

Artery Research Vol. **26(S1**); 2020, *p*. S19 DOI: https://doi.org/10.2991/artres.k.201209.014; ISSN 1872-9312; eISSN 1876-4401 https://www.atlantis-press.com/journals/artres



Conference Abstract YI 2.6 Comparison of Cardiovascular Disease Primary Prevention Guidelines between Australia, England and the United States

Niamh Chapman^{1,*}, Monique Breslin¹, Sarah Lay-Flurrie², Zhen Zhou¹, James Sharman¹, Mark Nelson¹, Richard McManus²

¹University of Tasmania, 1Menzies Institute for Medical Research ²University of Oxford, 2Nuffield Department of Primary Care Health Sciences

Keywords Lipid hypertension obesity

ABSTRACT

Objective: Cardiovascular disease (CVD) primary prevention guidelines recommend absolute CVD risk estimation to guide blood pressure and lipid therapy recommendations but are inconsistent despite relying on similar evidence. This study aimed to compare the populations recommended for treatment according to guidelines in Australia, England and the United States.

Methods: Cross-sectional analysis of national health survey data from Australian, English and United States (n = 4,056; n = 2,994; n = 2,943; respectively) adults aged ≥ 40 years. Participants were classified as recommended for therapy based on clinical characteristics denoting high risk and absolute CVD risk stratification according to each country's guidelines [1–6]. Agreement in therapy recommendation assessed by Kappa statistic.

Results: Agreement in therapy recommendation was minimal to weak ($\kappa = 0.35-0.54$). Proportions recommended for either blood pressure or lipid lowering treatment ranged between 26–32%, 47–52% and 43–47% in Australia, England and United States. There was minimal to strong agreement in therapy recommendation according to clinical criteria ($\kappa = 0.38-0.83$) and minimal to moderate agreement according to absolute CVD risk ($\kappa = 0.28-0.64$) across guidelines.

Conclusion: Despite similar evidence apparently underpinning guidance, there is little agreement in the populations targeted for CVD primary prevention with Australia recommending far few people for treatment in comparison to England or the United States. This is due to differences in both clinical characteristics considered high risk and absolute CVD risk stratification. Whilst different countries may adopt different policies on the appropriate level of risk to target, these findings suggest a need to develop international consensus definition for high CVD risk in primary prevention guideline.

REFERENCES

- [1] NVDPA. Guidelines for the management of absolute cardiovascular disease risk. 2012.
- [2] Gabb GM, Mangoni AA, Anderson CS, Cowley D, Dowden JS, Golledge J, et al. Guideline for the diagnosis and management of hypertension in adults — 2016. Med J Aust 2016;205:85–9.
- [3] NICE. Hypertension in adults: diagnosis and management. NICE guideline [NG136]. 2019.
- [4] NICE. Cardiovascular disease: risk assessment and reduction, including lipid modification. Clinical guideline [CG181]. 2014.
- [5] Whelton PK, Carey RM, Aronow WS, Casey DE, Collins KJ, Dennison Himmelfarb C, et al. 2017 ACC/AHA/AAPA/ABC/ ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/American Heart Association Task Force on clinical practice guidelines. J Am Coll Cardiol 2018;71:e127–e248.
- [6] Arnett DK, Blumenthal RS, Albert MA, Buroker AB, Goldberger ZD, Hahn EJ, et al. 2019 ACC/AHA guideline on the primary prevention of cardiovascular disease : a report of the American College of Cardiology/American Heart Association Task Force on clinical practice guidelines. Circulation 2019;140:e596–e646.
 - © 2020 Association for Research into Arterial Structure and Physiology. Publishing services by Atlantis Press International B.V. This is an open access article distributed under the CC BY-NC 4.0 license (http://creativecommons.org/licenses/by-nc/4.0/).