Living Longer in Good Health
Prevention's Contribution to Productive Ageing.

Professor Andrew Wilson
Contributors: Tess Cooper, Eloise O'Donnell, Jo-An Atkinson, Sonia Wutzke
Old Girls... They Talk in the Sand... Go Camping... Yarn Night Time

Rosella Namok
Shared Thoughts

- We are living longer and this is likely to continue.
- People are generally happy living longer if they have reasonable health.
- Governments are concerned about whether we can afford to live longer unless we increase productivity.
- Productivity means different things but poor health is associated with reduced productivity regardless of how you define it.
- We can prevent disease and disability in older age probably including some dementia.
## Life expectancy, Selected ages, Australia-2003 to 2013 - Males

<table>
<thead>
<tr>
<th>Life expectancy at exact age (years)</th>
<th>2003</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>77.8</td>
<td>80.1</td>
</tr>
<tr>
<td>1</td>
<td>77.2</td>
<td>79.4</td>
</tr>
<tr>
<td>15</td>
<td>63.4</td>
<td>65.5</td>
</tr>
<tr>
<td>25</td>
<td>53.8</td>
<td>55.8</td>
</tr>
<tr>
<td>45</td>
<td>35.0</td>
<td>36.8</td>
</tr>
<tr>
<td>50</td>
<td>30.4</td>
<td>32.2</td>
</tr>
<tr>
<td>65</td>
<td>17.6</td>
<td>19.2</td>
</tr>
<tr>
<td>85</td>
<td>5.6</td>
<td>6.1</td>
</tr>
</tbody>
</table>

ABS, Nov 2014
<table>
<thead>
<tr>
<th>Life expectancy at exact age (years)</th>
<th>2003</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>82.8</td>
<td>84.3</td>
</tr>
<tr>
<td>1</td>
<td>82.2</td>
<td>83.6</td>
</tr>
<tr>
<td>15</td>
<td>68.4</td>
<td>69.7</td>
</tr>
<tr>
<td>25</td>
<td>58.5</td>
<td>59.9</td>
</tr>
<tr>
<td>45</td>
<td>39.1</td>
<td>40.4</td>
</tr>
<tr>
<td>50</td>
<td>34.4</td>
<td>35.7</td>
</tr>
<tr>
<td>65</td>
<td>21.0</td>
<td>22.1</td>
</tr>
<tr>
<td>85</td>
<td>6.9</td>
<td>7.1</td>
</tr>
</tbody>
</table>

ABS, Nov 2014
In Europe, over a century...

Decrease in Death Rates by Age Group in **England and Wales**, 1900-04 to 1950-54 and 1950-54 to 2000-04
Life Expectancy and Disability
Age 65 years

Figure 6.28

- **Free of disability**
- **With disability but no severe or profound core activity limitation**
- **With a severe or profound core activity limitation**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>2012</th>
<th>1998</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td></td>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>2012</td>
<td>9.5</td>
<td>6.7</td>
<td>5.8</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>8.7</td>
<td>5.6</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>8.7</td>
<td>6.7</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>7.1</td>
<td>6.0</td>
<td>3.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: People with a severe or profound core activity limitation always or sometimes require help with communication, mobility and/or self-care.


Expected years of life at age 65, by disability status and sex, 1998 and 2012

AIHW. Australia’s Health 2014
Future Health Care
Components of projected $161 billion increase in total health system and aged care expenditure, Australia 2003 to 2033

- Volume per case: 81.3 billion dollars
- Ageing: 37.8 billion dollars
- Population: 34.4 billion dollars
- Price: 8.8 billion dollars
- Treatment proportion: 1.0 billion dollars
- Declining disease rates: -2.3 billion dollars

Qld CHO Report 2010
Figure 8: Decomposition of projected change in expenditure for cardiovascular disease

Source: AIHW Disease expenditure projection model.
Figure 13: Decomposition of projected change in health and residential aged care expenditure for cancer

Source: AIHW Disease expenditure projection model.
Figure 11: Decomposition of projected change in health and residential aged care expenditure for dementia

Source: AIHW Disease expenditure projection model.
Figure 12: Decomposition of projected change in health and residential aged care expenditure for musculoskeletal disorders

Source: AIHW Disease expenditure projection model.
Table 8: Projected change in health and residential aged care expenditure by area of expenditure, 2002–03 to 2032–33

