Should a smoking question be added to the Australian 2021 census?

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Should a smoking question be added to the Australian 2021 census?

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Australia is a global leader in tobacco control policy. Daily smoking prevalence is low (12% of people aged 14 and over) and has been falling for decades.[1] However, tobacco continues to be responsible for the greatest burden of disease of all risk factors in Australia.[2] Many unachieved policy tasks and new challenges remain.

In 2009, the National Preventative Health Taskforce recommended the inclusion of "a question on smoking among Australians aged 18 years and over in the Australian census scheduled for 2011, 2016 and 2021".[3] In its formal response, the Australian Government noted smoking prevalence estimates are available from various surveys; however, the recommendation was not dismissed and it was referred to the Australian Bureau of Statistics (ABS).[4] No changes were made to any content in the 2011 and 2016 censuses. The ABS has commenced public consultation about the content of the 2021 census and may be open to changes; however – as always – the process of having a question added will be difficult and contested.

Smoking questions in Australian population health surveys

Australia currently monitors trends and patterning of smoking prevalence through regular population surveys. The National Drug Strategy Household Survey (NDSHS) includes questions about smoking behaviours as well as questions about attitudes to smoking in its triennial random multi-stage household survey of more than 20,000 participants, most recently in 2016.[1] Most participants self-complete the survey, which is dropped at the household and collected later. Some participants elect to complete the survey on the telephone, and 22% completed the survey online in 2016. Approximately 50% of those contacted complete the survey.

The ABS includes questions about smoking behaviours in its National Health Survey. It is a triennial random multi-stage household survey that asks questions about smoking behaviours of more than 15,000 participants, most recently in 2014/15.[5] Trained ABS interviewers conduct the surveys by personal interview. More than 80% of the contacted households adequately complete the surveys. The ABS also asks smoking questions in its triennial Aboriginal and Torres Strait Islander surveys. These alternate between health and social surveys; most recently the National Aboriginal and Torres Strait Islander Social Survey in 2014/15.[6] These are also random multi-stage household surveys conducted by personal interview, with response rates of 80% and higher, which ask questions about smoking behaviours of 5,000–10,000 participants in each survey. As sampling is based on the geographic distribution of the Aboriginal and Torres Strait Islander population, rather than the whole Australian population, they include a more adequate sample from remote and very remote areas.

People who are homeless or living in non-private dwellings (e.g. hotels, hostels, hospitals and prisons) are not included in these population surveys. Each survey produces smoking prevalence estimates weighted to the distribution of the Australian (or Aboriginal and Torres Strait Islander) population in the census.

The NDSHS and ABS surveys use a different series of questions to determine smoking status, as well as different modes of data collection. Nevertheless, the surveys provide similar descriptions of the downward trend in national smoking prevalence. However, the estimates for Aboriginal and Torres Strait Islander smoking prevalence highlight the limitations of population health surveys in understanding smoking prevalence in similar sub-groups where smoking is now increasingly concentrated. The 2016 NDSHS estimate of daily smoking prevalence among Aboriginal and Torres Strait Islander people aged 15 and over was 28%, compared to 39% in the 2014-15 National Aboriginal Torres Strait Islander Social Survey conducted by the ABS. The large NDSHS included a much smaller and less representative sample of Aboriginal and Torres Strait Islander people (only 568 participants aged 12 and over). While the ABS Aboriginal and Torres Strait Islander surveys address this limitation for estimates of the national Aboriginal and Torres Strait Islander smoking prevalence, these limitations remain for smaller geographic and age sub-groups of the Aboriginal and Torres Strait Islander population and for other population groups, such as those from various cultural/language backgrounds, types of severe economic disadvantage and sub-groups of the LGBTI population. More accurate estimates of prevalence for each of these groups could be achieved with a smoking question in the census.

Lessons from smoking questions in the New Zealand census

Many years ago in these pages, Frank Houghton from New Zealand and David Hill from Australia discussed the potential for New Zealand to be a model for wider inclusion of smoking questions in national censuses.[7,8] The New Zealand 1976 and 1981 censuses asked people aged 15 years and over: 1) whether they currently, formerly or never smoked cigarettes regularly (daily); and 2) how many cigarettes they had smoked yesterday.[9] No smoking questions were included in the next two censuses but, following advocacy by tobacco control specialists, revised smoking questions have been included in the 1996, 2006 and 2013 censuses.[9,10] All three have asked the same two questions: 1) do you smoke cigarettes regularly (that is, one or more a day)?; and 2) have you ever been a regular smoker of one or more cigarettes a day? The question about the number of cigarettes smoked was dropped due to concerns about reliability.[9] Respondents are advised to count only

tobacco cigarettes, and not count pipes, cigars or cigarillos.

There are clear lessons for Australia from a recent comparison of the strengths of the New Zealand census and population health surveys to monitor smoking trends.[10] As the census includes almost the entire population, it allows more detailed analyses of the social patterning of smoking with no sampling error. It would enable accurate estimates of smoking prevalence for small geographical areas and small sub-populations. This is becoming of increasing value, as smoking is increasingly concentrated in disadvantaged groups, and as tobacco control needs to increasingly use more finely targeted methods, as opposed to blanket approaches.[11] For example, most of the funding for the national Tackling Indigenous Smoking program is spent on 37 regional teams.[12] Currently, these regional teams do not have accurate local data that could be used for local advocacy, to assess progress or to evaluate progress compared to areas without regional teams. In New Zealand, researchers have used microsimulation models based on responses to smoking questions in a population health survey to estimate smoking prevalence in small areas. However, in one-quarter of the areas, the estimate had more than 10% error compared to the census results, suggesting this is not yet an adequate solution.[13]

The New Zealand Census-Mortality Study has linked census and mortality data, enabling the census smoking data to be used by researchers to determine the mortality among non-smokers living with smokers, the changing smoking–mortality association over time across social groups, and the contribution of smoking to mortality inequalities, and also to model the impacts of different policies.[14-17] In Australia, the 2011 census has been linked with death registrations, with similar plans for future censuses, which would enable similar research if a smoking question was added to the Australian census.[18]

There remain some important potential limitations of the census smoking estimates.[10] Smokers may be over-represented among those who do not complete the census or who do not correctly complete the smoking question. However, when the census is completed online, built-in editing can ensure there are fewer invalid responses to individual smoking questions compared to self-administered paper forms.

A smoking question in the Australian census

Australia is committed to monitoring trends in smoking as part of its obligations as a signatory to the Framework Convention on Tobacco Control.[19] A census question would enable more accurate measures of smoking prevalence for increasingly small geographic areas and population subgroups. The additional information that would come from analyses of a smoking question in future Australian censuses is not possible with existing population health surveys. For efficiency, it may be necessary to only include a single question, such as 'Do you currently smoke regularly, that is at least once a day?' The wording should be as close as possible to either the NDSHS or ABS surveys to facilitate comparisons and calibration of the population health survey results. It would be useful, but of lesser practical priority, to include further questions to enable estimation of numbers of both daily and non-daily smokers, as well as ex-smokers and never-smokers. The population health surveys would complement the census by providing more frequent monitoring of national trends in smoking prevalence, and more nuanced understanding of smoking and quitting behaviours and attitudes, through the analyses of their related smoking questions.

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