



Appendix

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Appendix to: Banks E, Crouch SR, Korda RJ, et al. Absolute risk of cardiovascular disease events and blood pressure- and lipid-lowering treatment in Australia. *Med J Aust* 2016; 204: 320. doi: 10.5694/mja15.01004.

SUPPLEMENTARY MATERIAL

Additional detail regarding methods

The Australian Health Survey was conducted using a stratified multistage area sample of private dwellings, covering about 97% of the people living in Australia. A total of 25,080 out of the 30,721 households approached (81.6%) took part (31,837 persons).

Self-reported and measured variables

Self-report of prior CVD was in response to the following question: "Including any conditions which can be controlled with medications, have you ever been told by a doctor or nurse that you have any heart or circulatory conditions?". A participant was considered to have prior CVD if they answered yes to this question and reported one or more of the following conditions from a defined list: ischaemic heart disease, heart failure, oedema, other heart disease (including atrial fibrillation/flutter), cerebrovascular disease, and diseases of arteries, arterioles and capillaries.

Within the limitations of the self-reported data available, this definition of prior CVD is designed to capture a substantial proportion of those with known atherosclerotic disease at the time of the survey. It is based on Australian Bureau of Statistics conventions and is somewhat broader than general clinical definitions; it includes traditional atherosclerotic diseases, such as coronary, cerebral and peripheral vascular disease, as well as conditions which are commonly atherosclerotic in underlying aetiology, such as heart failure and atrial fibrillation. Calculations from data provided by the Australian Bureau of Statistics indicate that in the median age category in the target age range (age 55-64 years), at least 85% of those categorised as having prior CVD reported angina, other ischaemic heart disease, heart failure and/or stroke, suggesting that the majority of individuals categorised as having prior CVD will have some form of atherosclerotic disease. Since under-reporting and over-reporting of prior CVD are both potential consequences of use of self-reported data, the direction and degree of any bias resulting from the use of self-reported data is difficult to quantify precisely.

Additional self-reported variables included those forming part of the formal risk assessment algorithm (e.g. smoking and diabetes, see Box 1, Table S1a, Table S1b); and other health-related variables considered to be important in a comprehensive CVD risk assessment but which do not form part of the formal algorithm, such as body mass index and alcohol consumption.

Fasting blood samples were taken and a range of assays conducted, including: glucose; HbA1c; total cholesterol; high density (HDL-C) and low density (LDL-C) lipoprotein cholesterol; and estimated glomerular filtration rate. A urine sample was taken; tests for microalbuminuria were conducted and the urinary albumin:creatinine ratio measured.

A participant was considered: to have diabetes if they had a fasting blood glucose ≥ 7.0 mmol/L and/or an HbA1c ≥ 48 mmol/mol ($\geq 6.5\%$), and/or were taking medication for diabetes; to have moderate or severe chronic kidney disease if their estimated glomerular filtration rate was < 45 ml/min/1.73 m²; and to have microalbuminuria if urinary albumin was > 20 mcg/min or albumin:creatinine > 2.5 mg/mmol for males or > 3.5 mg/mmol for females. Point measurements of estimated glomerular filtration rate were used to ascertain chronic kidney disease as repeated measures were not available.

Medication review

Respondents were encouraged to have all of their medicines with them and were asked for the names or brands of all medications they had taken in the last two weeks, which were coded to the World Health Organization Anatomical Therapeutic Chemical (ATC) Classification System.¹ BP-lowering medication included ATC codes C02 (antihypertensives), C03 (diuretics), C07 (beta blocking agents), C08 (calcium channel blockers) and C09 (agents acting on the renin-angiotensin system). Lipid-lowering medication included ATC code C10 (lipid lowering agents: plain and combinations).

Ascertainment of absolute risk of a primary CVD event

The National Vascular Disease Prevention Alliance algorithm is only applied to those without prior CVD, and assesses an individual's risk of a global CVD event in the next 5 years, with global CVD defined as: coronary heart disease (myocardial infarction, coronary insufficiency, new angina, coronary death); cerebrovascular disease (ischaemic or haemorrhagic stroke, or transient ischaemic attacks); peripheral vascular disease (intermittent claudication); and heart failure.²

While the algorithm has been validated on people aged 45-74,³ we also report separately on outcomes in those aged 18-44 and those aged ≥ 75 years. Respondents who were missing data on prior CVD or on any components of the risk assessment algorithm, including factors in the Framingham CVD risk equation (see below), were excluded from the analyses (n=1,059).

