

Fiona F Stanaway¹, Lin Zhu¹, Sarah Aitken¹, Louisa Jorm², Michelle Dickson¹, Andrew Wilson¹, Saman Khalatbari-Soltani¹, Ben Hsu³, Carmen Huckel Schneider¹, Leonard Kritharides¹

¹The University of Sydney, Sydney, Australia, ²Centre for Big Data Research in Health, UNSW, Sydney, Australia, ³Harvard Medical School, Boston, USA

We have identified CVD inequalities in populations that are often poorly identified in large datasets such as those of Arab ethnicity

BACKGROUND

Australia has recently updated its guidelines for the management of cardiovascular disease (CVD). This includes the introduction of a new risk calculator based on New Zealand data. However, this involved removal of ethnicity from the New Zealand risk equations because of lack of readily available ethnicity data to use for calibration purposes.

METHODS

We have linked the 2016 Australian Census to the death registry for the whole of Australia (approx. 21 million people) and to hospital and deaths data for the state of New South Wales (NSW) (approx. 7 million people). The Census provides data on self-reported ancestry which is Australia's current approach to the measurement of ethnicity. This enabled estimation of CVD incidence rates by ethnicity for the state of NSW.

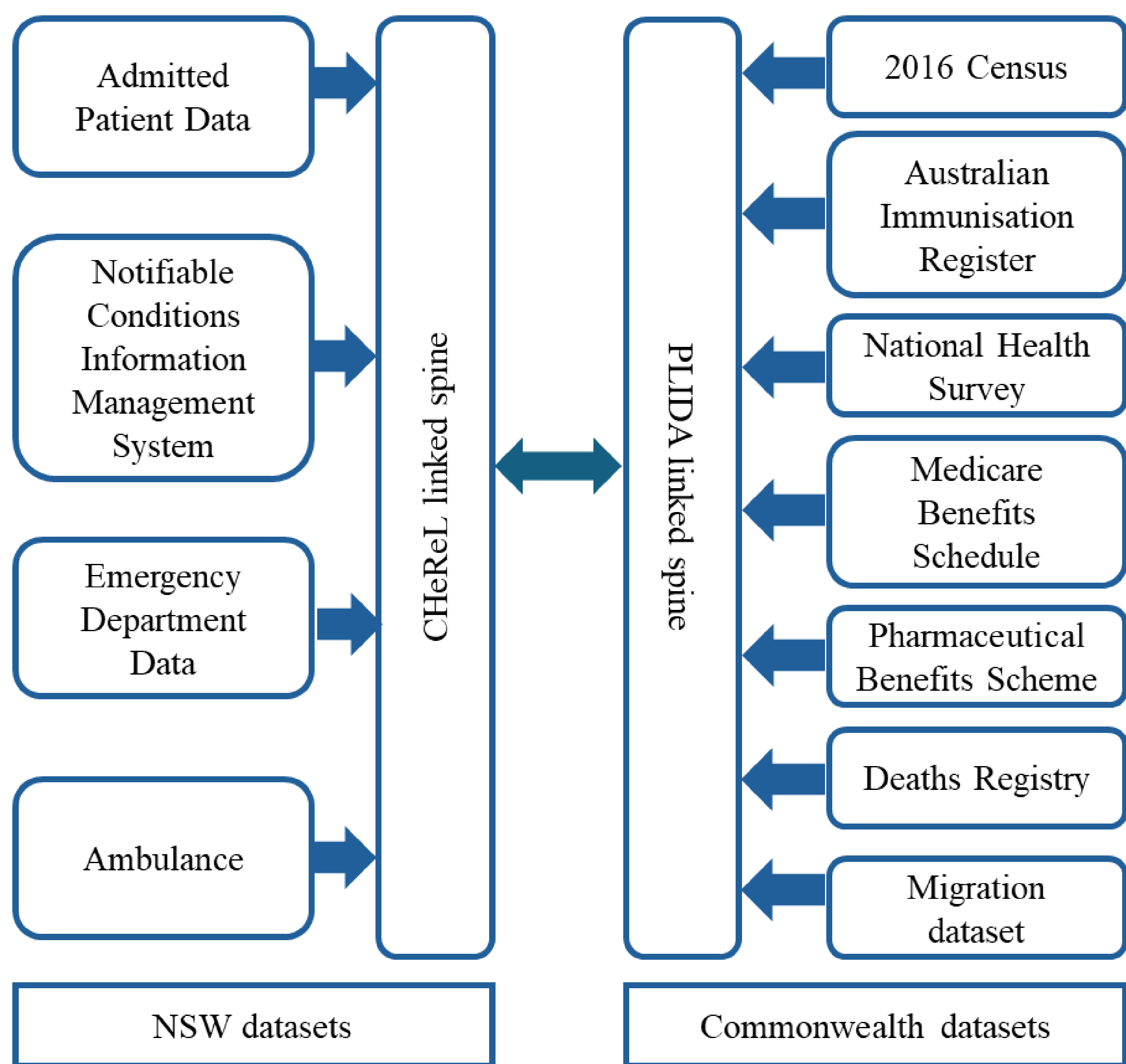


Figure 1: Data linkage process between NSW datasets and commonwealth datasets

*PLIDA: Person Level Integrated Data Asset, CHeReL: The Centre for Health Record Linkage

RESULTS

We found higher CVD incidence in those of Māori, Pasifika (Melanesian and Papuan, and Polynesian) and South Asian ethnicity. We also found substantially higher CVD incidence in those of Arab ethnicity compared to the population average. CVD incidence also appeared slightly higher in some Eastern and South-Eastern European groups.

