Deaths Registered in England and Wales (Series DR), 2013

Coverage: England and Wales  
Date: 29 October 2014  
Geographical Area: Region  
Theme: Population  
Theme: Health and Social Care

Key Findings

- There were 506,790 deaths registered in England and Wales in 2013, a rise of 1.5% compared with 2012.

- Age-standardised mortality rates (ASMRs) decreased in 2013. There were 11,583 deaths per million population for males and 8,526 deaths per million population for females. Since 2003, ASMRs have fallen by 22% for men and 19% for women.

- Cancers (neoplasms) were the broad disease group (based on International Classification of Diseases (ICD) chapters) for which the largest percentage of deaths were registered in 2013, accounting for 29% of all deaths.

- The leading cause of death for males in 2013 was ischaemic heart diseases (15.4% of all male deaths). For females, the leading cause was dementia and Alzheimer's disease (12.2% of all female deaths).

Summary

This bulletin presents the number of deaths registered in England and Wales in 2013 by age, sex and selected underlying causes of death. In addition, the 10 leading causes of death have been ranked to provide a summary for both males and females. This bulletin provides more detailed statistics than the death registration summary tables for England and Wales, which were released in July 2014.

Figures reported here are based on deaths registered in 2013. For more information on the differences between death registrations and death occurrences, see background notes 1 and 2.
Key Mortality Trends

There were 506,790 deaths registered in England and Wales in 2013, compared with 499,331 in 2012, a rise of 1.5%. The total number of deaths in 2013 comprised 245,585 male and 261,205 female deaths. This represents a rise of 2.2% for males and 0.8% for females, compared with 2012. This is the first time since 2008 that annual death registrations have been above half a million.

Mortality rates take into account the size and age structure of the population, which impacts on the number of deaths. Mortality rates for both males and females continued their long-term downward trend, despite the small increase in the number of deaths in 2013.

Age-Standardised Mortality Rates

Age-standardised mortality rates (ASMRs) allow comparisons between populations with different age structures (see background note 4). All ASMRs produced in this report and in the associated reference tables have been calculated using the new 2013 European Standard Population (ESP). The ESP is an artificial population structure, used in the weighting of mortality or incidence data, to produce age-standardised rates. Eurostat updated the ESP for the first time since its introduction in 1976, to make it more representative of the current population in Europe (Eurostat, 2013).

For almost all causes of death, except those predominantly associated with the very young, ASMRs are higher when calculated using the 2013 ESP. For some causes of death, this difference is large. This is to be expected, as the 2013 ESP gives a greater weight to older age groups than the 1976 ESP, and deaths predominantly occur at older ages. More information about the impact of this change can be found on the ONS website.
Figure 1: Age-Standardised Mortality Rates (ASMRs), 1994-2013
England and Wales

![Graph showing age-standardised mortality rates (ASMRs) from 1994 to 2013 for males and females in England and Wales.](image)

Source: Office for National Statistics

Notes:
1. Based on deaths registered in each calendar year.
2. These rates are for all ages and are standardised to the 2013 European Standard Population, expressed per million population (see background note 4).

Download chart

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The age-standardised mortality rates (ASMRs) in 2013 were 11,583 deaths per million population for males, and 8,526 deaths per million population for females. The male ASMR has decreased each year since 1995 (Figure 1). For females, the ASMR has decreased since 1995 with the exception of three small rises, the latest being in 2012. These age-standardised rates are for all causes and
cover all ages (see background note 4). Between 2003 and 2013, the age-standardised mortality rate for males fell by 22% (from 14,823), while for females it fell by 19% (from 10,550).

Over the course of the 20th century, ASMRs steadily decreased. Up until the early 1970s, year-on-year fluctuations were higher. This is a likely consequence of influenza epidemics and cold winters, although the relationship between temperature, influenza and winter mortality is complex (for more information see Excess winter mortality in England and Wales, 2012/13 provisional and 2011/12 final).

Mortality rates are generally falling; reasons for this include medical advances in the treatment of many illnesses and diseases. This is illustrated by the reduction in ASMRs for many causes of death (see Table 9 of the DR tables (0.99 Mb Excel sheet)).

