

Original Research

Tobacco retailer density in the Northern Territory, Australia

AUTHORS



Ruth Canty^{1,2,3} MPH, PhD Candidate  [<https://orcid.org/0009-0002-4939-0030>]



Janet Hoek^{4,3} PhD, Professor  [<https://orcid.org/0000-0003-4362-1539>]



Coral Gartner^{3,5} PhD, Professor  [<https://orcid.org/0000-0002-6651-8035>]



Adam Bourke⁶ BSc(Hons)



Benedikt Ley⁷ PhD, Associate Professor  [<https://orcid.org/0000-0002-5734-0845>]



David Thomas¹ PhD, Professor  [<https://orcid.org/0000-0002-8653-0621>]



Marita Hefler^{8,3} PhD, Professor *  [<https://orcid.org/0000-0002-1709-1098>]

CORRESPONDENCE

*Prof Marita Hefler marita.hefler@flinders.edu.au

AFFILIATIONS

¹ Menzies School of Health Research, Charles Darwin University, Royal Darwin Hospital Campus, Casuarina, NT 0810, Australia

² Present address: College of Medicine and Public Health, Flinders Health and Medical Research Institute, Flinders University, Darwin, NT, Australia

³ Centre for Research Excellence in Achieving the Tobacco Endgame, University of Queensland, Brisbane, Qld, Australia

⁴ Department of Public Health, University of Otago, Dunedin, New Zealand

⁵ School of Public Health, University of Queensland, University of Queensland, Qld, Australia

⁶ Charles Darwin University, Darwin, NT, Australia

⁷ Menzies School of Health Research, Charles Darwin University, Darwin, NT, Australia

⁸ College of Medicine and Public Health, Flinders Health and Medical Research Institute, Flinders University, Darwin, NT, Australia

PUBLISHED

25 June 2026 Volume 26 Issue 2

HISTORY

RECEIVED: 3 June 2025

REVISED: 26 March 2026

ACCEPTED: 7 April 2026

CITATION

Canty R, Hoek J, Gartner C, Bourke A, Ley B, Thomas D, Hefler M. Tobacco retailer density in the Northern Territory, Australia. *Rural and Remote Health* 2026; 26: 10095. <https://doi.org/10.22605/RRH10095>

This work is licensed under a [Creative Commons Attribution 4.0 International Licence](https://creativecommons.org/licenses/by/4.0/)

Abstract

Introduction: The Northern Territory (NT) is a geographically large, sparsely populated territory in Australia. It has the highest smoking prevalence in Australia (13.3% compared to 8.3% nationwide). Although international and national studies report associations between tobacco retailer density and higher smoking prevalence, no Australian state or territory currently regulates the location or density of tobacco outlets.

Methods: In this article, we map the locations of retailers licensed to sell tobacco in the NT, analyse tobacco retailer density, and explore associations between tobacco retailer density, population density, percentage of First Nations residents, geographic remoteness and area socioeconomic status. We obtained licensing data in November 2023 from Licensing NT and, using Australian Bureau of Statistics Statistical Area 2 as our unit of analysis, we geolocated retailers and used multiple regression to analyse associations between tobacco retailer density and explanatory variables, including socioeconomic status, population density, percentage of First Nations residents and remoteness.

Results: The mean tobacco retailer density in the NT was 1.81 per

1000 residents (95% confidence interval 1.38–2.23 per thousand) and tobacco retailer density increased with remoteness ($p=0.02$), although this relationship did not follow a strict gradient because remote areas did not show a significant increase relative to outer regional areas. In bivariate analyses, population density and percentage of First Nations residents, and remoteness were significantly associated with tobacco retailer density. In the multivariate analysis, only remoteness remained statistically significant.

Conclusion: In the NT, tobacco retailer density increased with geographic remoteness, consistent with findings elsewhere in Australia. This finding is probably influenced by small population denominations. Compliance and enforcement are more difficult in small and geographically isolated communities, making it crucial that strategies to address tobacco supply are generated with community support. Policies should also ensure equitable access to smoking cessation support for people who are already addicted to nicotine.

Keywords

retailer density, remoteness, tobacco, tobacco retail availability, tobacco retail licensing.

Introduction

Nearly 21,000 deaths and 7.6% of the Australian disease and injury burden are attributable to tobacco use each year, with harms disproportionately impacting groups experiencing disadvantage and marginalisation¹. For example, smoking prevalence among First Nations Peoples remains high relative to other populations (estimated at 29% in 2022–23) and varies considerably between urban areas and regional and remote areas^{2,3}. Many factors account for these inequities in smoking prevalence. These include the direct impacts of colonisation (eg tobacco supplied in lieu of wages and the commercial promotion and normalisation of tobacco use), trauma caused by the forced removal of family members, eviction from traditional lands, disruption of social and economic systems and destruction of sacred sites. Racism and unequal exposure to tobacco control activities and policies further compound these harms. Individually and collectively, these factors contribute to smoking prevalence among First Nations Peoples^{4–6}. First Nations Peoples make up 26% of the population of the Northern Territory (NT) where this study is set, the largest proportion in Australia⁷. The NT also has the highest smoking prevalence in the country. The National Drug Strategy Household Survey 2022–2023 (NDSHS) estimated overall daily smoking prevalence among people aged 14 and over in Australia at 8.3%, but 13.3% in the NT⁸.

Setting

The NT is a large but sparsely populated area in Northern and Central Australia. The population (estimated at 253,600 people in December 2023) is spread across a vast geographic area of more than 1.4 million square kilometres (population density about 5.31 inhabitants per square kilometre)⁷. Most of the NT is classified as remote or very remote (remoteness classifications are described

further below). The Australian Bureau of Statistics (ABS) uses five categories of remoteness, characterised by relative geographic access to services. Population is used as a proxy for service availability, which explains why Darwin is classed as outer regional while the capitals of other Australian states and territories are classified as major cities⁹. Approximately half of the population lives in the capital (Darwin) and the surrounding areas, and in larger towns such as Alice Springs, Katherine and Nhulunbuy. There are also 72 remote communities and about 600 smaller homelands with predominantly First Nations residents, with populations ranging from a few families to a few thousand people¹⁰.

Recent attention has turned to the impact of tobacco availability on smoking prevalence¹¹. Tobacco retailers are disproportionately concentrated in areas with greater disadvantage, globally and in Australia^{12–20}. High tobacco retailer density increases exposure to social and environmental cues to purchase tobacco, and is associated with higher smoking prevalence and lower smoking cessation success^{16,21–23}. Although the Australian National Tobacco Strategy 2023–2030 identified restricting the availability of tobacco as a priority, no state or territory currently regulates tobacco retailer location or density^{24,25}. Tobacco retailers in the NT must hold a tobacco retail licence, although anyone may apply for a licence by submitting a completed form, undergoing a police history check, and paying an annual fee of \$282²⁶. The NT has only one dedicated enforcement officer for tobacco licences, making monitoring compliance and enforcement challenging. This study extends existing work analysing retailer density in New South Wales^{16,27}, Tasmania¹⁷, Western Australia¹⁴ and South Australia¹⁹. Our objectives were to map the locations of tobacco retail licences in the NT and investigate associations between tobacco retailers, area remoteness and area-level socioeconomic status.

