Past quit attempts in a national sample of Aboriginal and Torres Strait Islander smokers

Abstract

Objectives: To describe past attempts to quit smoking in a national sample of Aboriginal and Torres Strait Islander people, and to compare their quitting activity with that in the general Australian population.

Design, setting and participants: The Talking About The Smokes (TATS) project used a quota sampling design to recruit participants from communities served by 34 Aboriginal community-controlled health services and one community in the Torres Strait. We surveyed 1643 smokers and 78 recent quitters between April 2012 and October 2013. Baseline results for daily smokers ($n = 1392$) are compared with results for daily smokers ($n = 1655$) from Waves 5 to 8.5 (2006–2012) of the Australian International Tobacco Control Policy Evaluation Project (ITC Project).

Main outcome measures: Ever having tried to quit, tried to quit in the past year, sustained a quit attempt for 1 month or more.

Results: Compared with the general population, a smaller proportion of Aboriginal and Torres Strait Islander daily smokers had ever tried to quit (TATS, 69% v ITC, 81.4%), but attempts to quit within the past year were similar (TATS, 48% v ITC, 45.7%). More Aboriginal and Torres Strait Islander daily smokers than those in the general population reported sustaining past quit attempts for short periods only. Aboriginal and Torres Strait Islander smokers whose local health services had tobacco control resources were more likely to have tried to quit, whereas men and people who perceived they had experienced racism in the past year were less likely. Younger smokers, those who had gone without essentials due to money spent on smoking, and those who were often unable to afford cigarettes were more likely to have tried to quit in the past year, but less likely to have ever sustained an attempt for 1 month or more. Smokers who were unemployed, those who had not completed Year 12 and those from remote areas were also less likely to sustain a quit attempt.

Conclusions: Existing comprehensive tobacco control programs appear to be motivating Aboriginal and Torres Strait Islander smokers to quit but do not appear to overcome challenges in sustaining quit attempts, especially for more disadvantaged smokers and those from remote areas.

Smoking is the leading cause of preventable death and disability for Aboriginal and Torres Strait Islander peoples, claiming one in every five lives.[1] The prevalence of daily smoking in those aged 15 years or older decreased steadily from 49% in 2002 to 42% in 2012–2013.[2] While this is due in part to fewer people starting to smoke, it is also due to more people quitting successfully.[2]

According to the 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS), 62% of adult smokers had cut down or stopped smoking in the past year,[3] and 45% had attempted to quit.[4] This indicates strong motivation to quit. It also suggests quitting activity is similar to that of smokers in the general Australian population, of whom about 40% report having attempted to quit in the previous year.[5] However, in the general population, only one in five quit attempts are sustained for 1 month or longer.[5,6] Further, predictors of sustaining a quit attempt differ from predictors of making a quit attempt.[7]

Sex, age, education and income are not consistently associated with making quit attempts in other populations.[7] While there are no comparable studies for Aboriginal and Torres Strait Islander smokers, prevalence data show that smoking rates in remote areas have not declined as much as in other areas,[2] particularly for women.[8] This suggests that certain groups of smokers may be less motivated to quit or have more difficulty quitting than other smokers.

Here, we investigate patterns of attempting to quit and sustaining quit attempts in a national sample of Aboriginal and Torres Strait Islander smokers, and compare their quitting activity to that in the general Australian population.

Methods

Survey design and participants

The Talking About The Smokes (TATS) project surveyed 1643 current smokers and 78 recent quitters (ex-smokers who quit ⩽12 months before) from April 2012 to October 2013 (Wave 1, or baseline). The survey design and participants have been described in detail elsewhere.[4,9]

Briefly, the study used a quota sampling design to recruit participants from communities served by 34 Aboriginal community-controlled health services (ACCHSs) and one community in the Torres Strait. Project sites were selected based on the population distribution of Aboriginal and Torres Strait Islander people by state or territory and remoteness. In most sites (30/35), we aimed to interview a sample of 50 smokers or recent quitters, with equal numbers of men and women and those aged 18–34 and ⩾35 years. The sample sizes were doubled in four large city sites and the Torres Strait community.