RESULTS CONTINUED

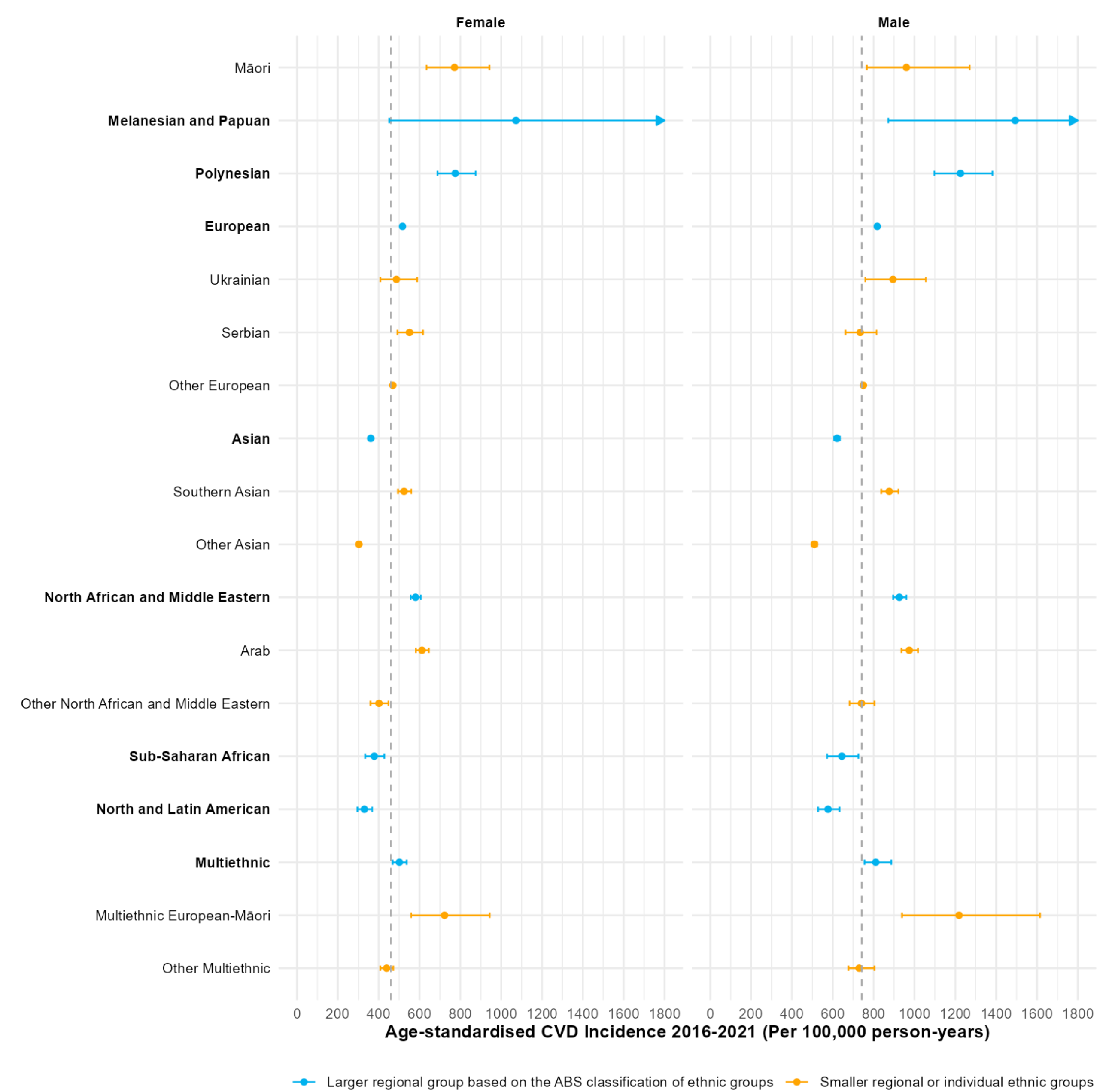


Figure 2: Incidence of cardiovascular disease by ethnicity in NSW (n=6,307,026)

*We combined together ethnic groups from similar regions where data showed no importance difference in CVD incidence rates. Where differences were evident, we used more granular ethnicity categories.

*Dotted line indicates population average incidence rate.

CONCLUSIONS

Our findings of higher CVD incidence in those of Māori, Pasifika and South Asian ethnicity support the findings of elevated CVD incidence in these groups in New Zealand. However, the greater population size of Australia and the increased granularity of ethnicity categories has enabled us to identify additional ethnic groups that are of increased risk of CVD. Of particular importance is the ability to identify higher CVD incidence in the Arab population who are rarely identified in many international ethnicity classification systems.

ADDITIONAL KEY INFORMATION

Author Contact Information: fiona.stanaway@sydney.edu.au

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Conflicts of Interest: Nil