Methods

Study design

We used a cross-sectional study design and linear regression analysis to examine associations between tobacco retail availability and area-level socioeconomic status and remoteness. We selected tobacco retailer density as our measure of tobacco retail availability in line with other work, both in Australia and internationally, as outlined above. This was calculated as the number of tobacco licences in an area per 1000 residents.

Data sources

We obtained the location of the 461 issued active tobacco retail licences from Licensing NT at the Department of Industry, Tourism and Trade (12 November 2023)²⁸. We obtained population data from the ABS 2021 census and other ABS data as specified below²⁹. In the NT, 91.3% of households completed the 2021 census either online or in paper form, compared to 96% nationally³⁰. People living in remote areas had extra time and support to complete the census as per the ABS Remote Areas strategy, whereby field staff undertook specialist collection tasks such as conducting house visits and interviewing respondents. Data on participation rates in remote area were not available.

Geographic unit studied

We selected ABS Statistical Area Level 2 (SA2) as the geographic unit most suitable for our purposes. These are medium-sized general-purpose areas and represent a community that interacts socially and economically³¹. The populations of SA2s in the NT ranges from about 1300 to 10,000 people. SA2s represent large geographic areas in the NT; however, in these remote and very remote areas, typically retailers are located either along a highway, accessed by travellers and the local population, or in towns and communities where populations and other services are clustered. SA2 was also the unit of measurement used in similar work undertaken in South Australia and Tasmania^{17,19}.

Other geographic units were also considered (eg SA1, SA3 and Indigenous Regions) but represented populations and geographic areas that were too large or too small to calculate meaningful retailer densities.

Outcome variable

Our outcome variable was retailer density, which was calculated as outlined above.

Explanatory variables

We assigned socio-economic status using 2021 Socio-Economic Indexes for Areas (SEIFA) Index for Relative Socio-economic Disadvantage (IRSD) within Australia with lower scores representing greater relative disadvantage³². We chose IRSD over IRSAD (Index for Relative Socio-economic Advantage and Disadvantage) to focus on disadvantage-related effects, and IRSD deciles over quartiles to capture any nuanced socioeconomic differences. We allocated remoteness areas to each SA2 using Australian Statistical Geography Standard Remoteness Structure (2021)³³. All SA2 areas in the NT are either outer regional, remote or very remote, as there are no major urban or inner regional areas. We used population estimates and population density from the 2021 ABS census data. The percentage of First Nations residents in SA2s was not available in the dataset and was calculated using the population estimates from the 2021 ABS census data for First Nations residents and the total population.

Data cleaning procedure

We used Google Maps Geocoding API web service to convert street addresses for each tobacco retail licence to latitude and longitude coordinates. We removed duplicate ($n=20$) and mobile licence data ($n=10$) and updated all incomplete addresses ($n=4$) using Google Maps. One listed licence did not have an NT address and could not be linked to an NT business; thus, it was excluded from the dataset.

We used geographic information software QGIS v3.32.3 (Open-Source Geospatial Foundation; <https://qgis.org/download>) to geolocate tobacco retailers by SA2 using Australian Bureau of Statistics (ABS) digital boundary GeoPackage data (2021). We also obtained the total area (km^2) for each NT SA2 polygon from ABS GeoPackage data³⁴.

There are 68 SA2s in the NT. We removed SA2s without a corresponding IRSD from the dataset ($n=6$). These areas were identified as Darwin airport ($n=3$ tobacco licences), one industrial area ($n=2$ tobacco licences) and four other areas with small or no residential populations or non-response in the 2021 Census (zero tobacco licences), resulting in exclusion of five licences. Two areas had zero tobacco licences; those areas were retained and an offset included to enable transformation. The final dataset contained 62 unique SA2s and 425 tobacco licences. More than one digital remoteness area boundary was present in four SA2s, and so the remoteness structure covering the largest proportional area was allocated. This process resulted in all four of these SA2s being classified as very remote.

Data analysis

We analysed data using Stata v18.0 (StataCorp; <https://www.stata.com/stata18/>). Tobacco retailer density (retailers per 1000 population) was modelled as a continuous outcome to reflect population-standardised availability, consistent with previous Australian studies of tobacco retail environments^{17,19}. While count-based models with a population offset represent an alternative analytical approach, modelling density allows for direct interpretation of exposure at the community level. As retailer density was right-skewed, a natural log transformation was applied, and linear regression models were used to estimate associations on the log scale. To accommodate zero values in retailer density, a small constant was added to the outcome before natural log transformation (ie $\ln(\text{density} + 0.1)$), consistent with common approaches to handle zeros in natural log-transformed epidemiological data³⁵. The constant was chosen to be small relative to the observed range of retailer density and therefore unlikely to substantially influence model estimates. Regression coefficients were exponentiated ($\exp(\beta)$) to aid interpretation as multiplicative differences in retailer density associated with each predictor. Exponentiated coefficients represent the ratio of geometric mean retailer density between comparison groups, where values greater than 1 indicate a relative increase and values less than 1 indicate a relative decrease. For example, an $\exp(\beta)$ of 1.50 corresponds to a 50% higher retailer density relative to the reference group. Corresponding 95% confidence intervals were obtained by exponentiating both the estimated coefficients and their confidence limits from the natural log scale.

The explanatory variables were chosen based on the literature and our aim of investigating associations between tobacco retailers, area remoteness and area-level SES^{17,19} and were selected if associated with the outcome variable in our initial bivariate analyses ($p < 0.05$; results of bivariate analyses are included in Supplementary table 1 and Supplementary table 2). To account for

potential confounding and collinearity, we then conducted multivariable regression analysis. Based on the findings from the bivariate analysis, we developed a multiple linear regression model to assess variance in tobacco retailer density as predicted by socioeconomic status (indicated by IRSD), population density, percentage of First Nations residents and remoteness.

We assessed influential points using residuals and inspection of box plots. A sensitivity analysis was conducted by refitting models after removal of identified influential observations to assess the robustness of the results. Collinearity was assessed by calculating the corresponding variance inflation factor (VIF). The proportion of First Nations residents variable (in %) was moderately collinear with remoteness ($VIF > 5$) and was removed from the final model to maintain model stability and interpretability. Remoteness was retained due to its conceptual relevance and stronger explanatory power in the model. We also conducted a global F -test to evaluate the overall significance of the remoteness variable.

Ethics approval

This analysis involved routinely collected publicly available administrative data geocoded at a level that precluded identification of individual businesses in the published results. This study was approved by the Human Research Ethics Committee of Northern Territory Health and Menzies School of Health Research (HREC 2023-4720).

Results

Figure 1 shows the locations of licenced tobacco retailers by SA2 and remoteness. We found a mean of 1.81 tobacco retailers per 1000 residents in the NT (95% confidence interval (CI) 1.38–2.23 per 1000, standard deviation (SD) 1.67). Table 1 outlines the numbers of SA2s and tobacco licences and mean retailer density per 1000 residents by remoteness category. Retailer density by SA2 ranged from 0 to 8.40 per 1000 residents and increased with remoteness (Table 1).