Following the algorithm, among those with no prior CVD, those with the following characteristics were automatically categorised as high risk: diabetes and > 60 years old; diabetes with microalbuminuria; moderate or severe chronic kidney disease; systolic BP ≥ 180 mmHg; diastolic BP ≥ 110 mmHg; or a serum total cholesterol > 7.5 mmol/L. Although familial hypercholesterolaemia is usually part of this assessment, it was not captured in the NHMS.

Participants without prior CVD who did not meet the criteria for automatically being classified as at high risk then had their absolute cardiovascular risk calculated based on the Framingham equation, which includes consideration of their age, sex, current smoking status, diabetes status, systolic BP, and total cholesterol to HDL ratio.⁴ Among those without prior CVD, the final high risk

category included those automatically at high risk and those rated as high risk by the Framingham risk equation.

Sample weighting

Population weights were calibrated against population benchmarks to ensure that the survey estimates conform to independently estimated distributions of the population rather than to the distribution within the sample itself.¹ A large number of factors were considered in the weighting, with the final weighting calibrated based on age, sex, state and part of state (major city, regional, remote). The NHMS has a lower proportion of current smokers compared to the Australian Health Survey. An investigation to determine whether the difference in smoking rates between the NHMS sample and the larger Australian Health Survey sample would impact CVD absolute risk scores found that it was not large enough to materially influence the results. There were negligible effects of weighting by other factors.

References

1. Australian Bureau of Statistics. Australian Health Survey: Users' Guide, 2011-13 Canberra2013 <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4363.0.55.001> (accessed May 2015).
2. D'Agostino RB, Sr., Vasan RS, Pencina MJ, et al. General cardiovascular risk profile for use in primary care: the Framingham Heart Study. *Circulation*. 2008; 117: 743-753.
3. National Vascular Disease Prevention Alliance. Guidelines for the management of absolute cardiovascular disease risk Canberra: NVDPA; 2012 http://strokefoundation.com.au/site/media/AbsoluteCVD_GL_webready.pdf (accessed March 2014).
4. National Prescribing Service Limited. Australian Absolute Cardiovascular Disease Risk Calculator Functional Specifications. Surry Hills: 2009.

Table S1a. Weighted proportions (%) of the Australian men without prior CVD with individual CVD risk factors, by age group

| Age group | Males without prior CVD | | | | |
|---|-------------------------|-------|-------|------|-----------|
| | 45-54 | 55-64 | 65-74 | 75+ | Total 45+ |
| | % | | | | |
| Smoking status | | | | | |
| Never smoked | 43.3 | 41.6 | 38.1 | 28.1 | 40.2 |
| Ex-smoker | 42.1 | 45.0 | 53.8 | 68.5 | 48.0 |
| Current smoker | 14.6 | 13.4 | 8.2 | 3.4 | 11.8 |
| Systolic blood pressure | | | | | |
| < 120 mmHg | 42.1 | 25.3 | 20.3 | 19.0 | 30.4 |
| 120-139 mmHg | 40.0 | 44.1 | 41.0 | 39.2 | 41.4 |
| 140-179 mmHg | 17.8 | 28.8 | 37.3 | 34.4 | 26.6 |
| ≥ 180 mmHg | 0.1 | 1.8 | 1.4 | 7.4 | 1.7 |
| Diastolic blood pressure | | | | | |
| < 90 mmHg | 79.8 | 79.4 | 86.8 | 90.5 | 82.1 |
| 90-109 mmHg | 20.0 | 19.9 | 12.4 | 8.2 | 17.3 |
| ≥ 110 mmHg | 0.2 | 0.6 | 0.8 | 1.3 | 0.6 |
| Low density lipoprotein cholesterol | | | | | |
| < 2.0 mmol/L | 1.9 | 6.8 | 10.6 | 15.9 | 6.6 |
| 2.0-3.5 mmol/L | 49.8 | 51.3 | 54.2 | 60.2 | 52.2 |
| > 3.5 mmol/L | 48.3 | 41.9 | 35.2 | 23.9 | 41.2 |
| High density lipoprotein cholesterol | | | | | |
| ≥ 1.0 mmol/L | 80.8 | 81.2 | 81.5 | 83.3 | 81.3 |
| < 1.0 mmol/L | 19.2 | 18.8 | 18.5 | 16.7 | 18.7 |
| Total cholesterol | | | | | |
| < 4.0 mmol/L | 5.2 | 8.8 | 15.0 | 25.5 | 10.3 |
| 4.0-7.5 mmol/L | 92.3 | 89.9 | 83.3 | 73.3 | 87.8 |
| > 7.5 mmol/L | 2.6 | 1.3 | 1.7 | 1.2 | 1.9 |
| Total cholesterol:high density lipoprotein cholesterol ratio | | | | | |
| < 4.5 | 46.2 | 56.8 | 63.1 | 72.3 | 55.5 |
| 4.5-5.9 | 37.7 | 31.4 | 27.1 | 21.6 | 32.0 |
| ≥ 6 | 16.1 | 11.8 | 9.8 | 6.1 | 12.5 |
| Diabetes | 6.4 | 9.9 | 18.5 | 14.8 | 10.7 |
| Diabetes with microalbuminuria | 1.3 | 2.5 | 7.1 | 7.3 | 3.4 |
| Moderate to severe chronic kidney disease | 0.1 | 0.5 | 1.8 | 6.8 | 1.3 |