People were excluded if they did not identify as Aboriginal or Torres Strait Islander, were less than 18 years old, were not usual residents of the area, were staff of the ACCHS, or were deemed unable to consent or complete the survey. In each site, different locally determined methods were used to collect a representative, albeit non-random, sample. The baseline sample closely matched the sample distribution of the 2008 NATSISS by age, sex, jurisdiction, remoteness, quit attempts in the past year and number of daily cigarettes smoked (for current daily smokers). However, there were inconsistent differences in some socioeconomic indicators: our sample had higher proportions of

Anna K Nicholson GDipPH, BPhty(Hons)[1]

Ron Borland PhD[2]

Maureen E Davey MB BS, FAFPHM[3]

Matthew Stevens PhD, BSc(Hons)[1]

David P Thomas MB BS, PhD, FAFPHM[1]

1 Menzies School of Health Research, Darwin, NT.

2 Cancer Council Victoria, Melbourne, VIC.

3 Aboriginal Health Service, Tasmanian Aboriginal Centre, Hobart, TAS.

anna.nicholson@menzies.edu.au

doi: 10.5694/mja15.00202

unemployed people, but also higher proportions who had completed Year 12 and who lived in more advantaged areas.[4]

Surveys were conducted face to face by trained interviewers, almost all of whom were members of the local Aboriginal and Torres Strait Islander community. The survey, entered directly onto a computer tablet, took 30–60 minutes to complete. In addition, a single survey of health service activities was completed for each site.

The project was approved by three Aboriginal human research ethics committees (HRECs) and two HRECs with Aboriginal subcommittees: Aboriginal Health & Medical Research Council Ethics Committee, Sydney; Aboriginal Health Research Ethics Committee, Adelaide; Central Australian HREC, Alice Springs; HREC for the Northern Territory Department of Health and Menzies School of Health Research, Darwin; and the Western Australian Aboriginal Health Ethics Committee, Perth.

ITC Project comparison sample

Comparisons were made with Australian smokers newly recruited to the International Tobacco Control Policy Evaluation Project (ITC Project) in Australia, between 2006 and 2012 (Wave 5, 2006–2007, $n = 624$; Wave 6, 2007–2008, $n = 485$; Wave 7, 2008–2009, $n = 114$; Wave 8, 2010–2011, $n = 189$; Wave 8.5, 2011–2012, $n = 243$). ITC Project participants were recruited using random digit telephone dialling, with strata defined by jurisdiction and remoteness, and surveys were completed by telephone.[10] Due to slightly different definitions of smokers, we concentrate our comparisons between the TATS project and ITC Project on daily smokers.

Main outcome measures

Survey questions were based on ITC Project surveys, particularly the Australian ITC Project surveys. All smokers were asked: "In the last month, have you tried to cut down the number of smokes you have?" and "Have you ever tried to quit smoking?". Those who had ever tried to quit were asked "How many times have you tried to quit smoking?" and "How long ago was your most recent quit attempt?".

Responses regarding ever trying to quit and when the last quit attempt occurred were used to derive the dichotomous outcome "tried to quit in the past year". If the last attempt occurred within the past 5 years, participants were asked "Of all the times you tried to quit smoking, what was the longest period you stayed completely off the smokes for?". This information was used to derive the outcome "ever sustained a quit attempt for ⩾1 month" (if tried to quit in the past 5 years). Those who had tried to quit more than once were also asked about their most recent attempt.

The exact questions, and comparisons with questions used in Australian ITC Project surveys, are presented in Appendix 1.

Covariates

Variation in quitting activity was described according to daily smoking status and key sociodemographic indicators (sex, age group, identification as Aboriginal and/or Torres Strait Islander, labour force status, highest level of education, remoteness, area-level disadvantage, perceived racism, not having enough money for food or essentials because of money spent on cigarettes, and being unable to buy cigarettes most of the time because of having no money). We also assessed variation according to whether or not the project site reported that it had received dedicated tobacco control resources (staff or funding) in the past year.

Statistical analyses

We calculated percentages and frequencies for all TATS project results (for daily smokers, non-daily smokers and recent quitters). ITC Project data (for daily smokers only) were summarised using percentages and 95% confidence intervals, which were directly standardised to match the age and sex profile of Aboriginal and Torres Strait Islander smokers according to the 2008 NATSISS. We did not include confidence intervals for TATS prevalence estimates as it is a non-probabilistic sample.