In the bivariate analyses (Supplementary table 2) population density ($p < 0.05$), percentage of First Nations residents ($p < 0.05$), and remoteness ($p < 0.05$) were all significantly positively associated

with retailer density.

In the multivariate model, we observed a statistically significant positive association between tobacco retailer density and very remote location ($F(4,57)=5.85, p < 0.001, r^2=0.29$; Table 2), and the model accounted for 29% of the variance in retailer density. Very remote areas were associated with higher retailer density compared to outer regional areas ($\beta=1.09, p=0.02$), corresponding to approximately a threefold higher retailer density ($\exp(\beta)=2.97$). The relationship between remoteness and tobacco retailer density did not follow a strict gradient, as remote areas did not show a significant increase relative to outer regional areas (Fig2). We did not observe a statistically significant linear relationship between retailer density and area disadvantage in either bivariate or multivariate analysis ($p > 0.05$), and some SA2s with less area disadvantage had some of the highest retailer densities, while some more disadvantaged SA2s had some of the lowest densities (Fig3). Population density was statistically significant in the bivariate analysis but was not significant when included in the full model ($p > 0.05$). Percentage of First Nations residents was excluded from the multivariate model as it was collinear with remoteness. This was unsurprising because many remote communities have a higher number of First Nations residents.

We also conducted a sensitivity analysis. After excluding three identified influential observations, remoteness remained a significant predictor compared to outer regional areas, population density became a significant predictor ($p < 0.05$), and the model's explanatory power increased ($F(4,54)=8.07, p < 0.001, r^2=0.37$; Table 3). The model accounted for 37% of the variance in retailer density.

Collinearity and the presence of influential points may have inflated standard errors in the full model, potentially obscuring associations with retailer density. However, we included these points in the final dataset and model given that they represent three real SA2s (in contrast to SA2s that were excluded from the dataset because they had small or no populations).

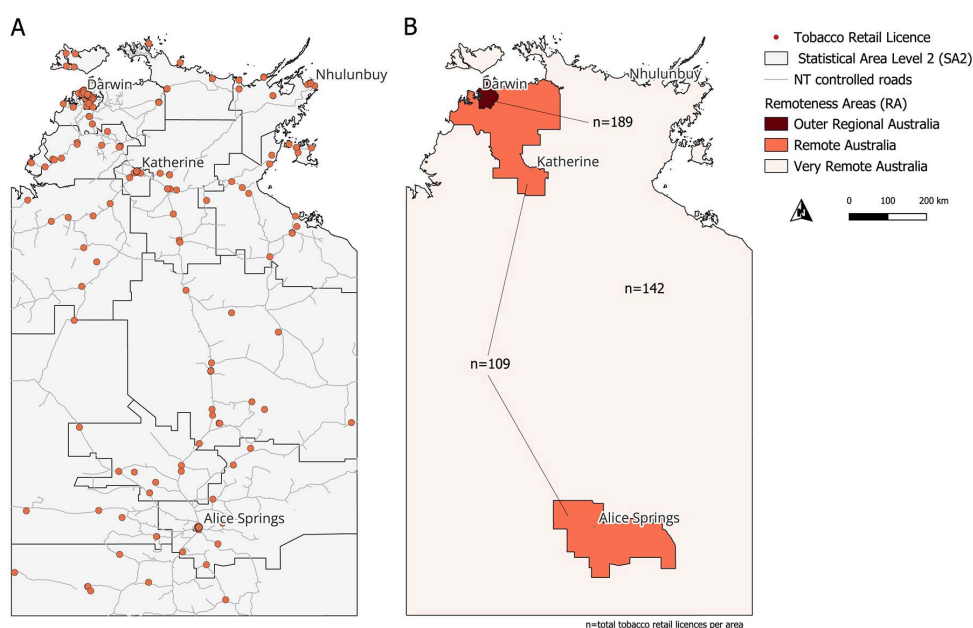


Figure 1: Maps of the Northern Territory. Map A shows Statistical Areas Level 2 and individual retailers. Map B shows areas of remoteness and total numbers of retailers in each area.

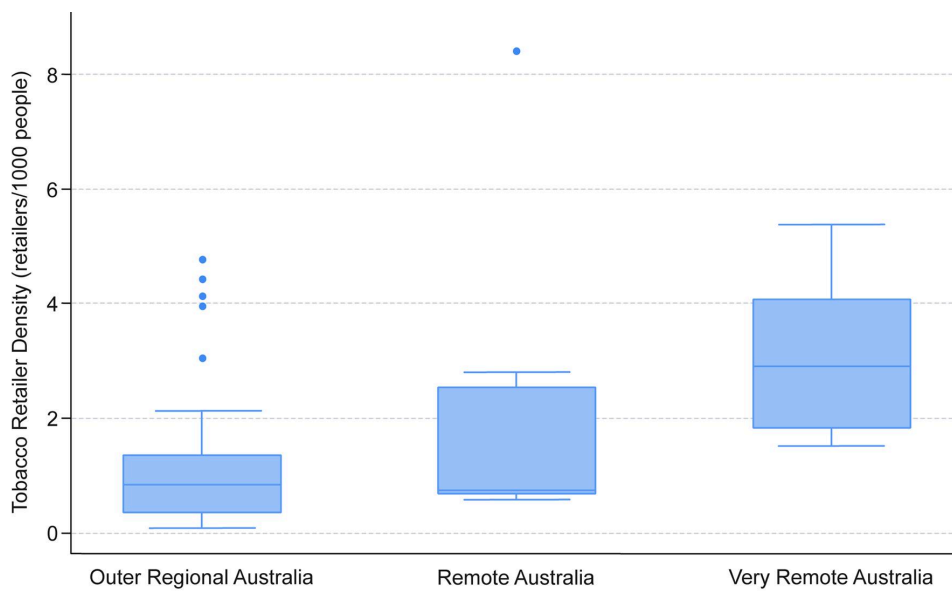


Figure 2: Tobacco retailer density (retailers per 1000 residents) by remoteness categories in the Northern Territory.

