Inequality in Avoidable Mortality in England and Wales: 2001-17

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Inequality in life expectancy has widened recently.
Inequality in change in life expectancy between 2012-14 and 2015-17: England and Wales for selected deprivation deciles.
What is avoidable mortality

• Amenable (treatable) mortality – deaths that could be avoided through timely and effective healthcare

• Preventable mortality – deaths that could be avoided by wider public health actions in a broad sense

• Avoidable mortality – deaths that are amenable, preventable or both, where each death is counted only once

They have a close alignment to premature mortality as most causes of death have a <75 years age threshold

Useful indicator to determine whether the slowing trend is observed in these statistics, particularly with regard to the extremes of the deprivation scale
Proportion of avoidable deaths by avoidable broad cause: UK 2017

- Avoidable deaths: 77%
- Non-Avoidable: 23%

- Neoplasms: 34.1%
- CVD: 25.7%
- Injuries: 17.3%
- Respiratory: 11.5%
- Drug use disorders: 5.9%
- Other: 5.6%
Trend in age-standardised avoidable mortality for selected deprivation deciles: England 2001-17

- Males_D1: Annual fall 2.4%
- Males_D10: Annual fall 0.5%
- Females_D1: Annual fall 1.9%
- Females_D10: Annual fall 0.1%

Definition change:
- Annual fall 2.7%
- Annual fall 1.5%
- Annual fall 2.5%
- Annual fall 1.3%
Annual % change in rate of avoidable death in two discrete periods by deprivation decile: males - England 2001-17

<table>
<thead>
<tr>
<th>Decile</th>
<th>2014-17 (Red)</th>
<th>2001-13 (Blue)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D10</td>
<td>44%</td>
<td>66%</td>
</tr>
<tr>
<td>D9</td>
<td>44%</td>
<td>66%</td>
</tr>
<tr>
<td>D8</td>
<td>66%</td>
<td>66%</td>
</tr>
<tr>
<td>D7</td>
<td>106%</td>
<td>66%</td>
</tr>
<tr>
<td>D6</td>
<td>66%</td>
<td>73%</td>
</tr>
<tr>
<td>D5</td>
<td>73%</td>
<td>89%</td>
</tr>
<tr>
<td>D4</td>
<td>89%</td>
<td>59%</td>
</tr>
<tr>
<td>D3</td>
<td>59%</td>
<td>66%</td>
</tr>
<tr>
<td>D2</td>
<td>66%</td>
<td>66%</td>
</tr>
<tr>
<td>D1</td>
<td>80%</td>
<td>66%</td>
</tr>
</tbody>
</table>
Annual % change in rate of avoidable death in two discrete periods by deprivation decile: females: England 2001-17

<table>
<thead>
<tr>
<th>Deprivation Decile</th>
<th>% fall in ARI 2014-17</th>
<th>% fall in ARI 2001-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>D10</td>
<td>47%</td>
<td>%</td>
</tr>
<tr>
<td>D9</td>
<td>80%</td>
<td>%</td>
</tr>
<tr>
<td>D8</td>
<td>13%</td>
<td>%</td>
</tr>
<tr>
<td>D7</td>
<td>65%</td>
<td>%</td>
</tr>
<tr>
<td>D6</td>
<td>61%</td>
<td>%</td>
</tr>
<tr>
<td>D5</td>
<td>95%</td>
<td>%</td>
</tr>
<tr>
<td>D4</td>
<td>61%</td>
<td>%</td>
</tr>
<tr>
<td>D3</td>
<td>90%</td>
<td>%</td>
</tr>
<tr>
<td>D2</td>
<td>91%</td>
<td>%</td>
</tr>
<tr>
<td>D1</td>
<td>117%</td>
<td>%</td>
</tr>
</tbody>
</table>

Annual percentage change

-3 -2.5 -2 -1.5 -1 -0.5 0 0.5
Trend in age-standardised avoidable mortality caused by cardiovascular diseases for selected deprivation deciles: England 2001-17

Annual fall 4.5%
Annual fall 4.9%
Annual fall 5.2%
Annual fall 5.5%
Annual fall 0.9%
Annual fall 0.8%
Annual fall 3.3%
Annual fall 4.7%
Trend in age-standardised avoidable mortality caused by injuries for selected deprivation deciles: England 2001-17

Annual fall 1.1%
Annual rise 2.8%
Annual rise 0.4%
Annual rise 2.7%
Annual fall 0.9%
Annual rise 1.9%
Annual fall 1.4%
Annual rise 2.9%
Trend in age-standardised avoidable mortality caused by respiratory diseases for selected deprivation deciles: England 2001-17

- Males_D1: Annual fall 1.1%
- Males_D10: Annual rise 1.9%
- Females_D1: Annual fall <0.1%
- Females_D10: Annual rise 2.1%
- 2001 to 2017
Trend in the slope index of inequality in male avoidable, amenable and preventable mortality: England 2001 to 2017

age-standardised rate per 100,000

2001 2003 2005 2007 2009 2011 2013 2015 2017

avoidable amenable preventable

461 380 341 361 358
240 286 302 198 203
150

Change in definition
Trend in the slope index of inequality in female avoidable, amenable and preventable mortality: England 2001 to 2017

age-standardised rate per 100,000

236 182 128
225 175 155 118
210 170 124
200 160 120
193 155 81
199 161 118
206 166 124

avoidable  amenable  preventable
Conclusions (1)

• There was a slowing in the rate of improvement in avoidable deaths for males and females between 2014-17 compared with 2001-13

• Observed at the extremes of deprivation exposure, but the magnitude was greater among the most deprived, and a rise for D1 females

• Reflected in substantial contraction in rate of improvement in avoidable CVD deaths (particularly deprived males/females), militating against maintenance of the general mortality falls observed 1\textsuperscript{st} decade

• The rises observed in avoidable deaths caused by respiratory diseases and injuries is contributing to the generally slowing trend we’ve observed
Conclusions (2)

• Trend in the absolute gap in avoidable deaths is also contrasting in second decade compared with noughties:
  • Males little improvement in avoidable and preventable deaths since new definition 2014, while the amenable gap increased
  • Females avoidable, preventable and amenable mortality inequalities have grown since 2014
• These figures suggest avoidable deaths trends are having an effect on the general slowing in mortality and life expectancy gains
• The presence of large gaps in avoidable deaths between deprived areas suggests eminent potential to return to a more regular pace of mortality improvement through narrowing inequalities