Deaths and Mortality Rates by Broad Disease Group

Cancers (neoplasms), circulatory diseases, and respiratory diseases were the broad disease groups (chapters) of the International Classification of Diseases 10th Revision (ICD-10), with the largest numbers of deaths registered in 2013. Cancers accounted for 29% of all deaths, while circulatory diseases (which include deaths from heart disease and strokes) accounted for 28% of all deaths. Respiratory diseases (including deaths from pneumonia) accounted for 15% of all deaths.

Over the course of the 20th century, there have been steady decreases in mortality rates for the main three broad disease groups (cancer, circulatory and respiratory) in England and Wales. The reasons for this include improvements in the treatment of these diseases, and the introduction of preventative programmes, such as NHS Breast screening which was introduced in 1988.

More recently, there have been initiatives to improve people’s health through better diet and lifestyle. Examples include the Department of Health’s ‘Change4life campaign’ which began in 2009 and the ‘Healthy Lives, Healthy People’ strategy for England (published in 2010) which included a tobacco control plan and a call to take action to reduce obesity in England. Similarly, Public Health Wales has a number of campaigns such as ‘Stop smoking Wales, ‘Change4life Wales’ (launched in 2010) and the ‘Screening for life’ campaign.
Figure 2: Male Age-Standardised Mortality Rates, for Three Main Broad Disease Groups, 2003 and 2013

England and Wales

Source: Office for National Statistics

Notes:
1. Based on deaths registered in each calendar year.
2. These rates are for all ages and are standardised to the 2013 European Standard Population, expressed per million population.
3. These categories correspond to the three chapters of ICD-10 with the largest number of deaths in England and Wales.

Download chart

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(27.5 Kb)
Figure 3: Female Age-Standardised Mortality Rates, for Three Main Broad Disease Groups, 2003 and 2013

England and Wales

Source: Office for National Statistics

Notes:
1. Based on deaths registered in each calendar year.
2. These rates are for all ages and are standardised to the 2013 European Standard Population, expressed per million population.
3. These categories correspond to the three chapters of ICD-10 with the largest number of deaths in England and Wales.

In 2013, deaths from cancer had the highest ASMRs for both males (3,482 deaths per million population) and females (2,385 deaths per million population). However, in 2003 the highest rates were for circulatory diseases. From 2003 to 2013, circulatory diseases (which include heart disease and strokes) have seen the largest fall in ASMRs for males and females (42% and 43% respectively). There has been a more gradual fall in ASMRs for cancer, with death rates 12% lower for males and 8% lower for females in 2013 than in 2003 (Figures 2 and 3).

In 'Improving Outcomes: A Strategy for Cancer', the Department of Health states that, although improvements have been made in the quality of cancer services in England, a significant gap remains in mortality rates compared with the European average.
The Outcomes Strategy sets out how the Department of Health aims to improve outcomes for all cancer patients and improve cancer survival rates. It aims to save an additional 5,000 lives every year by 2014/15. The ‘Be clear on cancer campaign’ aims to make sure people are aware of the signs of cancer to ensure early diagnosis. The Welsh Government's Together for Health, Cancer Delivery Plan for the NHS up to 2016 sets out the vision for the population of Wales, and what this means for NHS cancer services.

The male mortality rate for respiratory diseases decreased by 20% between 2003 and 2013, while the rate for females fell by 17%. Respiratory disease mortality rates in a given year are strongly influenced by influenza levels.

**Leading Causes of Death in 2013**

Tables 1 and 2 show the 10 leading underlying causes of death in 2013 for males and females. These are ranked according to a World Health Organisation (WHO) list, which categorises causes using ICD-10 groups, specifically designed for determining the leading causes of death. The list has been modified for use in England and Wales (Griffiths et al., 2005). The leading causes of mortality are ranked according to the number of deaths registered for each group in 2013.
Table 1: Leading Causes of Death for Males, 2013