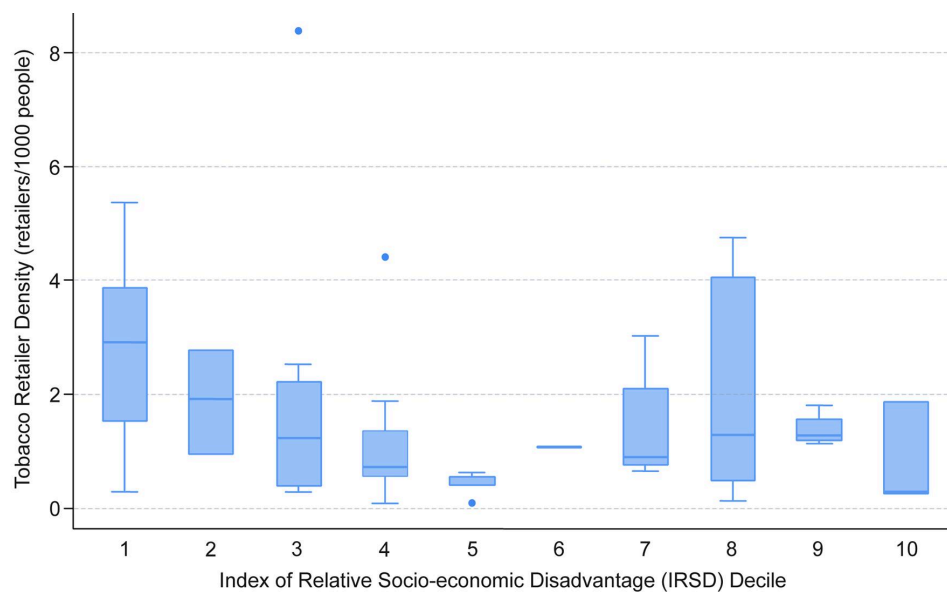


Figure 3: Tobacco retailer density (retailers per 1000 residents) by relative socioeconomic disadvantage decile.

Table 1: Summary of Statistical Areas Level 2, numbers of tobacco retailers and mean tobacco retailer density per 1000 residents by remoteness

Remoteness	Number of SA2s (n=62) (% of total)	Number of retailers (n=425) (% of total)	Mean retailer density per 1000 residents (95%CI)
Outer Regional Australia	38 (61.3)	183 (43.1)	1.25 (0.85–1.66)
Remote Australia	9 (14.5)	94 (22.1)	2.03 (0.35–3.73)
Very Remote Australia	15 (24.1)	148 (34.8)	3.06 (2.37–3.75)
Total	62 (100)	425 (100)	1.81 (1.38–2.23)

CI, confidence interval. SA2, Statistical Area Level 2.

Table 2: Multiple regression model output looking at factors associated with tobacco retailer density in the Northern Territory

Predictor	Subcategory	Coefficient β (95%CI)	exp(β) (95%CI)	p-value
IRSD decile		0.32 (-0.07–0.13)	1.38 (0.933–1.139)	0.52
Population density		0.00 (-0.00–0.00)	1.00 (1.000–1.000)	0.22
Remoteness (reference category)	Remote Australia	0.27 (-0.58–1.11)	1.31 (0.56–3.034)	0.53
	Very Remote Australia	1.09 (0.21–1.95)	2.97 (0.283–2.099)	0.02

CI, confidence interval. IRSD, Index for Relative Socio-economic Disadvantage.

Table 3: Regression output for sensitivity analysis looking at factors associated with tobacco retailer density in the Northern Territory

Predictor	Subcategory	Coefficient β (95%CI)	exp(β) (95%CI)	p-value
-----------	-------------	-----------------------------	------------------------	---------

IRSD decile		0.04 (-0.04–0.12)	1.041 (0.961–1.128)	0.33
Population density		0.00 (-0.0007–-0.00008)	1.000 (0.9993–0.9999)	0.015*
Remoteness (reference category)	Remote Australia	-0.31 (-1.06–0.45)	0.733 (0.347–1.571)	0.42
	Very Remote Australia	0.77 (0.01–1.53)	2.159 (1.010–4.617)	0.047*

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

CI, confidence interval. IRSD, Index for Relative Socio-economic Disadvantage.

Discussion

We aimed to map the locations of tobacco retail licences in the NT and to examine factors associated with tobacco retailer density in the NT using multiple linear regression.

We found that retailer density was higher in very remote areas. Although ostensibly counter-intuitive, these findings may reflect the small population size of very remote communities; that is, even if there is only one retailer in the community, the number of retailers per 1000 residents will be higher than in non-remote locations. Retailer density in the NT has not previously been examined; however, research in South Australia and Tasmania found a similar association^{17,19}. Although South Australia has more densely populated urban areas than the NT, both regions have remote and very remote areas with high proportions of First Nations residents.

We did not find a significant association between area disadvantage and tobacco retailer density in either the bivariate analysis or the multivariate analysis. In fact, we found that some SA2s with less area disadvantage had some of the highest densities, while other more disadvantaged SA2s had some of the lowest densities. Although higher densities of tobacco retailers are generally associated with greater area disadvantage and remoteness, including in Australia^{17,19,20}, a recent systemic review found that about 12% of included studies reported the opposite effect¹². Explanations include the preponderance of wealthier residents in some business districts, such as New York City³⁶, and greater densities of retail and entertainment businesses in some higher socioeconomic areas³⁷. Conversely, Kong et al suggested that some areas are so disadvantaged that they have very few or no retailers¹². Although other studies report on very different contexts from the NT, our findings support these explanations, as several higher socioeconomic areas with relatively more tobacco retailers were business or entertainment areas with several bars, shops and service stations; by contrast, several lower socioeconomic areas with fewer tobacco retailers also had fewer shops, and no bars and service stations.

Tobacco retail regulation is an underutilised policy measure, both in Australia and globally²⁴. However, some jurisdictions in Australia and internationally have successfully seen retailer numbers decline by restricting their location, increasing licence fees or capping the number of licences issued. Examples are Hungary³⁸, South Australia³⁹ and some US cities^{36,40–42}. A recent meta-analysis estimated a 2.5% reduction in tobacco use from reductions in exposure to tobacco retailer density and proximity⁴³. Tobacco retail outlets decreased by 85% in Hungary, leading to short-term reductions in smoking prevalence among young people⁴⁴. Although these studies report on very different settings from the NT, they provide several lessons for jurisdictions considering reducing tobacco availability. For example, findings from several cities in the US show the importance of considering the equity impact of retail reduction measures, and that these are likely to be unique to each context^{36,41,42}. In Hungary, the study authors noted that sustainable reductions required ongoing monitoring and comprehensive complementary tobacco control strategies. In

Australia, improving compliance and enforcement has also been identified as a key element of addressing the growing illicit market⁴⁵.

Associations between remoteness and tobacco availability may contribute to inequities in smoking prevalence between First Nations Peoples and non-Indigenous people in Australia, given that most remote NT communities have higher numbers of First Nations residents^{3,8}. While many potential tobacco control retail policies have a pro-equity impact, some may increase inequities⁴⁶. Strategies that specifically address the supply of tobacco in remote and very remote areas could thus help reduce inequities. However, there are limited opportunities to reduce density in the NT other than removing tobacco retailers from some communities, given that people have no choice but to shop at a tobacco retailer in communities that have only one store. Density or proximity restrictions may reduce access to tobacco in larger towns and cities, but implementing similar restrictions in smaller communities could create hardship for people who are addicted to nicotine. Furthermore, in larger communities with more than one store, restricting sales to only one store could be considered unfair by retailers. Policies focusing on remote communities could also be considered discriminatory, feeding industry arguments that consumers should be able to purchase tobacco, and potentially increasing stigma and community isolation^{47–51}. These concerns may be less persuasive when the rights of communities to be free from addiction are considered, along with the history of tobacco companies targeting marginalised groups, and the lethality of tobacco products compared to other consumer products, given they kill up to two-thirds of users when used as directed by the manufacturer^{52,53}. Furthermore, ensuring equitable access to smoking cessation support for people in small and more geographically isolated communities should be paired with policies to reduce tobacco supply^{54,55}.