Simple logistic regression was used to assess variation in attempts to quit (ever, past year) and their duration (ever sustaining a quit attempt for ⩾1 month) among those who had smoked in the past year (ie, current smokers and recent quitters). Stata 13 (StataCorp) survey [SVY] commands were used to adjust for the sampling design, identifying the 35 project sites as clusters, and the quotas based on age, sex and smoking status as strata.[11] Refused and "don't know" responses were treated as missing, excluding up to 3% of participants from analyses, with the exception that 4.2% of those who had tried to quit in the past year (37/874) were missing data for the duration of their most recent attempt.

Results

Quitting activity is summarised in Box 1. Compared with daily smokers in the general Australian population who participated in ITC Project surveys, a smaller proportion of Aboriginal and Torres Strait Islander daily smokers had ever tried to quit (TATS, 69% v ITC, 81.4%). The proportion of Aboriginal and Torres Strait Islander daily smokers who had tried to reduce their cigarette consumption in the previous month was similar to that in the general Australian population (TATS, 59% v ITC, 55.3%), as was the proportion who had tried to quit in the past year (TATS, 48% v ITC, 45.7%). Of those who had tried to quit in the past year, similar proportions reported sustaining their most recent quit attempt for ⩾1 month (TATS, 31% v ITC, 33%). Differences were greater when comparing the longest quit attempts of those who had tried to quit in the past 5 years: 47% of Aboriginal and Torres Strait Islander smokers had ever sustained a quit attempt for ⩾1 month, compared with 60% in the general population. This greater difference is mainly due to more Aboriginal and Torres Strait Islander smokers reporting their longest quit attempt was shorter than 1 week (TATS, 28% v ITC, 14%).

Within the TATS project sample, more non-daily than daily smokers

1 Past quitting activity among daily smokers in the Australian population and among a national sample of Aboriginal and Torres Strait Islander smokers and recent quitters, by smoking status*

	Australian ITC Project†	Talking About The Smokes project‡		
Past quitting activity	**Daily smokers**	**Daily smokers**	**Non-daily smokers**	**Recent quitters**
All smokers (*n*)	1655	1392	251	78
Tried to reduce cigarettes smoked per day (past month)§	55.3% (47.5%–62.9%)	59% (805)	70% (168)	—
Ever tried to quit	81.4% (78.8%–83.8%)	69% (961)	74% (181)	—
Tried to quit in the past year	45.7% (42.8%–48.6%)	48% (664)	56% (132)	—
Tried to quit in the past 5 years	69.9% (67.1%–72.5%)	62% (844)	63% (149)	—
Number of times ever tried to quit				
Never	18.6% (16.2%–21.3%)	31% (422)	28% (65)	—
1–2 times	35.2% (32.4%–38.0%)	32% (438)	32% (75)	46% (35)
3–4 times	22.8% (20.5%–25.3%)	18% (241)	19% (45)	21% (16)
5 or more	23.4% (21.2%–25.8%)	19% (259)	21% (48)	33% (25)
If tried to quit in the past 5 years (*n*)	1143	844	149	78
Median duration (IQR) of longest quit attempt, days	91 (14–274)	21 (4–122)	56 (14–274)	213 (91–365)
Duration of longest quit attempt				
Less than 24 hours	1.8% (1.0%–3.2%)	5% (38)	1% (1)	0
1 day or more (and less than 1 week)	12.4% (10.2%–14.9%)	24% (198)	7% (10)	0
1 week or more (and less than 1 month)	25.8% (22.8%–29.1%)	25% (209)	29% (42)	3% (2)
1 month or more (and less than 6 months)	23.2% (20.4%–26.3%)	24% (199)	32% (46)	26% (19)
6 months or more (and less than 1 year)	15.0% (12.7%–17.6%)	11% (88)	8% (11)	32% (23)
1 year or more	21.8% (19.2%–24.6%)	12% (101)	24% (35)	40% (29)
If tried to quit in the past year (*n*)	692	664	132	78
Median duration (IQR) of most recent quit attempt, days	14 (3–61)	14 (3–30)	30 (12–152)	152 (49–304)
Duration of most recent quit attempt				
Less than 24 hours	4.3% (2.8%–6.4%)	6% (37)	2% (2)	0
1 day or more (and less than 1 week)	27.0% (23.2%–31.3%)	33% (213)	12% (15)	5% (4)
1 week or more (and less than 1 month)	35.5% (31.3%–40.0%)	30% (192)	31% (39)	15% (11)
1 month or more (and less than 6 months)	21.5% (18.0%–25.5%)	20% (130)	32% (40)	31% (23)
6 months or more	11.7% (9.1%–14.8%)	10% (66)	23% (29)	49% (36)