England and Wales

<table>
<thead>
<tr>
<th>Rank</th>
<th>Underlying cause of death</th>
<th>ICD-10 code</th>
<th>Number of deaths registered</th>
<th>Percentage of all male deaths</th>
<th>Age-standardised mortality rate per million population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ischaemic heart diseases</td>
<td>I20-I25</td>
<td>37,797</td>
<td>15.4</td>
<td>1,771</td>
</tr>
<tr>
<td>2</td>
<td>Malignant neoplasm of trachea, bronchus and lung</td>
<td>C33,C34</td>
<td>16,818</td>
<td>6.8</td>
<td>746</td>
</tr>
<tr>
<td>3</td>
<td>Dementia and Alzheimer's disease</td>
<td>F01,F03,G30</td>
<td>15,262</td>
<td>6.2</td>
<td>818</td>
</tr>
<tr>
<td>4</td>
<td>Chronic lower respiratory diseases</td>
<td>J40-J47</td>
<td>15,021</td>
<td>6.1</td>
<td>717</td>
</tr>
<tr>
<td>5</td>
<td>Cerebrovascular diseases</td>
<td>I60-I69</td>
<td>14,058</td>
<td>5.7</td>
<td>696</td>
</tr>
<tr>
<td>6</td>
<td>Influenza and Pneumonia</td>
<td>J09-J18</td>
<td>11,426</td>
<td>4.7</td>
<td>614</td>
</tr>
<tr>
<td>7</td>
<td>Malignant neoplasm of prostate</td>
<td>C61</td>
<td>9,726</td>
<td>4.0</td>
<td>479</td>
</tr>
<tr>
<td>8</td>
<td>Malignant neoplasm of colon, sigmoid, rectum and anus</td>
<td>C18-C21</td>
<td>7,669</td>
<td>3.1</td>
<td>347</td>
</tr>
<tr>
<td>9</td>
<td>Malignant neoplasms of lymphoid,</td>
<td>C81-C96</td>
<td>6,311</td>
<td>2.6</td>
<td>283</td>
</tr>
</tbody>
</table>
The leading cause of death for males in 2013 was ischaemic heart diseases, which accounted for 15.4% of male deaths (Table 1). The leading cause of death for females was dementia and Alzheimer’s disease, which accounted for 12.2% of female deaths during 2013 (Table 2). The second leading cause of death in 2013 was malignant neoplasm of trachea, bronchus and lung (lung cancer) for males and ischaemic heart diseases for females.

If causes were ranked by their age-standardised mortality rates, instead of number of deaths, the rankings for males and females would change slightly. For example, dementia and Alzheimer’s disease among males is ranked third on number of deaths but second on mortality rates, while influenza and pneumonia among females is ranked fourth on number of deaths, but sixth on mortality rates. The age-standardisation process has been altered following a revision in 2013 and now gives a greater weight to deaths at older ages (see background note 4).

For both sexes, lung cancer (malignant neoplasm of trachea, bronchus and lung) was the most common cancer, appearing second in the leading cause of death list for males and sixth for females.

### Table

<table>
<thead>
<tr>
<th>Rank</th>
<th>Underlying cause of death</th>
<th>ICD-10 code</th>
<th>Number of deaths registered</th>
<th>Percentage of all male standardised deaths</th>
<th>Age-standardised mortality rate per million population</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Diseases of haematopoietic and related tissue</td>
<td>K70-K77</td>
<td>4,661</td>
<td>1.9</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td><strong>All male deaths</strong></td>
<td></td>
<td><strong>245,585</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table source:** Office for National Statistics

**Table notes:**
1. Based on deaths registered in each calendar year.
2. The cause of death groups used here are based on a list developed by the WHO, modified for use in England and Wales (Griffiths et al., 2005).
3. These rates are for all ages and are standardised to the 2013 European Standard Population, expressed per million population.

**Download table**

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The leading cause of death for males in 2013 was ischaemic heart diseases, which accounted for 15.4% of male deaths (Table 1). The leading cause of death for females was dementia and Alzheimer’s disease, which accounted for 12.2% of female deaths during 2013 (Table 2). The second leading cause of death in 2013 was malignant neoplasm of trachea, bronchus and lung (lung cancer) for males and ischaemic heart diseases for females.