Table S1b. Weighted proportions (%) of Australian females without prior CVD with individual CVD risk factors, by age group

| Age group | Females without prior CVD | | | | |
|---|---------------------------|-------|-------|------|-----------|
| | 45-54 | 55-64 | 65-74 | 75+ | Total 45+ |
| | % | | | | |
| Smoking status | | | | | |
| Never smoked | 52.7 | 55.4 | 60.0 | 64.4 | 56.5 |
| Ex-smoker | 33.6 | 32.6 | 34.0 | 33.5 | 33.4 |
| Current smoker | 13.6 | 12.0 | 6.0 | 2.1 | 10.2 |
| Systolic blood pressure | | | | | |
| < 120 mmHg | 56.2 | 40.9 | 21.8 | 14.7 | 39.8 |
| 120-139 mmHg | 32.0 | 36.3 | 40.8 | 40.7 | 36.1 |
| 140-179 mmHg | 11.4 | 22.6 | 34.5 | 40.1 | 22.8 |
| ≥ 180 mmHg | 0.3 | 0.2 | 2.9 | 4.4 | 1.3 |
| Diastolic blood pressure | | | | | |
| < 90 mmHg | 86.0 | 89.0 | 86.9 | 91.9 | 87.9 |
| 90-109 mmHg | 13.6 | 10.9 | 12.6 | 7.8 | 11.8 |
| ≥ 110 mmHg | 0.4 | 0.1 | 0.6 | 0.3 | 0.3 |
| Low density lipoprotein cholesterol | | | | | |
| < 2.0 mmol/L | 2.2 | 1.4 | 7.8 | 9.7 | 3.9 |
| 2.0-3.5 mmol/L | 55.0 | 44.2 | 49.5 | 59.5 | 51.1 |
| > 3.5 mmol/L | 42.8 | 54.5 | 42.7 | 30.8 | 45.0 |
| High density lipoprotein cholesterol | | | | | |
| ≥ 1.0 mmol/L | 96.2 | 97.9 | 97.3 | 97.6 | 97.1 |
| < 1.0 mmol/L | 3.8 | 2.1 | 2.7 | 2.4 | 2.9 |
| Total cholesterol (a) | | | | | |
| < 4.0 mmol/L | 4.3 | 3.7 | 7.0 | 7.7 | 5.1 |
| 4.0-7.5 mmol/L | 93.3 | 93.1 | 90.3 | 90.6 | 92.3 |
| > 7.5 mmol/L | 2.4 | 3.2 | 2.7 | 1.7 | 2.6 |
| Total cholesterol:high density lipoprotein cholesterol ratio | | | | | |
| < 4.5 | 77.7 | 78.2 | 83.4 | 85.3 | 79.9 |
| 4.5-5.9 | 19.3 | 17.1 | 13.7 | 12.8 | 16.7 |
| ≥ 6 | 3.0 | 4.7 | 2.9 | 1.9 | 3.4 |
| Diabetes | 3.1 | 6.5 | 10.8 | 8.6 | 6.3 |
| Diabetes with microalbuminuria | 0.3 | 0.3 | 2.1 | 1.4 | 0.8 |
| Moderate to severe chronic kidney disease | 0.0 | 0.1 | 1.1 | 5.3 | 0.9 |