ITC Project = International Tobacco Control Policy Evaluation Project. IQR = interquartile range. * Percentages and frequencies exclude refused responses and "don't know" responses. † Except where specified, results are percentages (95% confidence intervals) for daily smokers in the Australian population from Waves 5–8.5 of the Australian ITC Project (*n* = 1655), directly standardised to the age and sex of Aboriginal and Torres Strait Islander smokers surveyed in the 2008 National Aboriginal and Torres Strait Islander Social Survey. ‡ Except where specified, results are percentages (frequencies) for the baseline sample of Aboriginal and Torres Strait Islander current smokers (*n* = 1643) and ex-smokers who quit ≤ 12 months before (*n* = 78) in the Talking About The Smokes project. § Data available for Australian ITC Project Wave 8.5 only (*n* = 243). ◆

had tried to reduce their cigarette consumption in the previous month (70% v 59%), tried to quit in the past year (56% v 48%) and sustained a quit attempt for ≥ 1 month (ever: 63% v 47%; most recent: 55% v 31%). There was little difference in the number of past quit attempts recalled by daily smokers, non-daily smokers and recent quitters (Box 1).

There was some socioeconomic patterning of quitting activity within the TATS project sample (Box 2). Ever having tried to quit (but not having tried to quit in the past year) and ever sustaining a quit attempt for ≥ 1 month were both associated with being employed and having completed Year 12, but not with area-level disadvantage. Attempts to quit (but not sustain a quit attempt) were more likely for those whose local health service had dedicated tobacco control resources and were less likely among men and those who perceived they had experienced racism in the previous year. Smokers who had been unable to afford cigarettes most of the time in the past month, and those who did not have enough money for food or other essentials in the past 6 months because of money spent on cigarettes were significantly more likely to have attempted to quit in the past year, but were less likely to have ever sustained a quit attempt for ≥ 1 month.

Discussion

Consistent with previous research, our results show that nearly half of Aboriginal and Torres Strait Islander smokers had tried to quit in the past year, similar to the general Australian population.[3,4] Together with the finding that two-thirds of Aboriginal and Torres Strait Islander smokers want to quit (reported elsewhere in this supplement),[12] this strengthens evidence that lack of motivation to stop smoking does not present a significant barrier to lowering smoking rates. However, we observed some variation in quitting activity that appears specific to the social context of quitting for Aboriginal and Torres Strait Islander peoples.

2 Demographic and socioeconomic variation in quitting activity in a national sample of Aboriginal and Torres Strait Islander smokers and recent quitters*