If causes were ranked by their age-standardised mortality rates, instead of number of deaths, the rankings for males and females would change slightly. For example, dementia and Alzheimer’s disease among males is ranked third on number of deaths but second on mortality rates, while influenza and pneumonia among females is ranked fourth on number of deaths, but sixth on mortality rates. The age-standardisation process has been altered following a revision in 2013 and now gives a greater weight to deaths at older ages (see background note 4).

For both sexes, lung cancer (malignant neoplasm of trachea, bronchus and lung) was the most common cancer, appearing second in the leading cause of death list for males and sixth for females.
The lists also contain three other cancers for males and two for females, including those which are sex-specific (prostate cancer and female breast cancer).

Diseases of the liver replaced malignant neoplasm of the oesophagus as one of the 10 leading causes of death for males in 2013. Diseases of the liver did not appear in the 10 leading causes of death for males in 2012, but has appeared in previous years.
Table 2: Leading Causes of Death for Females, 2013

England and Wales

<table>
<thead>
<tr>
<th>Rank</th>
<th>Underlying cause of death</th>
<th>ICD-10 code</th>
<th>Number of deaths registered</th>
<th>Percentage of all female deaths</th>
<th>Age-standardised mortality rate per million population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dementia and Alzheimer's disease</td>
<td>F01,F03,G30</td>
<td>31,850</td>
<td>12.2</td>
<td>968</td>
</tr>
<tr>
<td>2</td>
<td>Ischaemic heart diseases</td>
<td>I20-I25</td>
<td>26,075</td>
<td>10.0</td>
<td>844</td>
</tr>
<tr>
<td>3</td>
<td>Cerebrovascular diseases</td>
<td>I60-I69</td>
<td>20,706</td>
<td>7.9</td>
<td>656</td>
</tr>
<tr>
<td>4</td>
<td>Influenza and Pneumonia</td>
<td>J09-J18</td>
<td>15,361</td>
<td>5.9</td>
<td>473</td>
</tr>
<tr>
<td>5</td>
<td>Chronic lower respiratory diseases</td>
<td>J40-J47</td>
<td>14,927</td>
<td>5.7</td>
<td>505</td>
</tr>
<tr>
<td>6</td>
<td>Malignant neoplasm of trachea, bronchus and lung</td>
<td>C33,C34</td>
<td>13,619</td>
<td>5.2</td>
<td>485</td>
</tr>
<tr>
<td>7</td>
<td>Malignant neoplasms of female breast</td>
<td>C50</td>
<td>10,144</td>
<td>3.9</td>
<td>353</td>
</tr>
<tr>
<td>8</td>
<td>Malignant neoplasm of colon, sigmoid,</td>
<td>C18-C21</td>
<td>6,569</td>
<td>2.5</td>
<td>224</td>
</tr>
</tbody>
</table>
## Deaths Registered in England and Wales (Series DR), 2013 | 29 October 2014

<table>
<thead>
<tr>
<th>Rank</th>
<th>Underlying cause of death</th>
<th>ICD-10 code</th>
<th>Number of deaths registered</th>
<th>Percentage of all standardised female deaths</th>
<th>Age-standardised mortality rate per million population</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Diseases of the urinary system</td>
<td>N00-N39</td>
<td>5,457</td>
<td>2.1</td>
<td>172</td>
</tr>
<tr>
<td>10</td>
<td>Heart failure and complications and ill-defined heart disease</td>
<td>I50-I51</td>
<td>5,012</td>
<td>1.9</td>
<td>154</td>
</tr>
</tbody>
</table>

All female deaths 261,205

**Table source:** Office for National Statistics

**Table notes:**
1. Based on deaths registered in each calendar year.
2. The cause of death groups used here are based on a list developed by the WHO, modified for use in England and Wales (Griffiths et al., 2005).
3. These rates are for all ages and are standardised to the 2013 European Standard Population, expressed per million population.

**Comparing Leading Causes of Death in 2003 and 2013**

In 2003, deaths from ischaemic heart diseases accounted for 21.6% of all male deaths (Figure 4) and 15.8% of all female deaths (Figure 5). In 2013, it accounted for 15.4% of all male deaths, a fall of 6.2 percentage points, and 10.0% of all female deaths, a fall of 5.8 percentage points.