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Admitted patient services</td>
<td>25,926</td>
<td>35,678</td>
<td>54,157</td>
<td>81,425</td>
<td>214%</td>
</tr>
<tr>
<td>Out-of-hospital medical services</td>
<td>10,859</td>
<td>14,652</td>
<td>20,421</td>
<td>27,952</td>
<td>157%</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>10,865</td>
<td>14,871</td>
<td>20,701</td>
<td>28,544</td>
<td>163%</td>
</tr>
<tr>
<td>Residential aged care (high-care) services</td>
<td>7,528</td>
<td>11,191</td>
<td>17,538</td>
<td>29,725</td>
<td>295%</td>
</tr>
<tr>
<td>Other health(^{(b)})</td>
<td>29,885</td>
<td>39,079</td>
<td>54,912</td>
<td>78,410</td>
<td>162%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85,063</strong></td>
<td><strong>115,471</strong></td>
<td><strong>167,729</strong></td>
<td><strong>246,056</strong></td>
<td><strong>189%</strong></td>
</tr>
</tbody>
</table>

\(^{(a)}\) Expenditure for all years is reported in 2006–07 dollars.

\(^{(b)}\) Other health comprises non-admitted patient services, dental services, other health practitioners, community and public health, patient transport services, aids and appliances, administration and research.

Source: AIHW Disease expenditure projection model.
Estimated age-specific incidence rates for all cancers combined, Australia, 2012

Rate (per 100,000)

Age group (years)

Notes
1. 2012 estimates are based on 2000–2009 incidence data.
2. Data pertain to cancers coded in ICD-10 as C00–C97, D45, D46, D47.1 and D47.3, with the exception of those C44 codes that indicate a basal or squamous cell carcinoma of the skin.

Source: AIHW Australian Cancer Database 2009.
Health and Productivity
Why Governments fear Ageing?

- More than a quarter of Australian government spending is directed to health, age-related pensions and aged care.

- Projected to increase to almost half of total spending by 2049–50.

- Total Australian government spending projected to rise to around 27% of GDP by 2049–50, rising by around 4\(\frac{3}{4}\)% of GDP from the projected low-point in spending in 2015–16.
The 3Ps of Growth in Real GDP per Person

Intergenerational Report 2010
Ageing and Participation

- Australia's mature age participation rate is below that of comparable countries eg US, UK, Canada and NZ.

- Key factors influencing workforce participation:
  - health status;
  - educational attainment;
  - the tax-transfer system;
  - cultural attitudes;
  - workplace flexibility;
  - access to retraining and support services.
Prevention Priorities
Non Communicable diseases
Prevention Priorities - Dementia

Figure 6.29

Estimated number of people with dementia, by sex, 2010 to 2050

Note: See AIHW 2012 for information about the method to derive prevalence estimates.
Sources: Calculations by AIHW using rates based on ADI 2009 and Harvey et al. 2003 and applied to population data for 2010 to 2011 (ABS 2012) and population projections for 2012 to 2050 (ABS 2008).
Preventing Dementia

- Large amount of observational epidemiology
- Many shared lifestyle related risk factors with atherosclerotic cardiovascular disease
  - diabetes
  - mid-life hypertension
  - excessive alcohol consumption
  - Smoking
  - Obesity
- Others head injury depression and obesity
Preventing Dementia

- Small number of intervention studies (<20 intervention studies across all factors)
- Poor differentiation of type of dementia
- Endpoints – clinical vs cognitive decline
- Small in size cf CVD trials
- Limited intervention and follow up periods
- Physical activity and dietary components
- Secondary analysis of CVD drug trials
- Suggestive but not conclusive
Prevention Priorities

Figure 6.27

Per cent

Source: AIHW analysis of ABS 2012a.

Prevalence of selected self-reported health conditions among people aged 55 and over, by age group, 2011–12

AIHW. Australia’s Health 2014
Preventing NCDs in Older Persons

- Evidence supports prevention for diabetes, CVD, and osteoarthritis
- Studies specifically in older persons limited except for CVD.
- Obesity is a risk factor but more difficult to interpret with changes in body composition.
- Prudence advice vs definitive evidence
“You are old, Father William,” the young man said,
“And your hair has become very white;
And yet you incessantly stand on your head —
Do you think, at your age, it is right?”

“In my youth,” Father William replied to his son,
“I feared it might injure the brain;
But, now that I’m perfectly sure I have none,
Why, I do it again and again.”
Thank-you for Listening

Gauatau Ural (Magpie Geese). Dennis Nona, Badu Island, Torres Straits B.1973