	Ever tried to quit		Tried to quit in the past year		Ever sustained a quit attempt for >1 month†	
Sociodemographic variable	**% (frequency)‡**	**OR (95% CI)ϟ**	**% (frequency)‡**	**OR (95% CI)ϟ**	**% (frequency)‡**	**OR (95% CI)ϟ**
Sex		*P* = 0.02		*P* = 0.04		*P* = 0.35
Female	75% (668)	1.0	55% (479)	1.0	51% (294)	1.0
Male	67% (552)	0.68 (0.50–0.93)	49% (395)	0.78 (0.61–0.99)	54% (257)	1.13 (0.87–1.47)
Age (years)		*P* = 0.53		*P* = 0.006		*P* = 0.03
18–24	72% (261)	1.0	62% (224)	1.0	44% (107)	1.0
25–34	71% (325)	0.96 (0.69–1.33)	53% (238)	0.68 (0.51–0.90)	54% (157)	1.55 (1.11–2.15)
35–44	69% (285)	0.87 (0.58–1.32)	46% (188)	0.52 (0.37–0.73)	57% (135)	1.75 (1.21–2.54)
45–54	73% (207)	1.07 (0.70–1.65)	48% (133)	0.56 (0.38–0.82)	55% (92)	1.59 (1.06–2.40)
⩾55	76% (142)	1.22 (0.75–1.98)	49% (91)	0.59 (0.40–0.87)	53% (60)	1.44 (0.94–2.21)
Indigenous status		*P* = 0.20		*P* = 0.04		*P* = 0.17
Aboriginal	71% (1073)	1.0	51% (758)	1.0	53% (482)	1.0
Torres Strait Islander	67% (60)	0.84 (0.36–1.97)	49% (44)	0.94 (0.44–2.01)	59% (33)	1.29 (0.73–2.30)
Both	78% (87)	1.47 (0.85–2.53)	65% (72)	1.78 (1.09–2.90)	46% (36)	0.75 (0.52–1.09)
Labour force status		*P* = 0.04		*P* = 0.14		*P* < 0.001
Unemployed or not in labour force	69% (763)	1.0	50% (547)	1.0 (ref)	46% (301)	1.0
Employed	75% (455)	1.34 (1.01–1.79)	55% (325)	1.19 (0.95–1.51)	62% (249)	1.89 (1.45–2.46)
Highest education attained		*P* = 0.001		*P* = 0.20		*P* < 0.001
Less than Year 12	67% (584)	1.0	50% (428)	1.0	47% (236)	1.0
Year 12 or higher	75% (626)	1.47 (1.17–1.86)	53% (440)	1.15 (0.93–1.43)	58% (314)	1.56 (1.23–1.99)
Remoteness		*P* = 0.43		*P* = 0.24		*P* = 0.03
Major cities	74% (334)	1.0	54% (240)	1.0	59% (172)	1.0
Inner and outer regional	69% (597)	0.78 (0.51–1.20)	49% (419)	0.81 (0.59–1.11)	52% (262)	0.76 (0.56–1.02)
Remote and very remote	73% (289)	0.95 (0.58–1.54)	55% (215)	1.03 (0.69–1.54)	47% (117)	0.63 (0.44–0.89)
Area-level disadvantage		*P* = 0.10		*P* = 0.12		*P* = 0.44
1st quintile (most disadvantaged)	67% (440)	1.0	48% (310)	1.0	50% (190)	1.0
2nd and 3rd quintiles	74% (533)	1.40 (1.01–1.93)	55% (392)	1.33 (1.01–1.75)	54% (246)	1.18 (0.87–1.59)
4th and 5th quintiles	74% (247)	1.43 (0.90–2.26)	52% (172)	1.19 (0.84–1.69)	54% (115)	1.20 (0.87–1.64)
Perceived racism (past year)		*P* = 0.003		*P* = 0.01		*P* = 0.45
No	75% (549)	1.0	55% (400)	1.0	51% (246)	1.0
Yes	68% (639)	0.70 (0.55–0.88)	49% (454)	0.77 (0.63–0.94)	54% (295)	1.10 (0.86–1.41)
Unable to buy food or other essentials because of money spent on cigarettes (past 6 months)		*P* = 0.14		*P* < 0.001		*P* = 0.004
No	70% (896)	1.0	48% (609)	1.0	53% (403)	1.0
Yes	74% (278)	1.24 (0.93–1.67)	59% (220)	1.55 (1.20–2.01)	43% (108)	0.67 (0.51–0.88)
Ever unable to buy cigarettes because of having no money		*P* = 0.17		*P* = 0.007		*P* < 0.001
Never	68% (352)	1.0	44% (228)	1.0	61% (181)	1.0
Some or most of the time	72% (766)	1.21 (0.93–1.57)	52% (547)	1.37 (1.09–1.71)	44% (286)	0.49 (0.36–0.67)
Dedicated tobacco control resources at project site		*P* < 0.001		*P* = 0.005		*P* = 0.78
No	62% (305)	1.0	45% (219)	1.0	53% (140)	1.0
Yes	75% (915)	1.83 (1.32–2.54)	54% (655)	1.45 (1.12–1.88)	52% (411)	0.96 (0.70–1.30)