In contrast, the percentage of deaths from dementia and Alzheimer's disease rose by 4.2 percentage points for males over the same period (from 2.0% to 6.2%), and by 7.5 percentage points for females (from 4.7% to 12.2%).

Download table

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Alzheimer’s disease is the most common cause of dementia. Deaths from dementia and Alzheimer’s disease are increasing as people live longer, with women living longer than men. Some of the rise over the last few decades may also be attributable to a better understanding of dementia. This means that doctors may be more likely to record dementia as the underlying cause of death. For more information on Alzheimer's disease, see this infographic (by Alzheimer's Society) and trends in mortality from Alzheimer’s disease, Parkinson’s disease and dementia, England and Wales, 1979–2004.

The increase in deaths from dementia may also be partially explained by an update to the ICD coding frame, introduced in January 2011 (see background note 6). The results of the bridge coding study, which looked at the update from ICD-10 version 2001.2 to ICD-10 version 2010, showed that within the dementia cause group there is a large change for vascular dementia (F01). Previously, vascular dementia deaths were coded as cerebrovascular disease (I60-I69), in particular I67.9 (cerebrovascular disease, unspecified). A number of dementia deaths were also previously coded as N39.0 (urinary tract infection, site not specified). This change was due to an addition to the modification tables of valid causal sequences.
Figure 4: Percentage of Deaths for the 10 Leading Causes of Death for Males, 2003 and 2013

England and Wales

Source: Office for National Statistics

Notes:
1. Based on deaths registered in each calendar year.
2. The cause of death groups used here are based on a list developed by the WHO, modified for use in England and Wales (Griffiths et al., 2005).
3. Figures for 2003 are given for the top 10 causes of death in 2013, as a comparison.

Download chart

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(27 Kb)
Figure 5: Percentage of Deaths for the 10 Leading Causes of Death for Females, 2003 and 2013

England and Wales

Source: Office for National Statistics

Notes:
1. Based on deaths registered in each calendar year.
2. The cause of death groups used here are based on a list developed by the WHO, modified for use in England and Wales (Griffiths et al., 2005).
3. Figures for 2003 are given for the top 10 causes of death in 2013, as a comparison.

Download chart

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Impact of Registration Delays on Mortality Statistics, 2013

The information used to produce mortality statistics is based on the details collected when deaths are certified and registered. In England and Wales, deaths should be registered within five days of the death taking place. However, there are some situations which result in the registration of the death being delayed. Deaths considered unexpected, accidental or suspicious will be referred to a coroner who may order a post-mortem and/or carry out a full inquest to ascertain the reasons for the death. The death cannot be registered until the inquest is completed, which can take many months or even years. ONS is not notified that a death has occurred until it is registered. If someone is to be charged in relation to the death, the coroner must adjourn the inquest, and they may carry out an accelerated registration. However, the full details are not recorded until the inquest is completed. Accelerated registrations are assigned a U50.9 (inquest adjourned) code, and are included in the [DR Series Table 5 (1.95 Mb Excel sheet)](DR%20Series%20Table%205%20(1.95%20Mb%20Excel%20sheet)).

Mortality statistics are presented based on the number of deaths registered in a particular period, rather than the number of deaths that actually occurred in that period. This approach is used as a trade-off between timeliness and data quality, to meet user needs.

In 2013, there were 506,790 deaths registered in England and Wales. Of these deaths, 482,658 occurred in 2013, representing 95% of the deaths registered. The proportion of deaths registered in 2013 that also occurred in 2013 varies by the underlying cause of death, classified using the ICD-10. More information on [registration delays](registration%20delays) is available on the ONS website and in background notes 1 and 2.

Users and Uses of Mortality Statistics

The Office for National Statistics uses death data to:

- produce population estimates and population projections at both national and subnational level,
- report on social and demographic trends,
- carry out further analysis, for example, life expectancies and causes of death,
- further analyse infant mortality, where infant deaths are linked to their corresponding birth record to enable more detailed analyses on characteristics such as: age of parents; birthweight; and whether the child was born as part of a multiple birth, and
- quality assure census estimates.