A number of other unintended consequences of policies aimed at reducing supply of tobacco in the NT also require consideration. For example, research in New Zealand found that some participants thought the smoke-free generation policy would be less effective for Māori because social supply to minors would continue⁵⁶. Increased occurrences of social supply were also identified in Hungary⁴⁴. Exploratory data (unpublished) from our team from parts of the NT suggest that social supply already takes place in some communities. Use of pituri (a traditional nicotine-containing stimulant from *Duboisia hopwoodii*, used for ceremonial, social, and medicinal purposes, chewed by the user), and native tobacco plants among women in Central Australia is widespread, with reports of use starting in girls as young as five^{57,58}. Reducing the supply of commercial tobacco could lead to increased use of native tobacco sources.

It is easy to focus on the difficulties in addressing tobacco retailer availability in a jurisdiction as vast and challenging as the NT, and a one-size-fits-all approach may not be the most appropriate or effective course of action. However, some community stores have built in key performance indicators monitoring tobacco sales, providing opportunities and local will to address the supply of tobacco^{59,60}. Communities have also led initiatives to improve the health and wellbeing of their residents; for example, many NT

communities have introduced sugar reduction policies^{60,61} and low aromatic unleaded fuel to reduce petrol sniffing⁶². The NT also has a long and complex history of legislated and unlegislated policy restricting access to alcohol, including examples of externally imposed policy and some community led⁶³. Finally, in the criminal justice sector, there are other examples of community generated solutions⁶⁴⁻⁶⁶. Together these examples illustrate the potential for approaches addressing tobacco supply that are tailored to community circumstances. They also provide an entry point to begin the conversation on dismantling the current paradigm of a destructive product that is widely available. Research with communities and stakeholders such as health services would be essential to ensure that people who smoke are properly supported through such a transition, as well as funding and resources for cessation support services.

Limitations

Our study has some limitations. Smoking prevalence data for the NT by SA2 were not available, so we could not examine associations between retailer density and prevalence. Although other measures could have yielded different associations, as outlined earlier, we chose the number of retailers per 1000 residents and SA2 as the most suitable outcome variable. Measures of retailer density based on area would not be suitable given the large sparsely populated areas of the NT. We have used a single spatial scale, although we expect that the remoteness variable captures that individuals living in small towns and communities are less likely to move outside of their ascribed SA2 on a daily basis than are individuals living in an SA2 that covers a single suburb in a larger town, individuals may be exposed to multiple contexts that are not accounted for in the analysis⁴³. For example, our analysis does not account for seasonal mobility of people. Our measurement of remoteness is a geographic measure characterised relative to 'colonial settlement patterns'⁶⁷. We also acknowledge that we have used a single measure of inequity that reflects the values and priorities of the mainstream population, which are not necessarily those of First Nations Peoples. Finally, this analysis represents a snapshot in space and time. Both media and anecdotal reports suggest that

there has been a recent increase in retail outlets primarily selling illegal, untaxed, cheap, tobacco, which would not be captured in official licensing figures.

Conclusion

Although tobacco retailer density increased with remoteness, we did not find a significant relationship between retailer density and area disadvantage. In a jurisdiction as large and sparsely populated as the NT, policy options could include a cap on tobacco licences, thus preventing new tobacco retailers from being established in the NT, while also planning measures that will actively reduce numbers of retailers. This work will require engagement with retailers and remote communities, given potential impacts on them and transition support that may be required. In small and geographically isolated communities where compliance and enforcement are more difficult, it is important to ensure that strategies are generated with the support of the community and consider the potential for them to be undermined by factors such as illicit sales and social supply.

Funding

RC is supported by an Australian Government Research Training Program stipend and a National Health and Medical Research Council Ideas grant (Grant No. 2029002). CG receives funding from NHMRC grants (GNT1198301, GNT2019252) and is supported by an ARC Future Fellowship (FT220100186). MH receives funding from NHMRC grants (1198301, 2029002) and is supported by a Heart Foundation Australia Future Leader Fellowship (110860-2025).

Conflicts of interest

RC and MH work in partnership with remote community-owned stores in the NT to develop strategies to reduce supply of tobacco in remote communities.

AI disclosure statement

During the preparation of this work, the authors used ChatGPT to improve the readability of some sentences in the Methods, Results and Discussion sections. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

References

- 1 Australian Institute of Health & Welfare (AIHW). *Australian Burden of Disease Study 2024*. Canberra, Australia: AIHW, 2024. <https://www.aihw.gov.au/reports/burden-of-disease/australian-burden-of-disease-study-2024/contents/about> (Accessed 16 February 2026).
- 2 Australian Bureau of Statistics (ABS). *National Aboriginal and Torres Strait Islander Health Survey 2022–23*. Canberra, Australia: ABS, 2024. <https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/national-aboriginal-and-torres-strait-islander-health-survey/latest-release> (Accessed 28 March 2025).
- 3 Heris C, Lovett R, Barrett EM, Calma T, Wright A, Maddox R. Deadly declines and diversity – understanding the variations in regional Aboriginal and Torres Strait Islander smoking prevalence. *Australian and New Zealand Journal of Public Health* 2022; **46(5)**: 558–561. <https://doi.org/10.1111/1753-6405.13286> <https://www.ncbi.nlm.nih.gov/pubmed/35924895>
- 4 Thomas DP, Briggs V, Anderson IPS, Cunningham J. The social determinants of being an Indigenous non-smoker. *Australian and New Zealand Journal of Public Health* 2008; **32(2)**: 110–116. <https://doi.org/10.1111/j.1753-6405.2008.00185.x> <https://www.ncbi.nlm.nih.gov/pubmed/18412679>
- 5 Williams M, Allan J. Reducing smoking in Australia: how to include Aboriginal and Torres Strait Islander people. *Cosmopolitan Civil Societies: An Interdisciplinary Journal* 2019; **11(2)**: 37–54. <https://doi.org/10.5130/ccs.v11i2.6642>
- 6 Greenhalgh EM, Maddox R, van der Sterren A, Jenkins S, Knoche D, Winstanley MH. 8.3 Prevalence of tobacco use among Aboriginal and Torres Strait Islander peoples. *Tobacco in Australia: facts and issues*. Melbourne, Australia: Cancer Council Victoria, 2024. <https://www.tobaccoinustralia.org.au/chapter-8-apsi/8-3-prevalence-of-tobacco-use-among-aboriginal-peo> (Accessed 12 March 2025).
- 7 Australian Bureau of Statistics (ABS). *Snapshot of the Northern Territory*. Canberra, Australia: ABS, 2022.