OR = odds ratio. *Results are based on the Talking About The Smokes project baseline sample of current smokers (n = 1643) and ex-smokers who quit ⩽12 months before (n = 78) (total, n = 1721, or n = 874 for those who had tried to quit in the past year). †For those who had tried to quit in the past 5 years. ‡Percentages and frequencies exclude refused responses and "don't know" responses. ϟ*P* values for overall variable significance, using adjusted Wald tests. ◆

In contrast to the general Australian population, where there is no difference between the sexes in quitting activity,[7,13] Aboriginal and Torres Strait Islander men were less likely to have ever tried to quit or tried to quit in the past year, and they have been shown elsewhere to be less interested in quitting.[12] Given the prevalence of daily smoking was somewhat higher for Aboriginal and Torres Strait Islander men than women across each age group in 2012–2013,[2] this represents a considerable concern and challenge. Future tobacco control campaigns must increase the urgency and priority of quitting for both men and women.

Quitting activity was also lower among smokers who perceived they had experienced racism in the past year, strengthening previous findings regarding the link between racism and smoking.[14,15] The 2012 Australian Reconciliation Barometer showed that 84% of Aboriginal and Torres Strait Islander people and 78% of non-Indigenous people perceive that trust of one another is low or very low.[16] For some Aboriginal and Torres Strait Islander people, this distrust extends to mainstream health authorities.[17] These relationships may be critical to motivating and supporting quitting activity.[12,17,18] While supportive, non-discriminatory health services are a starting place to tackle racism, broader campaigns such as the National Anti-Racism Strategy could also play an important role.[19]

While it is encouraging that the presence of tobacco control resources at local health services was associated with greater quitting activity, access to these resources did not appear to improve the likelihood of sustaining a quit attempt. This is a reminder that a higher number of quit attempts is not alone associated with improved odds for successfully quitting, as those who try repeatedly are more likely to relapse.[20,21] A considerably higher proportion of Aboriginal and Torres Strait Islander daily smokers than those in the general population had been unable to sustain a quit attempt for longer than a week, which suggests the main challenge in reducing their prevalence of smoking lies in boosting quit success.

Consistent with international research,[22-24] smokers who live in remote areas, who had frequently been unable to afford cigarettes in the past month, and who had gone without food or other essentials because of money spent on cigarettes were as or more likely to have tried to quit than those who did not, but less likely to sustain a quit attempt. In part, these associations may be explained by higher levels of nicotine dependence, which has been shown to be associated with measures of disadvantage[25] and is predictive of early relapse.[7,25,26] Further, as for the broader population, smokers who live in remote and disadvantaged areas appear equally likely to be asked about their smoking by a health professional but may be less likely to use stop-smoking medications.[5,27,28]

However, while access to cessation support plays an important role, the high levels of psychological distress that are associated with chronic disadvantage are another important factor, which is likely to require action that extends beyond these services.[29,30] For example, there is some evidence that moving above the poverty line increases the chances of quitting successfully.[31] If the overall economic position of Aboriginal and Torres Strait Islander peoples can be raised, it has the potential to reduce smoking among future generations.[32]

Strengths and limitations

The associations presented here are all cross-sectional and should not be used to infer causation. The sample, while not random, is broadly representative, although using health services as the sampling frame is likely to have introduced some biases. It is likely that the TATS project participants were more closely connected to their health services than average, and thus had higher exposure to health professionals and anti-tobacco materials. However, the proportion of smokers who reported seeing a health professional in the past year was similar to that in the 2008 NATSISS, as was the proportion who had tried to quit in the past year.[4] With these considerations in mind, this study remains the most comprehensive exploration of quitting activity in Aboriginal and Torres Strait Islander smokers to date.