The Department of Health (DH) is a key user of mortality statistics. The [Public Health Outcomes Framework](Public%20Health%20Outcomes%20Framework) sets out the desired outcomes for public health and how these will be measured. Data are used, for example, to inform policy decisions and to reduce premature mortality from the major causes of death under an [NHS outcomes framework](NHS%20outcomes%20framework).

The Welsh Government (WG) is another key user of mortality statistics. The [Programme for Government](Programme%20for%20Government) sets out the indicators, one of which is 21st century healthcare. Data are then used to determine delivery priorities, such as those relating to cancer and circulatory diseases as outlined in the Wales [NHS Delivery Framework](NHS%20Delivery%20Framework).
Infant mortality is seen as a key measure among health outcomes, with a long-established link between social and health inequalities, and infant mortality. Infant mortality continues to take a central role in DH and WG's work on health inequalities.

Other government departments and local authorities use mortality data for planning and resource allocation. The Department for Work and Pensions, for example, uses detailed mortality statistics to feed into statistical models used for pensions and benefits.

Users also include:

- other public sector organisations, such as the police, who are interested in data on external causes of death,
- private sector organisations such as banks, insurance and investment companies, who are particularly interested in deaths by single year of age and region, which feed into risk estimation,
- funeral directors, who are interested in the number of deaths occurring at the local area level,
- academics, demographers and health researchers, who conduct research into mortality trends,
- lobby groups and charities, who use death statistics to support their cause, for example, campaigns against alcohol and drug misuse, or suicide,
- organisations such as Eurostat and the UN, who use death statistics for making international comparisons, and
- the media, who report on key trends in mortality.

**Further Information**

More data on [Deaths](https://www.ons.gov.uk) in England and Wales 2013 are available on the ONS website.

Data on [Births in England and Wales in 2013](https://www.ons.gov.uk) are also available on the ONS website.

A [Quality and Methodology Information](https://www.ons.gov.uk) (222.3 Kb Pdf) document for mortality statistics is available on the ONS website. Further information on data quality, legislation and procedures relating to mortality is available in the [Mortality Metadata](https://www.ons.gov.uk) (2.46 Mb Pdf).


There is an [interactive mapping tool](https://www.ons.gov.uk) which enables trends in mortality to be analysed at the local level.

A [leading causes of death](https://www.ons.gov.uk) infographic (for 2012 data) is available on the ONS website.

To meet user needs, very timely but provisional counts of death registrations are published as follows: [Provisional counts of weekly death registrations by age-sex group and region](https://www.ons.gov.uk) and [provisional counts of monthly death registrations by local authority](https://www.ons.gov.uk). Users should note that figures for 2014 have not been subject to the full quality assurance process so figures are considered provisional.
Information illustrating the processes in certification and registration (0.99 Mb Excel sheet) for deaths registered in 2013 is published on the ONS website.

The 21st Century Mortality Files are a record of mortality in England and Wales from 2001 onwards. They are designed to complement the 20th Century Mortality Files. The files consist of an aggregated database of deaths by age-group, sex, year and underlying cause, and include populations for England and Wales.

Crude death rates for selected international countries are available in the Vital Statistics: Population and Health Reference Tables (see annual time series data reference table).

For mortality data for other UK countries, please see statistics on deaths in Northern Ireland and statistics on deaths in Scotland.

Future changes to mortality outputs are outlined in the plan for mortality outputs (116 Kb Pdf) available on the ONS website.

References


Public Health Wales, Stop Smoking Wales [accessed 23 October 2014], available at: www.stopsmokingwales.com/


Public Health Wales, Screening for Life [accessed 23 October 2014], available at: www.screeningforlife.wales.nhs.uk/


**Background notes**

1. The year in which a death is registered may not correspond to the year in which the death occurred. Up to 1992, Office for National Statistics (ONS) publications gave numbers of deaths registered in the data year. Between 1993 and 2005, the majority of ONS's published figures represented the number of deaths that occurred in the data year. For 2006 onwards, ONS changed the reporting of death figures back to deaths registered in a reference year. In most years (and for most causes of death), this change has little effect on annual totals but allows the output of more timely mortality data. For an annual extract of death occurrences to be acceptably complete, it must be taken some time after the end of the data year to allow for any late registrations.