Table S2. Estimated proportion and number of individuals aged 45-74 years in the Australian population with prior cardiovascular disease (CVD) and, among those without prior CVD, with low, moderate and high absolute 5-year risk of a primary CVD event in relation to selected health characteristics

| | No prior CVD | | | | | | Prior CVD | |
|---|------------------------------------|--------|--------------------|-------|------------------|-------|-------------------|-------|
| | Absolute primary CVD risk category | | | | | | | |
| | Low (< 10%) | | Moderate (10%-15%) | | High (> 15%) | | | |
| | % [95% CI] | (N*) | % [95% CI] | (N*) | % [95% CI] | (N*) | % [95% CI] | (N*) |
| Total | 71.5 [70.1,72.9] | (5207) | 8.6 [7.4,9.8] | (625) | 11.2 [10.2,12.2] | (813) | 8.7 [7.8,9.6] | (635) |
| Smoking Status | | | | | | | | |
| Never smoked | 51.4 [48.6,54.2] | (2677) | 37.1 [28.4,45.8] | (231) | 36.4 [29.2,43.6] | (297) | 38.6 [30.5,46.7] | (245) |
| Ex-smoker | 39.9 [37.3,42.5] | (2076) | 36.2 [27.6,44.7] | (226) | 40.7 [33.2,48.3] | (332) | 47.7 [38.0,57.4] | (302) |
| Current smoker | 8.7 [7.4,10.0] | (453) | 26.7 [18.5,34.9] | (167) | 22.9 [16.8,29.0] | (187) | 13.7 [10.0,17.3] | (87) |
| Measured BMI | | | | | | | | |
| Normal/underweight (\leq 24.99) | 31.4 [29.1,33.6] | (1635) | 20.4 [14.3,26.4] | (127) | 15.6 [10.7,20.5] | (127) | 20.5 [14.3,26.7] | (129) |
| Overweight (25.00-29.99) | 39.1 [36.4,41.8] | (2039) | 43.2 [33.1,53.4] | (269) | 38.3 [31.0,45.6] | (311) | 33.2 [25.0,41.3] | (209) |
| Obese (\geq 30.00) | 29.5 [27.4,31.6] | (1540) | 36.4 [26.9,46.0] | (227) | 46.1 [38.5,53.7] | (375) | 46.4 [36.4,56.3] | (292) |
| Measured waist circumference | | | | | | | | |
| Not at risk of chronic disease | 29.2 [26.8,31.6] | (1520) | 19.0 [13.1,25.0] | (120) | 13.8 [9.5,18.1] | (112) | 14.5 [9.6,19.4] | (92) |
| At risk of chronic disease [†] | 70.8 [67.3,74.3] | (3682) | 81.0 [64.6,97.3] | (510) | 86.2 [74.7,97.7] | (701) | 85.5 [71.5,99.5] | (543) |