We chose to compare our results with the Australian ITC Project dataset, which was collected over several years (from 2006 to 2012), because it allowed us to compare TATS and ITC baseline surveys. While the prevalence of smoking in Australia declined over the decade to 2011–2012,[33] this was not reflected in quit attempts reported in the ITC Project dataset. Although comparisons of attempts to quit in the past year may be somewhat compromised by differences in question wording (Appendix 1), we think large differences due to wording are unlikely. Further, while past research suggests that many quit attempts are forgotten,[34] we have no reason to believe forgotten attempts would differ greatly across populations. Finally, our outcome for ever sustaining a quit attempt for 1 month or more was intended as an indicator of ability to sustain a quit attempt, not as a measure of quit success per se. Given the relatively high proportion of Aboriginal and Torres Strait Islander daily smokers who had never sustained a quit attempt for 1 week or longer, finding ways to improve quit success will be an important area of future research in this population, as it is for the general population.[35]

In conclusion, existing comprehensive tobacco control programs appear to be motivating Aboriginal and Torres Strait Islander smokers to try to quit, but do not appear to overcome challenges in sustaining quit attempts for more disadvantaged smokers and those from remote areas. Strengthening of support could usefully include broader policies that tackle poverty, racism and other causes of chronic stress.

Acknowledgements: The full list of acknowledgements is available in Appendix 2.

Competing interests: No relevant disclosures.

Provenance: Not commissioned; externally peer reviewed.

Received 17 Feb 2015, accepted 6 May 2015.

1 Vos T, Barker B, Stanley L, Lopez A. The burden of disease and injury in Aboriginal and Torres Strait Islander peoples 2003. Brisbane: School of Population Health, University of Queensland, 2007.

2 Australian Bureau of Statistics. Australian Aboriginal and Torres Strait Islander

Health Survey: updated results, 2012–13. Canberra: ABS, 2014. (ABS Cat. No. 4727.0.55.006.)

3 Australian Bureau of Statistics. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples, Oct 2010. Canberra: ABS, 2011. (ABS Cat. No. 4704.0.)

4 Thomas DP, Briggs VL, Couzos S, et al. Research methods of Talking About The Smokes: an International Tobacco Control Policy Evaluation Project study with Aboriginal and Torres Strait Islander Australians. *Med J Aust* 2015; 202 (10 Suppl): S5-S12.

5 Cooper J, Borland R, Yong HH. Australian smokers increasingly use help to quit, but number of attempts remains stable: findings from the International Tobacco Control Study 2002-09. *Aust N Z J Public Health* 2011; 35: 368-376.

6 Australian Institute of Health and Welfare. 2010 National Drug Strategy Household Survey report. Canberra: AIHW, 2011. (AIHW Cat. No. PHE 145; Drug Statistics Series No. 25.)

7 Vangeli E, Stapleton J, Smit ES, et al. Predictors of attempts to stop smoking and their success in adult general population samples: a systematic review. *Addiction* 2011; 106: 2110-2121.

8 Thomas D. National trends in Aboriginal and Torres Strait Islander smoking and quitting, 1994-2008. *Aust N Z J Public Health* 2012; 36: 24-29.

9 Couzos S, Nicholson AK, Hunt JM, et al. Talking About The Smokes: a large-scale, community-based participatory research project. *Med J Aust* 2015; 202 (10 Suppl): S13-S19.

10 Thompson ME, Fong GT, Hammond D, et al. Methods of the International Tobacco Control (ITC) Four Country Survey. *Tob Control* 2006; 15 (Suppl 3): iii12-iii18.

11 StataCorp. Stata survey data reference manual: release 13. College Station, Tex: StataCorp, 2013. http://www.stata.com/manuals13/svy.pdf (accessed Apr 2015).

12 Nicholson AK, Borland R, Davey ME, et al. Predictors of wanting to quit in a national sample of Aboriginal and Torres Strait Islander smokers. *Med J Aust* 2015; 202 (10 Suppl): S26-S32.

13 Partos TR, Borland R, Siahpush M. Socio-economic disadvantage at the area level poses few direct barriers to smoking cessation for Australian smokers: findings from the International Tobacco Control Australian cohort survey. *Drug Alcohol Rev* 2012; 31: 653-663.

14 Twyman L, Bonevski B, Paul C, Bryant J. Perceived barriers to smoking cessation in selected vulnerable groups: a systematic review of the qualitative and quantitative literature. *BMJ Open* 2014; 4: e006414.

15 Paradies Y. A systematic review of empirical research on self-reported racism and health. *Int J Epidemiol* 2006; 35: 888-901.

16 Reconciliation Australia. Australian Reconciliation Barometer 2012. Auspoll Research, 2012. https://www.reconciliation.org.au/wp-content/uploads/2013/12/2012-Australian-Reconciliation-Barometer-Report-by-Auspoll.pdf (accessed May 2015).