2. Death figures reported here are based on deaths registered in the data year. For 2013, this includes some deaths that occurred in previous years (24,132 deaths). ONS also takes an annual extract of death occurrences in the autumn following the data year, to allow for late registrations. This is used for seasonal analysis of mortality data and several infant mortality outputs. The difference between death registrations and death occurrences in a year is relatively small. For example, the number of death registrations in 2012 involving deaths occurring in 2012 was 478,733, while the number of 2012 death occurrences was 499,240 (a difference of 4%).

3. Cause of death data are based on the final underlying cause of death. This takes account of any additional information provided by medical practitioners or coroners after the death has
been registered. The original underlying cause of death only changes in a very small number of deaths (around 0.2%) in a given year.

4. The age-standardised mortality rates (ASMRs) in this release cover all ages. Age-specific rates for 2013 were calculated using the mid-2013 population estimates based on the 2011 Census. They were then directly age-standardised to the 2013 European Standard Population (ESP), which allows comparisons between populations with different age structures, including between males and females and over time. In 2013 Eurostat, the statistical institute of the European Union, updated the ESP which is used in the calculation of age-standardised rates. ESP changes have resulted in changes to mortality rates. Overall, ASMRs have increased. The impact of the change from the 1976 ESP to the 2013 ESP was greatest for conditions commonly associated with older ages (where ASMRs increased) and conditions predominantly exclusive to the very young (where ASMRs decreased). These changes are the result of an improvement in statistical methods and not a change in the actual number of deaths. This is due to the 2013 ESP being weighted more heavily towards older ages, where most deaths occur. Trends in mortality levels within and between areas have remained relatively unchanged. More information on the 2013 revised ESP is available on the ONS website.

5. The population estimates used to calculate rates refer to the usually resident population of an area on 30 June of each year. The usually resident population is defined by the standard United Nations definition for population estimates. This includes people who reside in the area for a period of at least 12 months, whatever their nationality. ONS mid-year population estimates are based on updates from the most recent census, allowing for births, deaths, net migration and ageing-on of the population. The population estimates used for the calculation of mortality rates are the latest consistent estimates available at the time of production. Further information on population estimates methodology (343.6 Kb Pdf) can be found on the ONS website.

6. In January 2011, the software used for cause of death coding was updated from the International Classification of Diseases, 10th Revision (ICD-10) version 2001.2 to version 2010. The main changes in ICD-10 v2010 are amendments to the modification tables and selection rules, which are used to ascertain a causal sequence and consistently assign underlying cause of death from the conditions recorded on the death certificate. Overall, the impact of these changes is small although some cause groups are affected more than others, for example, the dementia cause group. For further information, see the results of the bridge coding study on the ONS website. There is also another study looking at the impact on stillbirths and neonatal deaths.

7. There is a large degree of comparability in mortality statistics between countries within the UK. Any differences are believed to have a negligible impact. These differences are outlined in the Quality and Methodology Information (222.3 Kb Pdf) document for mortality statistics.

8. Special extracts and tabulations of mortality data for England and Wales are available to order (subject to legal frameworks, disclosure control, resources and agreement of costs, where appropriate). Enquiries should be made to:

Vital Statistics Output Branch
Life Events and Population Sources Division
Office for National Statistics  
Segensworth Road  
Titchfield  
Fareham  
Hampshire PO15 5RR  
Tel: +44 (0)1329 444110  
Email: vsob@ons.gsi.gov.uk

The ONS charging policy is available on the ONS website. In line with the ONS approach to open data, all ad hoc data requests will be published onto the website.

9. We would welcome feedback on the content, format and relevance of this release. Please send feedback to the postal or email address above.

10. Follow ONS on Twitter, Facebook and LinkedIn.

11. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods; and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

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This document is also available on our website at www.ons.gov.uk.

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