Deaths at home from prostate cancer

Purpose:
To improve palliative care and service planning for cancer patients in the terminal stages of life, allowing more of them the choice of dying at home.

Definition of indicator and its variants:
The proportion of deaths from prostate cancer (ICD-10 C61) that occur at home.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Sex</th>
<th>Age group (see glossary)</th>
<th>Current data</th>
<th>Trend data</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Percent of deaths at home</td>
<td>M</td>
<td>All ages</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>three years pooled</td>
<td>18D_197PC</td>
</tr>
<tr>
<td>Indirectly age-standardised deaths at home rate per 100 deaths and number of deaths at home</td>
<td>M</td>
<td>All ages</td>
<td>E&amp;W, E, Region, LA, CTY</td>
<td>three years pooled</td>
<td>18D_197ISR</td>
</tr>
</tbody>
</table>

Numerator:

Numerator data:
Deaths at home from prostate cancer, classified by underlying cause of death (ICD-10 C61), registered in the respective calendar year(s).

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.

Information about the place of death is found on the mortality record in the communal establishment field. It contains one of:
- a 5 digit code identifying a communal establishment or institution (e.g. hospital, nursing home, residential home);
- an “H” code which indicates that the person is certified as having died at their home address and that this is not a communal establishment or;
- an “E” code which indicates that the person died elsewhere.

The communal establishments are themselves classified into 84 categories (e.g. general hospital, mental nursing home, nursing home etc) and can be further distinguished by whether they are an NHS or Non-NHS establishment.

It is currently ONS practice to include nursing homes with hospitals under a broader group - “Other hospitals and communal establishments for the care of the sick” - and also to include residential homes under “Other communal establishments”. This is because of concerns highlighted by ONS regarding the accuracy of the recorded status of some communal establishments, particularly nursing homes and residential homes.

It is therefore not possible to include nursing home or residential home deaths as a “home” death. For this indicator, a “home” death is defined as one that has the “H” code in the communal establishment field, i.e. where the death has occurred at the home address and that address is not a communal establishment.

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

For analysis of data in the years 1995-2013 (inclusive), the number of deaths observed has been adjusted to give “expected” numbers of deaths which would have been coded to this cause using ICD-10 v2013 IRIS software. This is done by multiplying the ICD-10 v2010 NCHS based death counts by the appropriate comparability ratio. These ratios are based on initial work carried out by ONS.

Ratios are applied per sex and age group (under 75 and 75 years and over).

A full table of comparability ratios is available from:
https://indicators.ic.nhs.uk/download/Additional%20Reading/Methods%20annexes/ONS_based_comparability_ratios_NCHS_to_IRIS_2014.xlsx

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.

**Denominator:**

**Denominator data:**
All deaths from prostate cancer, classified by underlying cause of death (ICD-10 C61), registered in the respective calendar year(s).

**Source of denominator data:**
ONS

**Comments on denominator data:**
Includes deaths in all categories of communal establishment code, i.e. deaths in all communal establishments, at home, and elsewhere.

From the 2003 Compendium onwards, data are based on the original causes of death rather than the final causes used in earlier Compendia. See Annex 2 for more details.

**Statistical methods:**

The age-standardised deaths at home rate utilises the indirect method of standardisation. The direct method was found not to be robust as it was affected by small numerator and denominator counts in specific age groups.

Indirect standardisation requires the computation of the ratio of an area’s observed number of events to its expected number of events if it had experienced the standard age-specific rates. This age-standardised ratio can be converted into a rate by multiplying it by the crude rate of the standard population.

The standard rates used are those of England and Wales for the respective calendar year(s). Male and female rates have been standardised separately. The rate for persons is standardised for both age and sex.

This methodology is similar to that used for the Clinical Indicators and is described in detail in:

Annex 3: Explanations of statistical methods used in the Compendium (under the sections entitled “Indirectly Standardised Rates For Clinical Indicators” and “Confidence Intervals Of Indirectly Standardised Rates For Clinical Indicators”).

Data on the Indicator Portal 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” section of the portal:

**Interpretation of indicators:**
Type of Indicator - This is a condition-specific cross-sectional comparative indicator reflecting events which act as a proxy for outcome (quality of dying). In the absence of an absolute standard, comparative data are useful for monitoring in relation to rates achieved in comparable areas.

Quality of indicator - Annex 12 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.

Confidence Intervals - 95%. Some of the values and factors influencing them may be chance occurrences, with values fluctuating at random between organisations and from year to year. Numbers of deaths may be small at individual organisational level. The results should therefore be interpreted with caution and with the aid of confidence intervals. The 95% confidence interval provides a measure of the statistical precision of the rate for an area or institution. It indicates a range which, with 95% probability, will contain the underlying value of the indicator. If the confidence interval for an organisation’s rate is outside the range of the national confidence intervals, the difference between the two rates is considered statistically significant. If the confidence intervals for two rates overlap, in most cases the difference between the rates would not be considered statistically significant.

Effect of Case-Mix / severity - Severity of the cancer and need for hospital care have implications for those who wish to die at home being able to do so. The data available do not allow adjustment for these factors.

Other Potential Confounding Factors - A number of factors outside the control of the NHS such as personal choice, availability of hospices, and family/community support may contribute to the variation shown by the indicator.

Relevant National initiatives:


Further reading:


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