The cost of pain in Australia

Report for Painaustralia

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Disease Cost Burden Analysis
A standard methodology used to estimate financial costs and the disease burden (wellbeing costs) of a condition

<table>
<thead>
<tr>
<th>Epidemiological profile</th>
<th>Prevalence (# of people)</th>
<th>Mortality (# of deaths)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life</td>
<td>Disability weight</td>
<td>Death</td>
</tr>
<tr>
<td>Loss of wellbeing</td>
<td>Years of healthy life lost due to morbidity</td>
<td>Years of life lost due to premature death</td>
</tr>
<tr>
<td>Economic burden</td>
<td>Health system costs</td>
<td>Productivity costs</td>
</tr>
<tr>
<td></td>
<td>Health system costs include hospitalisation (inpatient and outpatient), research, medication, and out-of-hospital costs</td>
<td>Absenteeism</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduced workforce participation</td>
</tr>
<tr>
<td></td>
<td>Transfers</td>
<td>Informal care costs</td>
</tr>
<tr>
<td></td>
<td>Welfare payments and forgone taxation revenue</td>
<td>Other financial costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deadweight losses associated with reduced income and government-funded services</td>
</tr>
</tbody>
</table>
The prevalence of chronic pain in Australia

**3.24 million** Australians are living with chronic pain

- 53.8% of Australians living with chronic pain are women
- For the majority (56%) of Australians living with chronic pain, their pain restricts what activities they are able to undertake (e.g. mobility, self care).
- 68.3% of Australians living with chronic pain are of working age (aged 15-64).
- The prevalence of chronic pain will increase to 5.23 million Australians by 2050.

**Figure 1: Prevalence of chronic pain (%)**

**Figure 2: Prevalence heat map (cases per Federal electorate)**
Cost of chronic pain
The total costs of chronic pain were $139.3 billion in 2018

The total financial costs of chronic pain in Australia were $73.2 billion in 2018. This consists of health system, productivity and other costs. The loss of wellbeing was valued at an additional $66.1 billion.

### Health system costs
- Including hospital costs, specialist costs and pharmaceutical costs
  - $12.2 billion

### Productivity costs
- Including absenteeism, presenteeism and reduced employment
  - $48.3 billion

### Other costs
- Including informal carer costs, deadweight losses and aids and modifications costs
  - $12.7 billion

### Loss of wellbeing
- Reduced quality of life
  - $66.1 billion
Health system costs

Pain causes 6.5% of total health system costs, $12.2bn in 2018

Figure 3: Health costs by type (LHS) and payer (RHS)
Productivity costs
Pain cost $48.3bn in lost productivity in 2018

Figure 4: Productivity costs by component (LHS) and payer (RHS)
Other financial costs

Pain cost $12.7bn in informal care, aids/modifications and efficiency losses across Australia in 2018

Figure 5: Other costs by type

- Informal care, $4.5bn, 36%
- Efficiency losses, $7.6bn, 60%
- Aids and modifications, $0.6bn, 4%
Who bears the cost?
Individuals bear the largest share of the financial costs of chronic pain

Figure 6: Productivity costs by component (LHS) and payer (RHS)
Wellbeing costs

Total wellbeing costs were estimated at $66.1 billion in 2018

• Chronic pain leads to substantial wellbeing losses e.g. lower back pain is the leading cause of disability in Australia.

• We use the “burden of disease” methodology of the World Health Organization and AIHW to estimate the disability adjusted life years associated with chronic pain as 340,384 DALYs in 2018. This is based on a disability weight of 0.105 per case on average across prevalent cases in Australia.

• We multiply DALYs by the official estimate of the value of a statistical life year, $194,200, to calculate the total wellbeing costs of $66.1bn.
Regional analysis
The cost distribution reflects prevalence of chronic pain and, in turn, demographics

Table 1: Costs by type and location

<table>
<thead>
<tr>
<th>Location</th>
<th>Financial ($bn)</th>
<th>Wellbeing ($bn)</th>
<th>Total cost ($bn)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State/territory</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>23.2</td>
<td>21.2</td>
<td>44.4</td>
<td>32%</td>
</tr>
<tr>
<td>VIC</td>
<td>18.6</td>
<td>16.8</td>
<td>35.5</td>
<td>25%</td>
</tr>
<tr>
<td>QLD</td>
<td>14.7</td>
<td>13.2</td>
<td>27.8</td>
<td>20%</td>
</tr>
<tr>
<td>SA</td>
<td>5.2</td>
<td>4.9</td>
<td>10.1</td>
<td>7%</td>
</tr>
<tr>
<td>WA</td>
<td>7.9</td>
<td>7.0</td>
<td>14.9</td>
<td>11%</td>
</tr>
<tr>
<td>TAS</td>
<td>1.6</td>
<td>1.5</td>
<td>3.1</td>
<td>2%</td>
</tr>
<tr>
<td>NT</td>
<td>0.7</td>
<td>0.6</td>
<td>1.3</td>
<td>1%</td>
</tr>
<tr>
<td>ACT</td>
<td>1.2</td>
<td>1.1</td>
<td>2.3</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Remoteness area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>48.9</td>
<td>43.4</td>
<td>92.2</td>
<td>66%</td>
</tr>
<tr>
<td>Regional</td>
<td>24.3</td>
<td>22.7</td>
<td>47.1</td>
<td>34%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73.2</strong></td>
<td><strong>66.1</strong></td>
<td><strong>139.3</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Components may not sum to totals due to rounding.
Opioid harm

Commonly prescribed pain management medications can cause harm and have side effects\(^1\):

- Hospitalisations and pharmacotherapy from prescription opioid misuse cost $73.6 million in 2018.\(^2\)
- Prescription opioid misuse caused an estimated 823 deaths in 2018.\(^2\)
- Overall, these deaths cost Australia $4.7 billion, comprising $964.5 million in productivity losses, $79.0 million in deadweight losses and $3.7 billion in reduced wellbeing.

Figure 7: Loss of wellbeing from opioid misuse in 2018 ($)bn

\(^1\) Schug, S., (2018a). Not all opioids are the same. Medicine today, 19(9), pp. 2-4.
Looking ahead
An extension of best practice care to Australian patients could lead to substantial savings and better health outcomes

• Doubling current levels of access to multidisciplinary care could deliver $3.7 million in savings to the health system, while reducing absenteeism and improving wellbeing.

• A nationwide roll out of a pain specialist-designed and led GP training program could be delivered for $45 million a year, and could result in a 25% improvement in best practice chronic pain management by GPs.

• The program could save $209 million in overdose related costs for $45 million in upfront costs.

• While more research is still required, prescribing atypical opioids, rather than conventional opioids, has the potential to save as many as 249 lives per year in Australia, and save Australia $1.4 billion in financial and wellbeing costs.
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