islander communities, particularly among the young and elderly. Aboriginal and Torres Strait Islander children within the Top End of Australia still have higher rates of hospitalisation due to diarrhoeal disease than non-Indigenous children. This is attributed to infectious diarrhoeas such as cryptosporidium, giardiasis, salmonellosis and shigellosis.[14,15] Increasing WASH measures within communities has been shown to reduce instances of faecal-oral diarrhoeal diseases in children by 32–36%.[16] Aboriginal and Torres Strait Islander homes without access to these facilities are increasing and it should be an immediate priority to improve access, particularly for children, as infectious gastrointestinal diseases can have long-term impacts on development[17] (Figure 1).

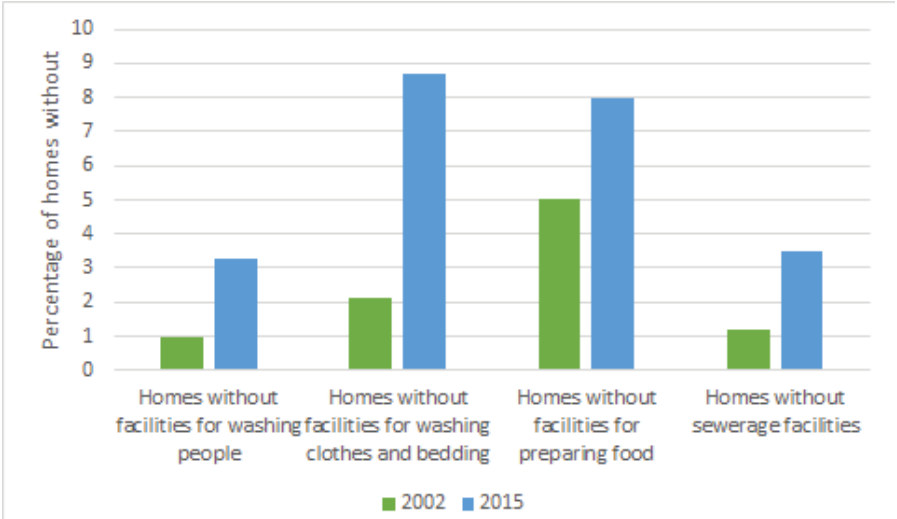
Status of urinary calculi

Urinary calculi occurs when a mass forms within the kidneys or urinary tract.[18] Within Aboriginal and Torres Strait Islander children, there is an increased risk of kidney stones from a very early age.[19] In children, this results in a failure to thrive and abdominal pain.[20] This increased risk is likely associated with dehydration, as well as lack of access to WASH facilities. This results in renal scarring, which increases the risk of chronic kidney disease in future life.[21] True prevalence rates of urinary calculi within Aboriginal and Torres Strait Islander children are unclear; however, the literature shows ongoing high levels within communities, as well as other renal conditions.[22] The increased risk of developing chronic kidney disease after experiencing renal scarring from urinary calculi from preventable causes indicates the importance of ensuring accessible WASH facilities within communities.

Status of intestinal parasites

The prevalence of intestinal parasites has been increasingly linked to low socioeconomic status.[23] Recent Aboriginal and Torres Strait Islander community testing has shown the prevalence of *Strongyloides stercoralis,* a preventable infective intestinal worm, is as high as 60% in some communities.[24] Many intestinal parasites can live outside a human host, making environmental control and WASH access important in working towards the elimination of these species. There is currently a lack of research into and monitoring of the prevalence of intestinal worm infections, due largely to the difficulty in access to reliable and accurate testing as well as funding. Community programs working towards elimination should be developed in collaboration with Aboriginal and Torres Strait Islander health workers, Aboriginal Community Controlled Health Organisations and local councils, and should then be led by the community to improve access to health hardware and clinical support.

Figure 1: Aboriginal and Torres Strait Islander homes without working facilities to support healthy living practices [data sourced from reference 6].



Status of trachoma

Trachoma is an eye disease that in Australia almost exclusively affects Aboriginal and Torres Strait Islander people. Caused by the bacteria *Chlamydia trachomatis*, trachoma can cause irreversible blindness. The Trachoma Surveillance and Reporting Unit established in 2006 has allowed for sustained and ongoing insights into the effectiveness of interventions. In 2018, the prevalence of active trachoma in children aged 5–9 had reduced to 3.9% Australia wide from 18% in 2006.[25,26] This reduction means that while Australia is one of the only high-income countries to have people experiencing trachoma, the disease is no longer endemic. This reduction has been attributed to improving sanitation infrastructure.[27] The success of trachoma reduction through monitoring prevalence, improving education, and improving access to WASH hardware and equipment such as soaps demonstrates the ability of our public health system in Australia to respond to the other public health issues raised here.

Community-led initiatives

Community-led initiatives and a decreasing reliance on external services empower communities and lead to improved health outcomes. Within communities, a lack of control leads to Aboriginal and Torres Strait Islander powerlessness. Allowing people the control and responsibility to help their own health fundamentally improves trust.[28] Aboriginal Community Controlled Health Organisations shift power back to the community and allow them to design tailored responses to health issues facing their communities. Financial and infrastructural support is needed to develop programs and to support organisations; however, the long-term financial benefit from a decreased burden of disease is a clear benefit. Additionally, the efforts of existing government programs that claim to be providing a service to remote communities

but are occupying the space that Aboriginal Community Controlled Health Organisations are suited to delivering should be reviewed. This would allow a better understanding of which programs could be moved to Community Controlled programs. Funding, in many instances, will only be granted 'where an existing service is not already provided', leaving public health programs underfunded and unable to find consistency and sustainability in funding community-controlled preventative health approaches. These preventative approaches reduce the burden on the primary health care system by preventing illness, a figure not commonly considered. Even though there is a clear economic benefit, the driving factor should be that it is the morally right thing to do. Factors identified for success in community-led First Nations programs include strong community-based leadership, community member engagement, sustainable funding and the implementation of infrastructure for long-term program sustainability.[29] Beyond the improvement of environmental health, Aboriginal and Torres Strait Islander initiated caring for country projects have co-benefits for health and wellbeing.[30] The clearest lesson learnt is that implementing these factors in community-based programs is needed to address this aspect of the public health crises that Aboriginal and Torres Strait Islander people are facing.

Conclusion

Public health professionals are uniquely positioned to address environmental health failures in Australia to improve health inequities. The NEHS raised key indicators of poor environmental health in communities that today persist and are contributing to the failure of the close the gap scheme. The 2020 national agreement on closing the gap, which consulted directly with Aboriginal and Torres Strait Islander groups for the first time, gives hope to the future of health. Further consideration should also be given to the importance of working towards the UN's sustainable development goals, particularly SDG Goal 6: clean water and sanitation. Aboriginal and Torres Strait Islander people's voices should be amplified and their right to health advocated for, and Australia must implement change as well as be accountable for promises made in working towards closing the gap.

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