| Measured Blood Pressure | | | | | | | | |
| < 120/80 mmHg | 37.6 [35.1,40.1] | (1958) | 6.9 [3.9,10.0] | (43) | 12.7 [8.9,16.5] | (103) | 29.9 [22.6,37.3] | (190) |
| 120/80- $<$ 140/90 mmHg | 40.7 [38.4,43.0] | (2119) | 38.6 [28.6,48.7] | (241) | 31.1 [23.7,38.5] | (253) | 41.2 [33.5,48.9] | (261) |
| \geq 140/90 mmHg | 21.7 [19.8,23.6] | (1128) | 54.4 [42.1,66.8] | (340) | 56.2 [46.4,66.0] | (458) | 28.9 [22.0,35.8] | (183) |
| Systolic blood pressure | | | | | | | | |
| < 120 mmHg | 45.3 [42.6,48.0] | (2357) | 9.8 [5.5,14.0] | (61) | 14.2 [10.4,18.0] | (116) | 34.6 [26.5,42.8] | (220) |
| 120-139 mmHg | 38.6 [36.0,41.1] | (2007) | 41.7 [31.8,51.7] | (261) | 32.1 [24.8,39.4] | (261) | 40.2 [32.6,47.9] | (256) |
| 140-159 mmHg | 14.1 [12.4,15.7] | (732) | 40.5 [31.2,49.8] | (253) | 32.1 [25.5,38.7] | (261) | 19.9 [14.4,25.4] | (127) |
| 160-179 mmHg | 2.1 [1.3,2.9] | (109) | 8.0 [4.4,11.6] | (50) | 13.7 [9.7,17.6] | (111) | 3.7 [2.1,5.3] | (23) |
| \geq 180 mmHg | 0.0 [0.0,0.0] | (0) | 0.0 [0.0,0.0] | (0) | 7.9 [4.6,11.2] | (64) | 1.6 [0.2,2.9] | (10) |
| Diastolic blood pressure | | | | | | | | |
| < 90 mmHg | 87.1 [83.7,90.5] | (4539) | 71.2 [56.3,86.1] | (443) | 74.2 [63.7,84.8] | (603) | 89.3 [75.4,103.2] | (567) |
| 90-109 mmHg | 12.9 [11.1,14.6] | (671) | 28.8 [20.4,37.2] | (179) | 22.6 [16.8,28.4] | (184) | 10.0 [5.5,14.5] | (63) |
| \geq 110 mmHg | 0.0 [0.0,0.0] | (0) | 0.0 [0.0,0.0] | (0) | 3.2 [1.5,4.8] | (26) | 0.7 [0.0,1.5] | (4) |
| Diabetes - by HbA1c | | | | | | | | |
| No diabetes | 90.4 [87.0,93.8] | (4709) | 80.2 [64.4,96.0] | (501) | 47.5 [39.4,55.7] | (386) | 67.5 [55.7,79.4] | (428) |
| At high risk of diabetes | 7.3 [6.1,8.6] | (383) | 10.0 [6.3,13.7] | (62) | 10.4 [6.0,14.8] | (85) | 13.5 [9.1,17.9] | (86) |
| Has diabetes | 2.3 [1.5,3.0] | (118) | 9.8 [4.4,15.2] | (61) | 42.1 [34.7,49.4] | (342) | 18.9 [13.5,24.4] | (120) |
| Level of Exercise | | | | | | | | |
| High | 12.2 [10.7,13.7] | (634) | 4.4 [2.2,6.7] | (28) | 4.2 [2.0,6.5] | (34) | 5.8 [2.4,9.1] | (37) |

