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# Deadly news: the downward trend continues in Aboriginal and Torres Strait Islander smoking 2004–2019

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moking is the leading contributor to the burden of disease among Aboriginal and Torres Strait Islander Australians, 1 and one of the largest causes of preventable morbidity and mortality.<sup>2-5</sup> Reducing exposure to tobacco provides substantial opportunity for improving the health outcomes of Aboriginal and Torres Strait Islander peoples and is reflected in the Framework Convention on Tobacco Control (FCTC). The FCTC acknowledges concern "about the high levels of smoking and other forms of tobacco consumption by indigenous peoples" (FCTC, Preamble).3,6(p2) It is important to continue the focus on reducing tobacco use and promoting smoke-free environments, consequently improving Aboriginal and Torres Strait Islander health outcomes.4

### **Aims**

Using nationally representative smoking prevalence estimates reported by the Australian Bureau of Statistics (ABS), we aimed to quantify changes in Aboriginal and Torres Strait Islander adult (≥18 years) daily smoking prevalence from 2004/05–2018/19 overall and in relation to demographic factors.

# Methods

This paper draws on nationally representative prevalence estimates reported by the ABS from the 2004/05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS),<sup>7</sup> 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS),<sup>8</sup> 2012/13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS),<sup>7</sup> 2014/15 NATSISS<sup>9</sup> and 2018/19 NATSIHS.<sup>10</sup> These surveys provide population-representative data about Aboriginal and Torres Strait Islander peoples nationally, noting some

limitations to the scope of surveys, as detailed elsewhere.<sup>11</sup> Using a strength-based approach,<sup>12</sup> we quantified the change in daily current smoking prevalence overall and by demographic factors, estimating corresponding 95% confidence intervals (CIs) using the formula SE(x-y)=[SE(x)2+SE(y)2].<sup>12</sup>

# Results

Adult current daily smoking prevalence in 2018/19 was 40.2% (95%CI:37.9,42.4), down from 50.0% (95%CI:47.9,52.2) in 2004/05. This represents a 9.8% (95%CI:6.7,11.5) absolute decrease in prevalence over the past 15 years and represents a continued trend in declining current daily tobacco use over the period. This amounts to almost 50,000 fewer Aboriginal and Torres Strait Islander adult daily smokers than there would have been if smoking prevalence had remained at 2004/05 levels.

Significant reductions in current daily smoking from 2004/05 to 2018/19 were observed among those aged 18-24 years (14.7% decrease, CI:7.6.18.3, from 50.5% to 35.8%), 25-34 years (10.6% decrease, CI:3.8,14.1, from 54.6% to 44.0%), 35-44 years (8.5% decrease, Cl:1.8,12.0, from 55.1% to 46.6%), and 45-54 years (8.7% decrease, CI:1.2,12.5, from 50.5% to 41.8%).<sup>2,3</sup> No significant changes were identified among daily smokers aged ≥55 years. Adult daily smoking prevalence decreased by 12.0% (CI:8.0,14.0) among those living in urban/ regional areas (from 49.3% to 37.3%), while no significant change was observed among those living in remote areas (-0.1% decrease, CI:-5.2,2.5, from 51.9% to 52.0%).3,5

# Discussion

The majority of Aboriginal and Torres Strait Islander peoples do not smoke and prevalence continues to decline.<sup>3,5</sup> Declines in current daily smoking within younger age groups and in urban/regional settings are particularly encouraging given the young population profile (median age 23 years) and that the majority of Aboriginal and Torres Strait Islander current daily smokers live in urban/regional settings (146,300 compared to 49,000 living in remote areas).<sup>13</sup>

The lack of change in remote areas is concerning and is likely to reflect the higher baseline prevalence in remote areas, as declines in tobacco use are harder to achieve when population prevalence is high.<sup>13,14</sup> Declines are also harder to achieve where systemic and structural barriers to being smoke-free remain stubbornly persistent or are left unaddressed.<sup>13</sup> Evidence highlights the need to address barriers to education, the labour force, and access to services and supports. 13,14 This highlights substantial opportunities to improve access and engagement in the education system and the labour force, 15,16 with potential impacts to Aboriginal and Torres Strait Islander health and wellbeing. While the continuing decline in Aboriginal and Torres Strait Islander smoking prevalence is Deadly ('Deadly' to mean 'good'), there are ongoing opportunities to build on these successful declines, including Aboriginal and Torres Strait Islander specific approaches to promote smoke-free behaviours.

### Strengths and limitations

Strengths of this research include input and participation by Aboriginal and Torres Strait Islander people in the analysis and interpretation of data from large national samples of Aboriginal and Torres Strait Islander peoples. However, the relatively small sample sizes, especially in remote areas, should be addressed as these limit the ability to detect important changes over time, including by age and sex; larger samples, targeted to evidence needs, would be beneficial. Adequate samples, longitudinal data and more detailed analyses are required to better understand, monitor and support smoking cessation and smokefree behaviours (such as Talking About the Smokes<sup>17</sup> and the Mayi Kuwayu Study<sup>18</sup>); exploring prevalence by urban, regional and remote areas would be informative.