- <https://www.abs.gov.au/articles/snapshot-nt-2021>
(Accessed 12 March 2025).
- 8** Australian Institute of Health and Welfare (AIHW). *National Drug Strategy Household Survey 2022–2023*. Canberra, Australia: AIHW, 2024.
<https://www.aihw.gov.au/reports/illicit-use-of-drugs/national-drug-strategy-household-survey>
(Accessed 12 March 2025).
- 9** Australian Centre for Housing Research (ACHR). *Accessibility/Remoteness Index of Australia (ARIA+)*. Adelaide, Australia: ACHR, 2024.
<https://able.adelaide.edu.au/housing-research/data-gateway/aria#example-calculation>
(Accessed 12 March 2025).
- 10** Australian Bureau of Statistics (ABS). Chapter 3: A profile of discrete Aboriginal and Torres Strait Islander communities. In: ABS (Ed.). *Housing and infrastructure in Aboriginal and Torres Strait Islander communities, Australia, 2006*. Canberra, Australia: ABS, 2007.
<https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4710.0MainFeatures42006>
(Accessed 12 March 2025).
- 11** Kong A Y, Henriksen L. Retail endgame strategies: reduce tobacco availability and visibility and promote health equity. *Tobacco Control* 2022; **31(2)**: 243–249.
<https://doi.org/10.1136/tobaccocontrol-2021-056555>
<https://www.ncbi.nlm.nih.gov/pubmed/35241596>
- 12** Kong A Y, Lee J G L, Halvorson-Fried S M, Sewell K B, Golden S D, Henriksen L, et al. Neighbourhood inequities in the availability of retailers selling tobacco products: a systematic review. *Tobacco Control* 2025; **34**: 350–360.
<https://doi.org/10.1136/tc-2024-058718>
<https://www.ncbi.nlm.nih.gov/pubmed/38937098>
- 13** Marsh L, Doscher C, Robertson L A. Characteristics of tobacco retailers in New Zealand. *Health & Place* 2013; **23**: 165–170.
<https://doi.org/10.1016/j.healthplace.2013.07.003>
<https://www.ncbi.nlm.nih.gov/pubmed/23933446>
- 14** Wood LJ, Pereira G, Middleton N, Foster S. Socioeconomic area disparities in tobacco retail outlet density: a Western Australian analysis. *Medical Journal of Australia* 2013; **198(9)**: 489–491.
<https://doi.org/10.5694/mja12.11539>
<https://www.ncbi.nlm.nih.gov/pubmed/23682892>
- 15** Marashi-Pour S, Cretikos M, Lyons C, Rose N, Jalaludin B, Smith J. The association between the density of retail tobacco outlets, individual smoking status, neighbourhood socioeconomic status and school locations in New South Wales, Australia. *Spatial and Spatio-temporal Epidemiology* 2015; **12**: 1–7.
<https://doi.org/10.1016/j.sste.2014.09.001>
<https://www.ncbi.nlm.nih.gov/pubmed/25779904>
- 16** Pearce J, Rind E, Shortt N, Tisch C, Mitchell R. Tobacco retail environments and social inequalities in individual-level smoking and cessation among Scottish adults. *Nicotine & Tobacco Research* 2015; **18(2)**: 138–146.
<https://doi.org/10.1093/ntr/ntv089>
<https://www.ncbi.nlm.nih.gov/pubmed/25895953>
- 17** Melody S M, Martin-Gall V, Harding B, Veitch M G. The retail availability of tobacco in Tasmania: evidence for a socio-economic and geographical gradient. *Medical Journal of Australia* 2018; **208(5)**: 205–208.
<https://doi.org/10.5694/mja17.00765>
<https://www.ncbi.nlm.nih.gov/pubmed/29540133>
- 18** Mills SD, Kong AY, Reimold AE, Baggett CD, Wiesen CA, Golden SD. Sociodemographic disparities in tobacco retailer density in the United States, 2000–2017. *Nicotine & Tobacco Research* 2022; **24(8)**: 1291–1299.
<https://doi.org/10.1093/ntr/ntac020>
<https://www.ncbi.nlm.nih.gov/pubmed/35079790>
- 19** Morris J N, Baldock J, Trigg J, Blunt J, Blanden L. South Australia's tobacco retail landscape and its intersection with socioeconomic factors and smoking prevalence. *Health Promotion Journal of Australia* 2023; **35(3)**: 646–652.
<https://doi.org/10.1002/hpja.797>
<https://www.ncbi.nlm.nih.gov/pubmed/37604184>
- 20** Bendotti H, Gartner CE, Marshall HM, Ireland D, Garvey G, Lawler S. Exploring associations of population characteristics and tobacco and vape retailer density and proximity in Australia: a scoping review. *Tobacco Control* 2024; **34(3)**: 361–368.
<https://doi.org/10.1136/tc-2024-058760>
<https://www.ncbi.nlm.nih.gov/pubmed/38969498>
- 21** Hoek J, Gifford H, Pirikahu G, Thomson G, Edwards R. How do tobacco retail displays affect cessation attempts? Findings from a qualitative study. *Tobacco Control* 2010; **19(4)**: 334–337.
<https://doi.org/10.1136/tc.2009.031203>
<https://www.ncbi.nlm.nih.gov/pubmed/20671091>
- 22** Hitchman SC, Fong GT, Zanna MP, Thrasher JF, Laux FL. The relation between number of smoking friends, and quit intentions, attempts, and success: findings from the International Tobacco Control (ITC) Four Country Survey. *Psychology of Addictive Behaviors* 2014; **28(4)**: 1144–1152.
<https://doi.org/10.1037/a0036483>
<https://www.ncbi.nlm.nih.gov/pubmed/24841185>
- 23** Glasser AM, Onnen N, Craigmile PF, Schwartz E, Roberts ME. Associations between disparities in tobacco retailer density and disparities in tobacco use. *Preventive Medicine* 2022; **154**: 106910.
<https://doi.org/10.1016/j.ypmed.2021.106910>
<https://www.ncbi.nlm.nih.gov/pubmed/34921833>
- 24** Canty R, Gartner CE, Hoek J, Hefler M. Global policy scan of commercial combustible tobacco product retailing regulations by WHO region. *Tobacco Control* 2024; **34(6)**: 726–732.
<https://doi.org/10.1136/tc-2023-058523>
<https://www.ncbi.nlm.nih.gov/pubmed/39059815>
- 25** Rooney T, Okninski M, Morphet K, Richards B, Gartner C. Protecting children from tobacco products in retail environments: a review of Australian tobacco control laws. *Drug and Alcohol Review* 2025; **44(4)**: 1062–1078.
<https://doi.org/10.1111/dar.14033>
<https://www.ncbi.nlm.nih.gov/pubmed/40057945>
- 26** Northern Territory Government. *Tobacco Control Act 2002*. Darwin, Australia: Northern Territory Government, 2002.
<https://legislation.nt.gov.au/en/Legislation/TOBACCO-CONTROL-ACT-2002>
(Accessed 12 March 2025).
- 27** Kite J, Rissel C, Greenaway M, Williams K. Tobacco outlet density and social disadvantage in New South Wales, Australia. *Tobacco Control* 2014; **23(2)**: 181.
<https://doi.org/10.1136/tobaccocontrol-2012-050648>
<https://www.ncbi.nlm.nih.gov/pubmed/23242978>
- 28** Northern Territory Government. *Northern Territory Government Public Register*
<https://licensingnt.nt.gov.au/PublicRegister>
(Accessed 25 March 2026).