| | | | | | | | | |
|---|------------------|--------|-------------------|-------|-------------------|-------|-------------------|-------|
| Moderate | 24.3 [22.5,26.0] | (1263) | 23.6 [16.3,30.9] | (148) | 21.1 [16.2,26.0] | (171) | 15.6 [10.6,20.6] | (99) |
| Low | 31.4 [29.2,33.5] | (1633) | 25.9 [19.0,32.8] | (162) | 27.4 [21.7,33.1] | (223) | 31.9 [24.3,39.4] | (202) |
| Sedentary | 32.2 [29.6,34.8] | (1676) | 46.0 [34.7,57.3] | (288) | 47.3 [38.9,55.6] | (384) | 46.8 [36.5,57.0] | (297) |
| Alcohol consumption | | | | | | | | |
| ≤ 2 standard drinks a day | 81.6 [77.0,86.1] | (4301) | 70.1 [53.2,87.0] | (418) | 74.1 [60.1,88.1] | (605) | 82.2 [60.2,104.2] | (488) |
| > 2 standard drinks a day | 18.4 [16.1,20.7] | (973) | 29.9 [20.6,39.1] | (178) | 25.9 [19.2,32.6] | (211) | 17.8 [11.0,24.6] | (106) |
| Low density lipoprotein cholesterol | | | | | | | | |
| < 2.0 mmol/L | 3.3 [2.4,4.1] | (171) | 3.0 [1.1,5.0] | (19) | 11.9 [8.0,15.8] | (92) | 26.7 [18.5,34.9] | (161) |
| 2.0-3.5 mmol/L | 57.9 [54.1,61.7] | (3051) | 52.4 [39.5,65.2] | (329) | 44.9 [36.3,53.6] | (349) | 54.5 [41.9,67.2] | (329) |
| > 3.5 mmol/L | 38.9 [35.4,42.3] | (2048) | 44.6 [33.5,55.7] | (280) | 43.2 [34.3,52.1] | (336) | 18.8 [13.3,24.2] | (113) |
| High density lipoprotein cholesterol | | | | | | | | |
| < 1.0 mmol/L | 7.0 [5.9,8.1] | (365) | 21.8 [15.1,28.5] | (137) | 24.5 [18.7,30.3] | (199) | 20.8 [15.1,26.6] | (132) |
| ≥ 1.0 mmol/L | 93.0 [89.6,96.4] | (4842) | 78.2 [62.4,94.0] | (490) | 75.5 [65.1,85.9] | (613) | 79.2 [65.9,92.4] | (503) |
| Total cholesterol | | | | | | | | |
| < 4.0 mmol/L | 5.4 [4.4,6.5] | (282) | 6.8 [2.6,11.0] | (42) | 12.9 [9.1,16.7] | (104) | 30.5 [23.4,37.6] | (195) |
| 4.0-7.5mmol/L | 94.6 [91.2,98.0] | (4927) | 93.2 [75.1,111.3] | (581) | 72.6 [61.9,83.2] | (588) | 68.8 [56.3,81.2] | (438) |
| > 7.5 mmol/L | 0.0 [0.0,0.0] | (0) | 0.0 [0.0,0.0] | (0) | 14.5 [10.6,18.5] | (118) | 0.7 [0.1,1.3] | (4) |
| Total cholesterol:HDL-C ratio | | | | | | | | |
| < 4.5 | 72.1 [69.2,75.1] | (3758) | 47.4 [35.1,59.8] | (296) | 49.2 [41.6,56.8] | (399) | 74.6 [62.0,87.1] | (473) |
| 4.5-5.9 | 22.7 [20.7,24.7] | (1184) | 36.4 [27.2,45.5] | (227) | 29.9 [23.4,36.3] | (243) | 20.2 [14.7,25.6] | (128) |
| ≥ 6.0 | 5.1 [3.9,6.3] | (267) | 16.2 [10.0,22.4] | (101) | 21.0 [15.1,26.9] | (170) | 5.3 [2.5,8.0] | (33) |
| Self-rated health | | | | | | | | |
| Excellent/very good/good | 89.0 [85.7,92.4] | (4638) | 81.2 [64.9,97.5] | (508) | 75.4 [64.6,86.3] | (611) | 57.0 [46.4,67.6] | (361) |
| Fair/poor | 11.0 [9.6,12.4] | (572) | 18.8 [12.6,25.1] | (118) | 24.6 [19.0,30.1] | (199) | 43.0 [34.5,51.5] | (272) |
| Disability status | | | | | | | | |
| No limitation | 76.7 [72.0,81.5] | (4045) | 66.2 [48.6,83.8] | (397) | 62.3 [49.5,75.0] | (507) | 46.6 [31.9,61.4] | (277) |
| Mild or moderate limitation | 19.4 [16.7,22.1] | (1022) | 27.3 [18.8,35.7] | (163) | 33.7 [24.1,43.4] | (275) | 37.6 [26.1,49.2] | (223) |
| Profound or severe limitation | 3.9 [2.8,5.0] | (206) | 6.5 [2.7,10.3] | (39) | 4.0 [1.8,6.1] | (32) | 15.7 [7.8,23.6] | (93) |
| Depression/feeling depressed (long term condition) | | | | | | | | |
| No | 93.9 [88.8,99.0] | (4949) | 93.0 [72.5,113.5] | (558) | 94.1 [78.5,109.8] | (769) | 90.6 [66.9,114.4] | (538) |
| Yes | 6.1 [4.8,7.3] | (321) | 7.0 [1.8,12.2] | (42) | 5.9 [2.3,9.4] | (48) | 9.4 [4.2,14.6] | (56) |

