Absolute cardiovascular disease risk and treatment in the Australian general population

Capital Health Network Education Session
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Study: Absolute risk of cardiovascular disease events and blood pressure- and lipid-lowering therapy in Australia\(^1\)

Aims

To quantify, in the Australian population:
- absolute CVD risk
- treatment with BP- and lipid-lowering medications

Methods

Structure of the Australian Health Survey
General population sample size = 26,000 households

NATIONAL HEALTH SURVEY (NHS)
15,500 Households
1 Adult + 1 child = 26,500 persons
- Detailed conditions
- Medications and supplements
- Health related actions
- Days of reduced activity
- Social & emotional wellbeing (18 yrs +)
- Physical activity (15 yrs +)
- Private health insurance status (18 yrs +)
- Breastfeeding (0-3 yrs)
- Disability status
- Alcohol consumption (15 yrs +)
- Family stressors (15 yrs +)
- Personal income (15 yrs +)
- Financial stress

CORE CONTENT
25,000 Households
1 Adult + 1 child (2 yrs +) = 32,000 persons
- Household information
- Demographics
- Self-assessed health status (15 yrs +)
- Smoking (15 yrs +)
- Physical measures (height, weight, waist and body mass index)
- Physical activity (18 yrs +)
- Dietary behaviours
- Blood pressure (5 yrs +)
- Female life stage (10 yrs +)
- Selected conditions

NATIONAL NUTRITION AND PHYSICAL ACTIVITY SURVEY (NNPAS)
9,500 Households
1 Adult + 1 child (2 yrs +) = 12,000 persons
- Food security
- Food avoidance
- Dietary recall
- Physical activity

NATIONAL HEALTH MEASURES SURVEY (NHMS)
All survey participants aged 5 yrs + invited to VOLUNTEER
11,000 persons
- Key blood tests (12yrs +) and urine tests (5yrs +)
- of nutritional status and chronic disease markers

NNPAS
Telephone follow-up
2nd dietary recall
8-day pedometer (5 yrs +)
Participants: 9,564 aged ≥ 18 y; 5,354 aged 45-74y

Prior CVD?

Yes

No

NVPDA algorithm

High risk (>15%)

Moderate risk (10-15%)

Low risk (<10%)

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Prior CVD?

- Yes
  - High risk (>15%)
- No
  - NVPDA algorithm
    - Moderate risk (10-15%)
    - Low risk (<10%)

Methods

Medication use: BP-lowering and lipid-lowering
Results: Absolute CVD risk

Estimated distribution of prior CVD and absolute 5-year risk of primary CVD event by age group: Australian adult population
Estimated distribution of prior CVD and absolute 5-year risk of primary CVD event by age group: Australian adult population, screening age (45-74)

In those aged 45-74
- 8.7% prior CVD
- 11.2% high primary risk
- 20% have a high 5-year risk of a CVD event
- ≈ 1.4M people
Results: Treatment

Estimated distribution of blood pressure- and/or lipid-lowering medications, by absolute CVD risk (45-74 years)
Estimated distribution of blood pressure- and/or lipid-lowering medications, by absolute CVD risk (45-74 years)

Among people with prior CVD:
- 44% taking both medications
- 20% taking neither

Among people with high primary risk:
- 24% taking both medications
- 47% taking neither
Estimated distribution of blood pressure- and/or lipid-lowering medications, by absolute CVD risk (45-74 years)

Among people with prior CVD:
- 44% taking both medications
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Among people with high primary risk:
- 24% taking both medications
- 47% taking neither

~970,000 people - 13% of Australian population aged 45-74 – are at high risk and not receiving combination treatment
Results: Treatment

Estimated distribution of blood pressure- and/or lipid-lowering medications, by absolute CVD risk, separately by age group

45-59 years

60-74 years

>75 years

[Bar charts showing distribution of medications by CVD risk and age group]

- Taking neither medication
- Taking one medication only
- Taking BP- and lipid-lowering medication
Results: Treatment

Estimated distribution of blood pressure- and/or lipid-lowering medications, by absolute CVD risk, separately by age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>&lt;10%</th>
<th>10-15%</th>
<th>&gt;15%</th>
<th>Prior CVD</th>
<th>% of people at high risk of primary CVD event on recommended treatment</th>
</tr>
</thead>
<tbody>
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<td>45-59 years</td>
<td>12%</td>
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Taking neither medication  Taking one medication only  Taking BP- and lipid-lowering medication
Results: Treatment

Estimated distribution of blood pressure (BP)- and/or lipid-lowering medications, by absolute CVD risk, separately by age group

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% of people at high risk of secondary event on recommended treatment
Summary

- 20% of Australian population aged 45-74 – risk >15%
  - ~1.4M individuals

- Evidence of treatment variation according to risk

- Two-thirds not receiving recommended treatment

- 13% of Australian population aged 45-74 – risk >15% and not receiving combination treatment
  - ~970,000 individuals

- Tens of thousands of CVD events potentially preventable
Absolute risk of cardiovascular disease events and blood pressure- and lipid-lowering therapy in Australia

Emily Banks, Simon R Crouch, Rosemary J Korda, Bill Stavreski, Karen Page Katherine A Thurber, Robert Grenfell

Lost in translation: the gap between what we know and what we do about cardiovascular disease

An estimated one million Australians at high risk may not have been receiving recommended preventive treatments

Clara K Chow
Anthony Rodgers
Absolute risk of cardiovascular disease among Aboriginal and Torres Strait Islander Australians

PRELIMINARY RESULTS

Please do not record, report or tweet
Acknowledgements

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