- 29** Australian Bureau of Statistics (ABS). *Australian Census Data 2021*. Canberra, Australia: ABS, 2021.
<https://www.abs.gov.au/census/find-census-data>
 (Accessed 25 March 2026).
- 30** Australian Bureau of Statistics (ABS). 3.3 Response rates. In: ABS (Ed.). *Report on the quality of 2021 census data: Statistical Independent Assurance Panel to the Australian Statistician*. Canberra, Australia: ABS, 2022.
<https://www.abs.gov.au/census/about-census/census-statistical-independent-assurance-panel-report/33-response-rates#cite-window1>
 (Accessed 25 March 2026).
- 31** Australian Bureau of Statistics (ABS). Main structure and greater capital city statistical areas. In: ABS (Ed.). *Australian Statistical Geography Standard (ASGS) Edition 3, July 2021–June 2026*. Canberra, Australia: ABS, 2021.
<https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/main-structure-and-greater-capital-city-statistical-areas>
 (Accessed 25 March 2026).
- 32** Australian Bureau of Statistics (ABS). *Socio-economic indexes for areas (SEIFA), Australia*. Canberra, Australia: ABS, 2021.
<https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/latest-release>
 (Accessed 25 March 2026).
- 33** Australian Bureau of Statistics (ABS). Remoteness areas. *Australian Statistical Geography Standard (ASGS) Edition 3 (July 2021–June 2026)*. Canberra, Australia: ABS, 2023.
<https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/remoteness-structure/remoteness-areas>
 (Accessed 25 March 2026).
- 34** Australian Bureau of Statistics (ABS). GeoPackages. In: ABS (Ed.). *Census data tools and products*. Canberra, Australia: ABS, 2022.
<https://www.abs.gov.au/census/guide-census-data/about-census-tools/geopackages>
 (Accessed 12 March 2025).
- 35** Bosse NI, Abbott S, Cori A, van Leeuwen E, Bracher J, Funk S. Scoring epidemiological forecasts on transformed scales. *PLOS Computational Biology* 2023; **19(8)**.
<https://doi.org/10.1371/journal.pcbi.1011393>
<https://www.ncbi.nlm.nih.gov/pubmed/37643178>
- 36** Giovenco DP, Spillane TE, Mauro CM, Hernández D. Evaluating the impact and equity of a tobacco-free pharmacy law on retailer density in New York City neighbourhoods. *Tobacco Control* 2019; **28(5)**: 548.
<https://doi.org/10.1136/tobaccocontrol-2018-054463>
<https://www.ncbi.nlm.nih.gov/pubmed/30135112>
- 37** Paul CL, Mee KJ, Judd TM, Walsh RA, Tang A, Penman A. Anywhere, anytime: retail access to tobacco in New South Wales and its potential impact on consumption and quitting. *Social Science & Medicine* 2010; **71(4)**: 799–806.
<https://doi.org/10.1016/j.socscimed.2010.05.011>
<https://www.ncbi.nlm.nih.gov/pubmed/20554363>
- 38** Bodrogi J, Joo T, Rogers T, Chaloupka FJ, Foley K. Implementation and outcomes of a national policy to reduce tobacco retail density in Hungary. *Proceedings Society for Research on Nicotine & Tobacco* 2016.
<https://www.economicsforhealth.org/files/research/292/Foley-Kristie-Tobacco-Retail-in-Hungary-SRNT-2016.pdf>
 (Accessed 12 May 2026).
- 39** Bowden JA, Dono J, John DL, Miller CL. What happens when the price of a tobacco retailer licence increases? *Tobacco Control* 2014; **23(2)**: 178–180.
<https://doi.org/10.1136/tobaccocontrol-2012-050615>
<https://www.ncbi.nlm.nih.gov/pubmed/23783508>
- 40** Coxe N, Webber W, Burkhart J, Broderick B, Yeager K, Jones L, et al. Use of tobacco retail permitting to reduce youth access and exposure to tobacco in Santa Clara County, California. *Preventive Medicine* 2014; **67**: 546–550.
<https://doi.org/10.1016/j.ypmed.2014.01.023>
<https://www.ncbi.nlm.nih.gov/pubmed/24513170>
- 41** Lawman HG, Henry KA, Scheeres A, Hillengas A, Coffman R, Strasser AA. Tobacco retail licensing and density 3 years after license regulations in Philadelphia, Pennsylvania (2012–2019). *American Journal of Public Health* 2020; **110(4)**: 547–553.
<https://doi.org/10.2105/ajph.2019.305512>
<https://www.ncbi.nlm.nih.gov/pubmed/32078358>
- 42** Vyas P, Sturrock H, Ling PM. Examining the role of a retail density ordinance in reducing concentration of tobacco retailers. *Spatial and Spatiotemporal Epidemiology* 2020; **32**: 100307.
<https://doi.org/10.1016/j.sste.2019.100307>
<https://www.ncbi.nlm.nih.gov/pubmed/32007281>
- 43** Lee JG, Kong AY, Sewell KB, Golden SD, Combs TB, Ribisl KM, et al. Associations of tobacco retailer density and proximity with adult tobacco use behaviours and health outcomes: a meta-analysis. *Tobacco Control* 2021; **31(e2)**: e189–e200.
<https://doi.org/10.1136/tobaccocontrol-2021-056717>
<https://www.ncbi.nlm.nih.gov/pubmed/34479990>
- 44** Joó T, Foley K, Brys Z, Rogers T, Szócska M, Bodrogi J, et al. Impact of regulatory tightening of the Hungarian tobacco retail market on availability, access and cigarette smoking prevalence of adolescents. *Tobacco Control* 2024; **34**: 430–435.
<https://doi.org/10.1136/tc-2023-058232>
<https://www.ncbi.nlm.nih.gov/pubmed/38242687>
- 45** Puljević C, King M, Meciar I, Gartner C. Smoking out Australia's growing illicit tobacco market: current trends and future challenges. *International Journal of Drug Policy* 2024; **127**: 104424.
<https://doi.org/10.1016/j.drugpo.2024.104424>
<https://www.ncbi.nlm.nih.gov/pubmed/38614017>
- 46** Caryl FM, Pearce J, Reid G, Mitchell R, Shortt NK. Simulating the density reduction and equity impact of potential tobacco retail control policies. *Tobacco Control* 2021; **30(e2)**: e138.
<https://doi.org/10.1136/tobaccocontrol-2020-056002>
<https://www.ncbi.nlm.nih.gov/pubmed/33148694>
- 47** Thompson L, Pearce J, Barnett JR. Moralising geographies: stigma, smoking islands and responsible subjects. *Area* 2007; **39(4)**: 508–517.
<https://doi.org/10.1111/j.1475-4762.2007.00768.x>
- 48** Bond C, Brough M, Spurling G, Hayman N. 'It had to be my choice' Indigenous smoking cessation and negotiations of risk, resistance and resilience. *Health, Risk & Society* 2012; **14(6)**: 565–581.
<https://doi.org/10.1080/13698575.2012.701274>
- 49** Kerrigan V, Herdman RM, Thomas DP, Hefler M. 'I still remember your post about buying smokes': a case study of a remote Aboriginal community-controlled health service using Facebook for tobacco control. *Australian Journal of Primary Health* 2019; **25(5)**: 443–448.