17 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: 565-581.

18 Johnston V, Thomas DP. What works in Indigenous tobacco control? The perceptions of remote Indigenous community members and health staff. *Health Promot J Austr* 2010; 21: 45-50.

19 Australian Human Rights Commission. National Anti-Racism Strategy and Racism. It Stops with Me Campaign. [internet]. Sydney: Australian Human Rights Commission; 2013 [updated Oct 2013]. https://www.humanrights.gov.au/national-anti-racism-strategy-and-racism-it-stops-me-campaign (accessed Apr 2015).

20 Borland R, Yong HH, Balmford J, et al. Motivational factors predict quit attempts but not maintenance of smoking cessation: findings from the International Tobacco Control Four country project. *Nicotine Tob Res* 2010; 12 Suppl: S4-S11.

21 Partos TR, Borland R, Yong HH, et al. The quitting rollercoaster: how recent quitting history affects future cessation outcomes (data from the International Tobacco Control 4-country cohort study). *Nicotine Tob Res* 2013; 15: 1578-1587.

22 Siahpush M, Yong HH, Borland R, et al. Smokers with financial stress are more likely to want to quit but less likely to try or succeed: findings from the International Tobacco Control (ITC) Four Country Survey. *Addiction* 2009; 104: 1382-1390.

23 Caleyachetty A, Lewis S, McNeill A, Leonardi-Bee J. Struggling to make ends meet: exploring pathways to understand why smokers in financial difficulties are less likely to quit successfully. *Eur J Public Health* 2012; 22 Suppl 1: 41-48.

24 Siahpush M, Carlin JB. Financial stress, smoking cessation and relapse: results from a prospective study of an Australian national sample. *Addiction* 2006; 101: 121-127.

25 Thomas DP, Panaretto KS, Stevens M, Borland R. Dependence in a national sample of Aboriginal and Torres Strait Islander daily smokers *Med J Aust* 2015; 202 (10 Suppl): S39-S44.

26 Yong HH, Borland R, Balmford J, et al. Heaviness of smoking predicts smoking relapse only in the first weeks of a quit attempt: findings from the International Tobacco Control Four-Country Survey. *Nicotine Tob Res* 2014; 16: 423-429.

27 Thomas DP, Briggs VL, Couzos S, et al. Use of nicotine replacement therapy and stop-smoking medicines in a national sample of Aboriginal and Torres Strait Islander smokers and ex-smokers. *Med J Aust* 2015; 202 (10 Suppl): S78-S84.

28 Thomas DP, Bennet PT, Briggs VL, et al. Smoking cessation advice and non-pharmacological support in a national sample of Aboriginal and Torres Strait Islander smokers and ex-smokers. *Med J Aust* 2015; 202 (10 Suppl): S73-S77.

29 Siahpush M, McNeill A, Borland R, Fong GT. Socioeconomic variations in nicotine dependence, self-efficacy, and intention to quit across four countries: findings from the International Tobacco Control (ITC) Four Country Survey. *Tob Control* 2006; 15: Suppl 3: iii71-iii75.

30 Kotz D, West R. Explaining the social gradient in smoking cessation: it's not in the trying, but in the succeeding. *Tob Control* 2009; 18: 43-46.

31 Young-Hoon K-N. A longitudinal study on the impact of income change and poverty on smoking cessation. *Can J Public Health* 2012; 103: 189-194.

32 Gilman S, Abrams D, Buka S. Socioeconomic status over the life course and stages of cigarette use: initiation, regular use, and cessation. *J Epidemiol Community Health* 2003; 57: 802-808.

33 Australian Bureau of Statistics. Australian Health Survey: updated results, 2011-2012: Tobacco Smoking. Canberra: ABS, 2013. (ABS Cat. No. 4364.0.55.003.)

34 Borland R, Partos TR, Yong HH, et al. How much unsuccessful quitting activity is going on among adult smokers? Data from the International Tobacco Control Four Country cohort survey. *Addiction* 2012; 107: 673-682.

35 Hajek P, Stead LF, West R, et al. Relapse prevention interventions for smoking cessation. *Cochrane Database Syst Rev* 2009 (1): CD003999. ■