* N = estimated number, in thousands, of persons in each category in Australia. Numbers do not always sum to totals due to weighting and missing value. † Measured waist circumference of more than or equal to 80cm for females, or more than or equal to 94cm for males.

Table S3a. Estimated proportion and number of Australian men aged 45 or more with prior cardiovascular disease (CVD) and, among those without prior CVD, with low, moderate and high absolute 5-year risk of a primary CVD event who were receiving blood pressure (BP)-lowering* and/or lipid-lowering† medications

| | No prior CVD | | | | | | Prior CVD | | Total | |
|-------------------------------------|------------------------------------|--------|-------------------|-------|------------------|-------|------------------|-------|------------------|--------|
| | Absolute primary CVD risk category | | | | | | % [95% CI] | (N‡) | % [95% CI] | (N‡) |
| | Low (< 10%) | | Moderate (10-15%) | | High (> 15%) | | | | | |
| | % [95% CI] | (N‡) | % [95% CI] | (N‡) | % [95% CI] | (N‡) | % [95% CI] | (N‡) | % [95% CI] | (N‡) |
| Total men aged 45 - 74 years | | | | | | | | | | |
| Lipid-lowering medication | 14.4 [10.6,18.2] | (313) | 19.6 [11.8,27.4] | (101) | 34.6 [25.8,43.4] | (194) | 60.2 [49.8,70.6] | (220) | 23.0 [19.8,26.2] | (829) |
| No lipid-lowering medication | 85.6 [81.7,89.5] | (1849) | 80.4 [72.7,88.1] | (418) | 65.4 [56.7,74.1] | (367) | 39.8 [29.4,50.2] | (146) | 77.0 [73.8,80.2] | (2779) |
| BP-lowering medication | 15.1 [11.3,18.9] | (325) | 35.8 [25.9,45.7] | (186) | 44.6 [35.7,53.5] | (250) | 71.2 [61.2,81.2] | (262) | 28.3 [24.7,31.9] | (1022) |
| No BP-lowering medication | 84.9 [81.1,88.7] | (1835) | 64.2 [54.3,74.1] | (333) | 55.4 [46.5,64.3] | (311) | 28.8 [18.8,38.8] | (106) | 71.7 [68.0,75.4] | (2587) |
| BP- and lipid-lowering medication | 6.4 [4.0,8.8] | (139) | 12.6 [6.6,18.6] | (66) | 25.6 [18.0,33.2] | (144) | 50.3 [39.8,60.8] | (185) | 14.8 [12.2,17.4] | (533) |
| Taking one medication only | 16.6 [12.9,20.3] | (360) | 30.2 [21.4,39.0] | (157) | 28.0 [21.6,34.4] | (157) | 30.9 [19.6,42.2] | (114) | 21.7 [18.6,24.8] | (785) |
| Taking neither medication | 76.9 [72.4,81.4] | (1663) | 57.2 [47.0,67.4] | (297) | 46.4 [37.5,55.3] | (260) | 18.8 [10.9,26.7] | (69) | 63.5 [59.9,67.1] | (2291) |
| Men aged ≥ 75 years | | | | | | | | | | |
| Lipid-lowering medication | 34.3 [2.9,65.7] | (14) | 34.8 [14.8,54.8] | (28) | 38.9 [24.8,53.0] | (110) | 63.3 [46.7,79.9] | (116) | 43.9 [34.8,53.0] | (258) |
| No lipid-lowering medication | 65.7 [34.3,97.1] | (28) | 65.2 [45.3,85.1] | (51) | 61.1 [47.0,75.2] | (173) | 36.7 [20.1,53.3] | (67) | 56.1 [47.0,65.2] | (330) |
| BP-lowering medication | 37.6 [0.7,74.5] | (16) | 53.7 [28.3,79.1] | (43) | 62.5 [51.6,73.4] | (178) | 77.4 [61.2,93.6] | (142) | 62.2 [54.0,70.4] | (366) |
| No BP-lowering medication | 62.4 [25.5,99.3] | (26) | 46.3 [20.9,71.7] | (37) | 37.5 [26.7,48.3] | (107) | 22.6 [6.3,38.9] | (41) | 37.8 [29.7,45.9] | (222) |
| BP- and lipid-lowering medication | 8.9 [0.0,21.0] | (3) | 33.7 [13.7,53.7] | (27) | 28.6 [17.2,40.0] | (82) | 48.9 [28.6,69.2] | (90) | 32.8 [25.1,40.5] | (193) |
| Taking one medication only | 54.1 [14.7,93.5] | (23) | 21.1 [5.1,37.1] | (16) | 44.2 [31.5,56.9] | (127) | 43.0 [23.5,62.5] | (78) | 40.6 [32.2,49.0] | (239) |
| Taking neither medication | 37.0 [0.0,76.6] | (15) | 45.2 [19.8,70.6] | (36) | 27.2 [17.2,37.2] | (77) | 8.1 [0.0,17.3] | (15) | 26.7 [17.8,35.6] | (157) |

* Hypertension medications includes Anatomic Therapeutic Chemical Classification C02 (antihypertensives), C03 (diuretics), C07 (beta blocking agents), C08 (calcium channel blockers) and C09 (agents acting on the renin-angiotensin system). † Lipid-lowering medications include Anatomic Therapeutic Chemical Classification C10 (lipid modifying agents, plain and combinations. Numbers do not always sum to totals due to weighting and missing values. ‡ N = estimated number, in thousands, of persons in each category in Australia.

Table S3b. Estimated proportion and number of Australian women aged 45 or more with prior cardiovascular disease (CVD) and, among those without prior CVD, with low, moderate and high absolute 5-year risk of a primary CVD event who were receiving blood pressure (BP)-lowering* and/or lipid-lowering† medications