- <https://doi.org/10.1071/PY19008>
<https://www.ncbi.nlm.nih.gov/pubmed/31590703>
- 50** Tane MP, Hefler M, Thomas DP. Do the Yolŋu people of East Arnhem Land experience smoking related stigma associated with local and regional tobacco control strategies?: an Indigenous qualitative study from Australia. *Global Public Health* 2020; **15**(1): 111–120.
<https://doi.org/10.1080/17441692.2019.1649446>
<https://www.ncbi.nlm.nih.gov/pubmed/31378142>
- 51** Voigt K. 'If you smoke, you stink.' Denormalisation strategies for the improvement of health-related behaviours: the case of tobacco. *Ethics in public health and health policy: concepts, methods, case studies*. Dordrecht, Netherlands: Springer, 2013. 47–61.
https://doi.org/10.1007/978-94-007-6374-6_4
- 52** Joshy G, Soga K, Thurber KA, Egger S, Weber MF, Sarich P, et al. Relationship of tobacco smoking to cause-specific mortality: contemporary estimates from Australia. *BMC Medicine* 2025; **23**(1): 115.10.
<https://doi.org/10.1186/s12916-025-03883-9>
<https://www.ncbi.nlm.nih.gov/pubmed/39994694>
- 53** Hoek J, Edwards R, Waa A. From social accessory to societal disapproval: smoking, social norms and tobacco endgames. *Tobacco Control* 2022; **31**(2): 358.
<https://doi.org/10.1136/tobaccocontrol-2021-056574>
<https://www.ncbi.nlm.nih.gov/pubmed/35241613>
- 54** Khan A, Green K, Medlin L, Khandaker G, Lawler S, Gartner C. Impact of the '10,000 lives' program on Quitline referrals, use and outcomes by demography and Indigenous status. *Drug and Alcohol Review* 2022; **41**(7): 1499–1509.
<https://doi.org/10.1111/dar.13499>
<https://www.ncbi.nlm.nih.gov/pubmed/35830355>
- 55** Trigg J, Skelton E, Lum A, Guillaumier A, McCarter K, Handley T, et al. Smoking cessation interventions and abstinence outcomes for people living in rural, regional, and remote areas of three high-income countries: a systematic review. *Nicotine & Tobacco Research* 2023; **25**(11): 1709–1718.
<https://doi.org/10.1093/ntr/ntad098>
<https://www.ncbi.nlm.nih.gov/pubmed/37338988>
- 56** Ball J, Edwards R, Waa A, Tautolo E-S. Stakeholder appraisal of selected tobacco endgame policy options in New Zealand. *Tobacco Regulatory Science* 2017; **3**(1): 56–67.
<https://doi.org/10.18001/TRS.3.1.6>
- 57** Ratsch AM, Mason A, Rive L, Bogossian FE, Steadman KJ. The Pituri Learning Circle: central Australian Aboriginal women's knowledge and practices around the use of *Nicotiana* spp. as a chewing tobacco. *Rural and Remote Health* 2017; **17**(3): 4044.
<https://doi.org/10.22605/RRH4044>
<https://www.ncbi.nlm.nih.gov/pubmed/28780876>
- 58** Wan M, Quinn C, Butson C, Kingon A. The dilemma of Pituri: a review and case report. *Australian Dental Journal* 2022; **67**(4): 362–365.
Supplementary material is available on the live site <https://www.rrh.org.au/journal/article/10095/#supplementary>
- <https://doi.org/10.1111/adj.12935>
<https://www.ncbi.nlm.nih.gov/pubmed/36082535>
- 59** Arnhem Land Progress Aboriginal Corporation (ALPA). [Home page]. Darwin, Australia: ALPA, 2024.
<https://www.alpa.asn.au>
(Accessed 12 March 2025).
- 60** Outback Stores. *Working with communities*. Berrimah, Australia: Outback Stores, 2024.
<https://outbackstores.com.au>
(Accessed 12 March 2025).
- 61** Brimblecombe J, McMahon E, Ferguson M, De Silva K, Peeters A, Miles E, et al. Effect of restricted retail merchandising of discretionary food and beverages on population diet: a pragmatic randomised controlled trial. *The Lancet Planetary Health* 2020; **4**(10): e463–e473.
[https://doi.org/10.1016/S2542-5196\(20\)30202-3](https://doi.org/10.1016/S2542-5196(20)30202-3)
<https://www.ncbi.nlm.nih.gov/pubmed/33038320>
- 62** D'Abbs PH, Shaw G. *Monitoring trends in the prevalence of petrol sniffing in selected Australian Aboriginal communities 2011–2014*. Darwin, Australia: Menzies School of Health Research, 2016.
<https://www.niaa.gov.au/sites/default/files/documents/publications/monit-trends-petrol-sniffing-2011-14.pdf>
(Accessed 12 March 2025).
- 63** Clifford S, Smith JA, Livingston M, Wright CJC, Griffiths KE, Miller PG. A historical overview of legislated alcohol policy in the Northern Territory of Australia: 1979–2021. *BMC Public Health* 2021; **21**(1): 1921.
<https://doi.org/10.1186/s12889-021-11957-5>
<https://www.ncbi.nlm.nih.gov/pubmed/34686162>
- 64** Northern Territory Government Department of the Attorney-General and Justice. *Northern Territory Aboriginal Justice Agreement: 2021–2027*. Darwin, Australia: Northern Territory Government, 2021.
https://justice.nt.gov.au/_data/assets/pdf_file/0005/1034546/nt-aboriginal-justice-agreement-2021-2027.pdf
(Accessed 12 March 2025).
- 65** Australian Broadcasting Commission (ABC). *Australian-first life skills camp, an alternative to custody, opens in Alice Springs for Aboriginal women*. Sydney, Australia: ABC, 2020.
<https://www.abc.net.au/news/2020-10-09/life-skills-camp-combats-high-rates-of-aboriginal-incarceration/12745040>
(Accessed 12 March 2025).
- 66** Australian Broadcasting Commission (ABC). *Northern Territory's second community court established in Kintore, Central Australia, through local law and justice group*. Sydney, Australia: ABC, 2024.
<https://www.abc.net.au/news/2024-09-20/community-court-returns-to-central-australia-in-kintore/104369908>
(Accessed 12 March 2025).
- 67** Prout Quicke S. Settler-colonial spatial logics and Indigenous internal (non)migration in Australia. [In French]. *Espace Populations Sociétés* 2020; **2020**(2020/1-2).
<https://doi.org/10.4000/eps.9838>

This PDF has been produced for your convenience. Always refer to the live site <https://www.rrh.org.au/journal/article/10095> for the Version of Record.