# Conclusion

There are almost 50,000 fewer Aboriginal and Torres Strait Islander adult daily smokers

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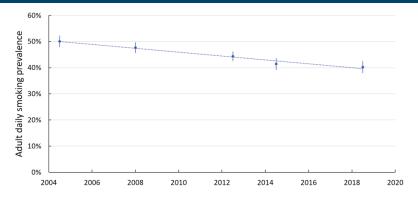
today than there would be if smoking prevalence had remained at 2004/05 levels. This is Deadly news. Consistent with the FCTC, further opportunities for building on this positive trend exist and accelerating declines in tobacco use will require continued resourcing and sustained policies, programs and action across Aboriginal and Torres Strait Islander specific and general tobacco control initiatives. Accelerating progress in urban/ regional areas, as well as reducing smoking in remote settings and among ≥55-yearolds with tailored programs will lead to major health improvements. This important tobacco reduction work is required alongside reducing historical and contemporary

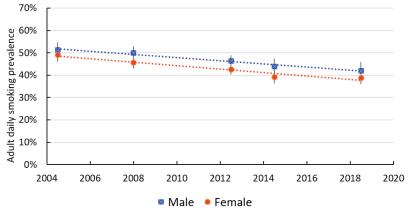
colonial factors that produce inequities. As outlined by the FCTC, tobacco control lessons and trends in prevalence should be shared internationally to better address globalisation of the tobacco epidemic, including among Indigenous peoples.

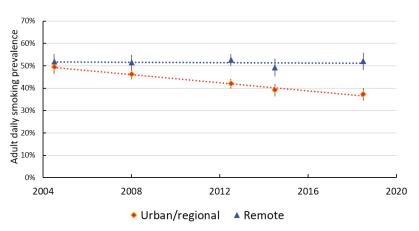
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Figure 1: Estimated daily smoking prevalence among Aboriginal and Torres Strait Islander adults (≥18 years) by sex, age, and remoteness 2004/05-2018/19].







### References

- Al-Yaman F. The Australian Burden of Disease Study: Impact and causes of illness and death in Aboriginal and Torres Strait Islander people, 2011. Public Health Res Pract. 2017;27(4):e2741732.
- VosT, Barker B, Stanley L, Lopez A. The Burden of Disease and Injury in Aboriginal and Torres Strait Islander Peoples 2003. Brisbane (AUST): The University of Queensland School of Population Health; 2007.
- 3. Australian Institute of Health and Welfare. *Australia's Health 2010*. Canberra (AUST): AIHW; 2010.
- Colonna E, Maddox R, Cohen R, Marmor A, Doery K, Thurber K, et al. Review of Tobacco Use Among Aboriginal and Torres Strait Islander Peoples. Perth (AUST): Australian Indigenous HealthInfoNet; 2020.
- US Office of the Surgeon General; US Office on Smoking and Health. The Health Consequences of Smoking: A Report of the Surgeon General. Atlanta (GA): United States Centers for Disease Control and Prevention; 2004. p. 62.
- World Health Organization. WHO Framework Convention on Tobacco Control. Geneva (CHE): WHO Document Production Services; 2003. p. 44.
- Australian Bureau of Statistics. 4727.0.55.001 Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012-13. Table 10, Smoker Status by Age, Indigenous Status and Sex, 2012–13 - Australia, Data Cube: Excel Spreadsheet. Canberra (AUST): ABS; 2013.
- Australian Bureau of Statistics. 4714.0 National Aboriginal and Torres Strait Islander Social Survey, 2009. Table 01, Indigenous Persons Aged 15 Years and Over, by Aboriginal or Torres Strait Islander Origin, Data Cube: Excel Spreadsheet. Canberra (AUST): ABS; 2009.
- Australian Bureau of Statistics. 4714.0 National Aboriginal and Torres Strait Islander Social Survey. Table 23, Health Risk Factor Indicators, by State, Remoteness Area and Indigenous Status - 2014–15, Data Cube: Excel Spreadsheet. Canberra (AUST): ABS; 2016.
- Australian Bureau of Statistics. 4715.0 National Aboriginal and Torres Strait Islander Social Survey, Australia, 2014–15. Health Risk Factors — Waist Circumference, Smoking, Alcohol Consumption, Substance Use. Tables 11 and 12: Smoking Status: Data Cube: Excel Spreadsheet. Canberra (AUST): ABS; 2016.
- Australian Bureau of Statistics. Australian Bureau of Statistics. Canberra (AUST): Government of Australia; 2020.
- Thurber KA, Thandrayen J, Banks E, Doery K, Sedgwick M, Lovett R. Strengths-based approaches for quantitative data analysis: A case study using the Australian Longitudinal Study of Indigenous Children. SSM Popul Health. 2020;12:e100637.
- McLaren L, McIntyre L, Kirkpatrick S. Rose's population strategy of prevention need not increase social inequalities in health. Int J Epidemiol. 2009;39(2):372-7.
- 14. Rose G. Sick individuals and sick populations. *Int J Epidemiol*. 2001;30(3):427-32.
- Nicholson AK, Borland R, Davey ME, Stevens M, Thomas DP. Past quit attempts in a national sample of Aboriginal and Torres Strait Islander smokers. Med JAust. 2015;202(S10):20-5.
- 16. Guenther J, McRae-Williams E, editors. Does education and training for remote Aboriginal and Torres Strait Islander lead to 'real'jobs? Evidence from the 2011 Census. Proceedings of the 17th AVETRA International Conference: Informing Changes in VET Policy and Practice: The Central Role of Research; 2014 Apr 22-23; Surfers Paradise, QLD.
- Couzos S, Nicholson AK, Hunt JM, Davey ME, May JK, Bennet PT, et al. Talking about the smokes: A large-scale, community-based participatory research project. *Med J Aust*. 2015;202(S10):13-19.
- Jones R, Thurber KA, Chapman J, D'Este C, Dunbar T, Wenitong M, et al. Study protocol: Our cultures count, the Mayi Kuwayu Study, a national longitudinal study of Aboriginal and Torres Strait Islander wellbeing. BMJ Open. 2018;8(6):e023861.

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