| | No prior CVD | | | | | | Prior CVD | | Total | |
|---------------------------------------|------------------------------------|----------|-------------------|----------|------------------|----------|------------------|----------|------------------|----------|
| | Absolute primary CVD risk category | | | | | | | | | |
| | Low (< 10%) | | Moderate (10-15%) | | High (> 15%) | | | | | |
| | % [95% CI] | (n '000) | % [95% CI] | (n '000) | % [95% CI] | (n '000) | % [95% CI] | (n '000) | % [95% CI] | (n '000) |
| Total women aged 45 - 74 years | | | | | | | | | | |
| Lipid-lowering medication | 13.2 [10.7,15.7] | (401) | 22.4 [7.3,37.5] | (23) | 28.4 [17.0,39.8] | (72) | 48.2 [35.3,61.1] | (129) | 16.6 [14.1,19.1] | (611) |
| No lipid-lowering medication | 86.8 [84.2,89.4] | (2644) | 77.6 [62.5,92.7] | (82) | 71.6 [60.2,83.0] | (181) | 51.8 [38.9,64.7] | (139) | 83.4 [80.9,85.9] | (3060) |
| BP-lowering medication | 20.3 [17.5,23.1] | (617) | 35.8 [18.0,53.6] | (38) | 44.9 [33.1,56.7] | (113) | 63.0 [51.0,75.0] | (169) | 25.1 [22.5,27.7] | (919) |
| No BP-lowering medication | 79.7 [76.9,82.5] | (2428) | 64.2 [46.3,82.1] | (69) | 55.1 [43.3,66.9] | (139) | 37.0 [25.0,49.0] | (99) | 74.9 [72.3,77.5] | (2752) |
| BP- and lipid-lowering medication | 6.8 [4.9,8.7] | (206) | 16.1 [3.0,29.2] | (17) | 21.6 [10.6,32.6] | (54) | 34.1 [22.7,45.5] | (91) | 9.8 [7.7,11.9] | (359) |
| Taking one medication only | 19.9 [16.9,22.9] | (605) | 26.0 [9.8,42.2] | (28) | 30.0 [18.7,41.3] | (75) | 42.9 [30.5,55.3] | (115) | 22.2 [19.4,25.0] | (814) |
| Taking neither medication | 73.3 [70.1,76.5] | (2232) | 58.0 [38.7,77.3] | (62) | 48.3 [36.1,60.5] | (122) | 23.0 [13.1,32.9] | (62) | 68.1 [65.2,71.0] | (2499) |
| Women aged ≥ 75 years | | | | | | | | | | |
| Lipid-lowering medication | 40.4 [25.4,55.4] | (137) | 25.8 [5.8,45.8] | (31) | 50.3 [26.1,74.5] | (76) | 56.2 [34.3,78.1] | (118) | 44.3 [33.4,55.2] | (362) |
| No lipid-lowering medication | 59.6 [44.5,74.7] | (203) | 74.2 [54.1,94.3] | (86) | 49.7 [25.5,73.9] | (75) | 43.8 [21.9,65.7] | (92) | 55.7 [44.8,66.6] | (455) |
| BP-lowering medication | 53.8 [36.0,71.6] | (184) | 60.9 [42.4,79.4] | (71) | 74.1 [56.1,92.1] | (111) | 80.9 [65.8,96.0] | (170) | 65.5 [55.6,75.4] | (536) |
| No BP-lowering medication | 46.2 [28.3,64.1] | (157) | 39.1 [20.6,57.6] | (46) | 25.9 [7.8,44.0] | (39) | 19.1 [4.1,34.1] | (40) | 34.5 [24.7,44.3] | (282) |
| BP- and lipid-lowering medication | 27.5 [14.0,41.0] | (93) | 22.7 [3.2,42.2] | (26) | 46.3 [22.4,70.2] | (70) | 47.7 [25.6,69.8] | (100) | 35.7 [25.1,46.3] | (292) |
| Taking one medication only | 39.4 [26.7,52.1] | (134) | 41.4 [19.2,63.6] | (49) | 31.8 [9.2,54.4] | (49) | 41.6 [20.1,63.1] | (88) | 38.4 [27.9,48.9] | (314) |
| Taking neither medication | 33.2 [18.4,48.0] | (113) | 36.0 [17.5,54.5] | (42) | 21.9 [3.3,40.5] | (33) | 10.7 [0.4,21.0] | (22) | 25.9 [16.3,35.5] | (211) |

* Hypertension medications includes Anatomic Therapeutic Chemical Classification C02 (antihypertensives), C03 (diuretics), C07 (beta blocking agents), C08 (calcium channel blockers) and C09 (agents acting on the renin–angiotensin system). † Lipid-lowering medications include Anatomic Therapeutic Chemical Classification C10 (lipid modifying agents, plain and combinations. Numbers do not always sum to totals due to weighting and missing values.

‡ N = estimated number, in thousands, of persons in each category in Australia.

