The economics of asbestos related disease

Identifying social and economic impacts and measuring their costs on individuals and society

November 2016

Presented by Sarina Lacey, Director Health Economics and Policy
Presented to the Asbestos Awareness and Management Conference 2016
Asbestos related disease imposes a financial and personal burden on society

- ARD’s are an important, potentially avoidable, public health issue in Australia

- Impacts occur at the individual, through to societal, level, so measuring economic and social impacts requires consideration of impacts on:
  - individuals/patients
  - families and carers
  - the health system
  - local communities, and
  - the wider economy.
Why should costs be measured?

- Asbestos exists in the community and has a regulatory and compliance framework to ensure Government’s duty of care to Australians regarding an acceptable level of risk is maintained.

- But there are many big questions related to this duty of care, and acceptability of risks:
  - What are the risks?
  - What is an acceptable level of risk?
  - Will risks be reduced if asbestos is reduced or the regulatory framework changed?
  - What are the costs of existing risks, or altered risk profiles?
  - How do these compare to the benefits of avoiding risks or costs altogether?

- First step is to understand the burden of asbestos-related disease, and the degree to which costs are avoidable.
There are several direct impacts, measurable impacts.

Indirect impacts are also potentially measurable.

Intangible impacts are important also.
Individual and societal perspectives count

**Individual**
- Direct costs of care
- Indirect costs from paid and unpaid activities resulting from disability
- Intangible costs, such as pain, emotional impairment, worry, and other forms of reduced quality of life

**Societal**
- Economic activity at the sectoral level (housing/construction, waste/disposal, governance/compliance)
- Productivity, participation, employment status etc
- Government expenditure and taxation; payments for carers, unemployment, reduced taxation etc
Measurement ain’t easy: Substantive data gaps for modelling purposes

- Little evidence on indirect costs:
  - Workforce and productivity effects
  - Social costs
  - Second round effects

- Even when data exists, costs are hard to value
  - Which diseases are wholly or partly attributable to asbestos exposure?
  - What about comorbidities or high risk events like stroke or heart attack that don’t necessarily link to asbestos?
  - And how do you account for different care pathways, severities, etc

- No measurement of benefits of society’s
Not to mention, ‘being well’ is valuable!

- A person’s life not shortened by avoidable death is valued at between $1.26 million and $1.4 million.
- People with 3+ chronic diseases are half as likely to be in the paid workforce compared to people that have no chronic diseases = loss to the labour force, with productivity losses estimated at 10%, compared to labour participation not being reduced by chronic disease.
- ‘Presenteeism’ has costs, when people work and participate, but less so because of poor physical and mental health.
Where to now?

- There is enough quality data and literature to measure some economic aspects with confidence:
  - Primary care
  - Allied health
  - Hospital care
  - Carer and workforce payments
  - Asbestos costs around detection, removal, waste/storage, construction

- Information is also available on patient stories, supported by data and archives on workers compensation and elsewhere
Measurement depends on the question to be answered

- What is the economic burden of ARD?
- What might be the economic case for asbestos eradication, considering impacts on all stakeholders?
- What level of risk is society willing to pay for in terms of asbestos exposure, given various quantities in the community?
- What are the benefits of eradication (aside from avoided costs). These haven’t been measured anywhere.
Next step for ASEA

- Second phase study now underway to measure the economic burden of asbestos related disease
  - Population based model to identify prevalence of specific diseases/conditions wholly or partly related to asbestos
  - Capturing direct costs in terms of health resource use and social security payments
  - Drawing on methodologies used internationally to enable some level of comparison/equivalence

- Will provide a baseline for future scenario testing and policy development

- Due to report by March 2017
Early analysis for the population model

- 1:4 ratio of Mesothelioma to lung cancer deaths
- Approx. 10% of mesothelioma deaths due to non-occupational exposure
- We assume that other cancers are also 10% occupational exposure

<table>
<thead>
<tr>
<th></th>
<th>Mesothelioma</th>
<th>Asbestosis</th>
<th>Lung cancer</th>
<th>Larynx cancer</th>
<th>Ovarian cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of people</td>
<td>No. of people</td>
<td>No. of people</td>
<td>No. of people</td>
<td>No. of people</td>
</tr>
<tr>
<td>Occupational exposure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>592</td>
<td>61</td>
<td>2,726</td>
<td>53</td>
<td>0</td>
</tr>
<tr>
<td>Female</td>
<td>98</td>
<td>1</td>
<td>318</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Both</td>
<td>689</td>
<td>62</td>
<td>3,044</td>
<td>53</td>
<td>15</td>
</tr>
<tr>
<td>Non-occupational exposure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>47</td>
<td>0</td>
<td>121</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Female</td>
<td>36</td>
<td>0</td>
<td>79</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Both</td>
<td>83</td>
<td>0</td>
<td>200</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>All sources of exposure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>639</td>
<td>61</td>
<td>2,847</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Female</td>
<td>133</td>
<td>1</td>
<td>397</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Both</td>
<td>772</td>
<td>62</td>
<td>3,244</td>
<td>55</td>
<td>19</td>
</tr>
</tbody>
</table>
There are more deaths and DALYs lost by males than females due to ARD.

People with ARD are generally older, due to the lag between exposure and disease.

Peak in deaths at age > 80.

DALYs lost are high where age > 60.
Most deaths are due to lung cancer or Mesothelioma

Deaths/year rising, but 2015 is projected peak (Finity, 2016)
A useful cross-check: ARD compensation

Compensation may include amounts for:

- Pain and suffering
- Medical and home/nursing assistance expense
- Loss of income
- Damages for loss of gratuitous nursing/domestic services that were provided by ARD patient

- KPMG estimated that Victorian statutory damages are approximately $70 000 per applicable claim
- In NSW, statutory damages through *Civil Liability Act s15B*
A useful cross-check: ARD compensation

- Compensatory damages for ARD to be used as a cross-check to bottoms-up approach

- Average compensation/damages for ARD
  - Mesothelioma - $294k
  - Asbestosis - $100k
  - Lung cancer - $116k

Source: KPMG Actuarial Report (2016) for James Hardie

- May not be an accurate measure of total costs
  - Doesn’t include public costs, only private costs
  - Some cases are settled, and compensation is negotiated
  - Statutory limits on compensation
Sarina Lacey
*Director, Health Economics and Policy*

(02) 9250 0800 or 0418 245 560
slacey@thecie.com.au