

# Inclusivity in Australian population surveys: missed opportunities to understand the health experiences of culturally and linguistically diverse populations

Population surveys are crucial to public health research, offering critical information on morbidity at a population level, health service use, and attitudes and intentions regarding health outcomes and behaviours. In Australia, population surveys are widely used to identify emerging health needs and their determinants and are vital in informing health policies and programs. Despite their geographic representation, these surveys often fail to adequately represent the diversity within Australia’s culturally and linguistically diverse (CALD) populations. This impedes understanding of health patterning among these populations. It prevents the identification of unique disease patterns, predictive risk factors, preferences for engaging with health services, and barriers to care that these communities encounter,<sup>1</sup> and potentially obscures our understanding of health inequalities among different groups.<sup>2</sup> In this perspective, we highlight the imperative for population surveys to improve their inclusivity and thereby enable

more comprehensive understanding of the needs of CALD groups. We discuss the implications of the non-inclusiveness of CALD populations and propose a way forward to ensure better representation and inclusion in these surveys.

The term “CALD communities” is unique to the Australian context. In 1996, it was first used to describe the diversity within the Australian population, replacing the term “non-English speaking backgrounds”, which was criticised for being non-inclusive.<sup>3</sup> The Australian Bureau of Statistics (ABS) defines the CALD population using a set of minimum core cultural and language indicators (four items) and 12 standard indicators (including the four core items) representing diversity within these groups (Box 1).<sup>9</sup> Most Australian surveys comply with the minimum core data, with very few reporting all 12 standard indicators, noting that some report “country of birth” and “language spoken at home” with aggregate, broad

## 1 Cultural and language indicators across population surveys

ABS standards for cultural and language variable	Census <sup>4</sup>	HILDA <sup>5</sup>	National Health Survey (microdata) <sup>6</sup>	National Mental Health and Wellbeing Survey 2021 <sup>7</sup>	Australian Longitudinal Study on Male Health, Ten to Men (Wave 1) <sup>8</sup>
<b>Minimum core data</b>					
Country of birth of person	Yes	Yes	Yes	Yes	Yes (L)
Proficiency in spoken English	Yes	Yes	Yes	Yes	Yes
Main language other than English spoken at home	Yes	Yes (L)	Yes	Yes	Yes (L)
Indigenous status	Yes	Yes	Yes	Yes	Yes
<b>Standard data (non-core)</b>					
Country of birth of person	Yes	Yes	Yes	Yes	Yes (L)
Proficiency in spoken English	Yes	Yes	Yes	Yes	Yes
Main language other than English spoken at home	Yes	Yes (L)	Yes	Yes (L)	Yes (L)
Indigenous status	Yes	Yes	Yes	Yes	Yes
Ancestry	Yes	No	No	No	No*
Country of birth of father	Yes	Yes	Yes	No	Yes (L)
Country of birth of mother	Yes	Yes	Yes	No	Yes (L)
First language spoken	Yes	Yes	Yes	No	Yes
Languages spoken at home	Yes	Yes (L)	Yes	Yes	Yes (L)
Main language spoken at home	Yes	Yes	Yes	Yes (L)	Yes (L)
Religious affiliation	Yes	Yes (L)	No	No	No
Year of arrival in Australia	Yes	Yes	Yes	Yes	No

ABS = Australian Bureau of Statistics; HILDA = Household, Income and Labour Dynamics in Australia; L = limited country of birth information (Standard Australia Classification of Countries [SACC]; two digits). \* Ancestry is now included in the most recent Wave 4.<sup>8</sup> ◆

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categories rather than specific countries or languages. English language proficiency and Indigenous status are part of the minimum core data reported in all surveys (Box 1).

There are two principal ways by which population surveys miss opportunities to adequately capture the experiences of CALD populations: (i) under-representation of vulnerable groups and (ii) overlooking critical diversity indicators. The lack of inclusion of CALD populations in clinical trials and other research designs has garnered significant attention in recent years.<sup>10-12</sup> Two studies<sup>13,14</sup> shed light on how diverse population groups are often excluded in academic research at the design stage, and when these groups are sampled, analysis is rarely stratified by CALD groups to enable meaningful insights into the experiences of these groups. We argue that such issues extend to Australian population surveys, which are typically underpowered to conduct advanced analysis on the health-related outcomes of CALD population groups. This is particularly important for marginalised groups (within CALD populations) whose health outcomes may be affected by limited health literacy or delayed access to health services.<sup>15</sup> The Household, Income and Labour Dynamics in Australia (HILDA) sought to address the under-representation of CALD and migrant groups by recruiting a top-up sample in 2011.<sup>5</sup> Despite this, it remains underpowered to undertake complex CALD subgroup analysis.<sup>16</sup> Linked data are often promoted as an alternative to these surveys for investigating diverse populations' health outcomes; its utility is hampered by limited access and inconsistent linkage quality for some databases.<sup>17</sup> We draw on four current and ongoing population surveys<sup>5-8</sup> (Box 1) to show the under-representation of vulnerable CALD groups and diversity indicators in these surveys.

