Mortality from all causes

Purpose:
To reduce mortality.

Definition of indicator and its variants:

Mortality from all causes (ICD-10 A00-Y99 equivalent to ICD-9 001-E999).

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Sex</th>
<th>Age group</th>
<th>Organisation (see glossary)</th>
<th>Current data</th>
<th>Trend data</th>
<th>File-worksheet code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of deaths</td>
<td>MFP</td>
<td>1+, 1-4, 5-14, 15-34, 35-64, 65-74, 75+</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>current year</td>
<td></td>
<td>03C_073NO</td>
</tr>
<tr>
<td>Crude death rate</td>
<td>MFP</td>
<td>All ages</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>current year</td>
<td></td>
<td>03C_073CRP1</td>
</tr>
<tr>
<td>Average age-specific death rate per 100,000 resident population</td>
<td>MFP</td>
<td>1+, 1-4, 5-14, 15-34, 35-64, 65-74, 75+</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>three years pooled</td>
<td></td>
<td>03C_073CRP2</td>
</tr>
<tr>
<td>Indirectly age-standardised mortality ratio (SMR) and number of deaths</td>
<td>MFP</td>
<td>All ages, &lt;15, &lt;75, 15-64, 65-74, All ages, &lt;15, &lt;75, 15-64, 65-74</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>three years pooled</td>
<td>from 1995 to current year</td>
<td>03C_073SM00++ 03C_073SM0014 03C_073SM0074 03C_073SM1564 03C_073SM6574 03C_073SMT00++ 03C_073SMT0014 03C_073SMT0074 03C_073SMT1564 03C_073SMT6574</td>
</tr>
<tr>
<td>Directly age-standardised mortality rate (DSR) per 100,000 and number of deaths</td>
<td>MFP</td>
<td>All ages, &lt;15, &lt;75, 15-64, 65-74, All ages, &lt;15, &lt;75, 15-64, 65-74</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>three years pooled</td>
<td>from 1995 to current year</td>
<td>03C_073DR00++ 03C_073DR0014 03C_073DR0074 03C_073DR1564 03C_073DR6574 03C_073DRT00++ 03C_073DRT0014 03C_073DRT0074 03C_073DRT1564 03C_073DRT6574</td>
</tr>
</tbody>
</table>

Numerator:

Numerator data:
Deaths from all causes classified by underlying cause of death (ICD-10 A00-Y99 equivalent to ICD-9 001-E999), registered in the respective calendar year(s). Due to a difference in the way neonatal deaths are recorded, all deaths for this age group are included, regardless of ICD-10 code. Neonatal deaths are included in the age groups that contain those aged less than 1 year.

Source of numerator data:
Office for National Statistics (ONS), original cause of death data.
Comments on numerator data:
Mortality data for years 1995-2006 were extracted by ONS in June 2007 with organisational codes assigned using the postcode of usual residence and the November 2006 edition of the National Statistics Postcode Directory (NSPD). Data for subsequent years were extracted in June of the following year using the respective year’s November edition of the NSPD.

From the 2003 Compendium onwards, data are based on the original causes of death rather than the final causes used in earlier Compendia.


ICD-9 to ICD-10 bridging exercise:
In January 2001, ONS implemented a change from ICD-9 to ICD-10 for coding causes of death in England and Wales. As part of an exercise to investigate the effects of this change, ONS also re-coded all deaths registered in 1999. Deaths for years prior to 1999 and for the year 2000 have not been re-coded.

For current analysis, therefore, all data are based on ICD-10.

For trend analysis, the numbers of deaths observed in the years 1995-98 and 2000 must be adjusted to give “expected” numbers of deaths which would have been coded to this cause in ICD-10. This is done by multiplying the ICD-9 based death counts by the appropriate ICD-10/9 comparability ratio published by ONS. For this indicator the following ICD-10/9 comparability ratios were used:

Males  All Ages: 1
Females  All Ages: 1

Adjusted person counts are the sum of the adjusted male and female counts. Once adjusted, the counts are used to calculate rates in the usual way.

ICD-10 v2001.2 to ICD-10 v2010 bridging exercise:
In 2011, ONS implemented a change from ICD-10 version 2001.2 to ICD-10 version 2010 for coding causes of death in England and Wales. For analysis of years 2011 onwards, all data are based on ICD-10 v2010.

These indicators are not affected by the changes in ICD-10 Codes.

ICD-10 v2010 NCHS software to ICD-10 v2013 IRIS software bridging exercise
In 2014, ONS changed the software used to code cause of death. Previously the ICD-10 v2010 software and rules provided by the National Center for Health Statistics (NCHS) was used, however from 1 January 2014 ONS have used the ICD-10 v2013 IRIS rules.

Further details are available from:
http://www.ons.gov.uk/ons/dcp171778_373602.pdf

These indicators are not affected by the changes in coding software.

Denominator:

Denominator data:
2011 Census rebased mid-year population estimates for the calendar years 2002-2010. 2011 Census based mid-year population estimates for the calendar year 2011 onwards.

Source of denominator data:
ONS

Comments on denominator data:
Data are based on the latest revisions of ONS mid-year population estimates for the respective years.
Statistical methods:

Annex 2: Changes to Office for National Statistics Mortality Data
Annex 3: Explanations of statistical methods used in the Compendium
Annex 5: The European Standard Population


Directly standardised indicators produced from August 2014 onwards have been calculated using the 2013 European Standard Population. This affects data for single years 2012 onwards, three-year pooled data for 2010-12 onwards and trend data from 1995-2012 onwards.

Data on the Compendium of Population Health Indicators website have had any required suppression applied: data that may potentially identify an individual have been removed (in cells marked by X). Full details of the disclosure control applied is available in the “Statistical methods” and “Disclosure control” sections of the website: https://digital.nhs.uk/data-and-information/publications/ci-hub/compendium-indicators

Interpretation of indicators:

Evaluating the quality of Clinical and Health Indicators - Annex 11 describes the criteria that should be used to judge the quality of this indicator. The application of the criteria is dependent on the context (e.g. describing a single organisation, comparing several organisations) and the level (e.g. national / regional with large numbers of events, local with small numbers of events) at which the data are to be used.

Further reading:


Updated: March 2019