### Under-representing the most vulnerable CALD groups

Although population representative, many Australian surveys are not inclusive of some of

the most vulnerable groups of CALD populations. Most prominently, people with limited language proficiency and Australia's temporary residents are under-represented. The ABS Census 2016 reported that 3.7% of Australians have limited English language proficiency (Box 2). Yet, most of the surveys either completely exclude people with limited English language proficiency or do not include enough people (0.8–2.5%) to reflect national representation.<sup>4</sup> Similarly, CALD migrants with limited English proficiency make up 17% of the Australian CALD population, yet this group represents only 5–12% of the sample of population surveys (Box 2). Lack of English proficiency is one of the most common predictors of poor health service engagement among CALD communities<sup>15,18</sup> — not being able to include them in such surveys may underestimate the true prevalence of health issues in CALD communities and miss opportunities to identify ways to address their health needs. Similarly, CALD temporary residents are also excluded as part of the selection criterion (Box 2) despite numbering more than 800 000 people.<sup>19</sup> Although the exclusion of temporary workers may be justified for longitudinal research, given that they may not be present for follow-up, their absence in cross-sectional surveys means that we know little about the health needs and outcomes of this disadvantaged group. However, we know that limited health coverage, poor health literacy, and precarious working conditions are greater in these groups, placing them at an increased risk of poorer health outcomes.<sup>20,21</sup> By excluding marginalised groups, these surveys cannot adequately capture the health needs and issues among CALD groups.

### Overlooking critical diversity indicators

Among the 12 standard cultural and language indicators, only one variable, "year of arrival", provides some information on migration (Box 1). This indicator is reported in the Census and some surveys but not others.<sup>8</sup> The HILDA survey provides information on most standard indicators including migration status

## 2 Culturally and linguistically diverse (CALD) representation in population surveys

	Individuals from CALD backgrounds*	Individuals with limited English language proficiency†	CALD migrants‡	CALD migrants with limited English language proficiency	Temporary migrants
Census 2016 <sup>4</sup>	25.3%	3.7%	19.2%	15.6%	837 322 <sup>§</sup>
National Health Survey (2017–18) <sup>6</sup> (unweighted)	18.2%	2.3%	16.5%	12.2%	Excluded
Household, Income and Labour Dynamics in Australia <sup>5</sup> (pooled)	12.9%	2.5%	12.6%	10.9%	Excluded
National Mental Health and Wellbeing Survey 2021 <sup>7</sup> (unweighted)	19.3%	0.9%	18.5%	5.1%	Excluded
Australian Longitudinal Study on Male Health, Ten to Men <sup>8</sup> (Wave 1) (unweighted)	14.3%	0.83%	13.5%	5.5%	Excluded

\* Individuals from CALD backgrounds: people born in countries other than Australia or main English-speaking countries (the United Kingdom, New Zealand, Canada, the United States, Ireland and South Africa), or speak a language other than English if born in Australia or in an English-speaking country. † Individuals with limited English language proficiency: speaks English (not well, not at all). ‡ CALD migrants: people born in non-English speaking countries (see \* above). § Australian Census and Temporary Entrants, 2016. ◆

on arrival (of primary applicant and family), and also contains a separate variable to identify refugee or humanitarian entrants.<sup>5</sup> Migration status at the time of arrival is an important predictor of long term health conditions<sup>17</sup> — not including this information in population surveys may affect our ability to accurately measure health outcomes or potential health disparities experienced by CALD migrant populations.<sup>17</sup>

Another critical diversity indicator is ethnicity, a measure not routinely collected in Australia. Despite “ancestry” being part of standard data, as advised by the ABS, it has not been collected in most surveys. The latest Australian longitudinal study on male health wave now includes ancestry information in Wave 4.<sup>8</sup> Parents’ country of birth is commonly reported in Australian surveys and is often used as a proxy measure of ethnic or cultural background. However, the information derived from these measures may not accurately reflect ethnicity for some groups, such as third-generation migrants or those who may have a different ethnic identity.<sup>22</sup> The availability of self-reported ethnicity measures<sup>22</sup> in these surveys will not only resolve the problem of using proxy measures to create an indicator but will also substantially improve the comparability of studies. Countries with multicultural populations have successfully used self-reported ethnicity indicators, which could be effectively adapted for Australian surveys.<sup>23,24</sup>

### Key recommendations

As a multicultural nation, it is imperative, that population surveys are inclusive and reflect the diversity within Australian multicultural communities. To do this, we must first ensure that people with limited English language proficiency and temporary workers are sampled and represented in surveys. Second, we should adequately measure the diverse identities of our population. We recommend two modifications to the ABS standard for cultural and language variables: one is “self-reported ethnicity” as a minimum core data item, and “migration category on arrival” as a standard indicator (Box 3). These indicators can then be adapted across all population surveys. Combining ethnicity, migration status, country of birth, and language proficiency variables will significantly enhance precision in identifying and addressing the health and other needs of Australia’s diverse population groups.

In addition, it may be beneficial to establish a separate longitudinal cohort of CALD populations that is representative of Australian multicultural populations. The cohort should measure a wide range of health outcomes using inclusive survey measures and research designs, which could not only address the CALD representation issues we have with current surveys but will also provide a richer understanding of the health needs and outcomes within these communities. These steps are integral to the inclusivity of population surveys and will enable them to truly reflect the Australian population and simultaneously provide robust insights into the health of CALD populations in Australia.

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### 3 Recommended variable to be adapted

#### ABS standards for cultural and language variable

##### Minimum core data

- Country of birth of person
- Proficiency in spoken English
- Main language other than English spoken at home
- Indigenous status
- Self-reported ethnicity\*

##### Standard data (non-core)

- Country of birth of person
- Main language other than English spoken at home
- Proficiency in spoken English
- Indigenous status
- Ancestry
- Country of birth of father
- Country of birth of mother
- First language spoken
- Languages spoken at home
- Main language spoken at home
- Religious affiliation
- Year of arrival in Australia
- Migration status on arrival\*

ABS = Australian Bureau of Statistics. \* Recommended additional variables. ◆

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