1 ALL DEATHS

This category includes all deaths in Britain (England, Scotland and Wales) between 1981 and 2004 inclusive.

The map of mortality rates from all causes combines in a single image all the influences on our survival. Having taken into account the distribution of the population according to age and sex, the map shows that across these areas a person’s chances of dying in a particular year varied from being more than 50% above the national average (an SMR of 150 as shown on the key) to less than 76% of the national average (with SMRs ranging from 71 to 76 in the lowest mortality category). Thus, depending on where you were living over the last quarter of a century, there are neighbourhoods of Britain containing populations of tens of thousands of people where you were more than twice as likely to die than had you lived in other places.

Across much of the south of England outside London, and in a few isolated enclaves of prosperity in the north, Wales and Scotland, people’s chances of dying each year have been at least 10%, often 20% and at the extremes almost 30% lower than average since 1981.

Over this 24-year period, the average age of death in Britain was 74.4 years, 71.2 for men and 77.4 for women. The average age of death in our neighbourhoods varied between 66.4 years (in Glasgow Easterhouse) and 80.6 years (in Eastbourne West). These are averages. The lower figures are due to many people dying much younger; the higher due to many people living longer. Over this period 42.0% of people who died were over 80 years old, while 12.4% were under 60 years old. In the worst neighbourhood 25.0% were under 60 years old.
The Grim Reaper’s road map

18 ASSAULT BY CUTTING

This cause of death comes under the ‘external’ causes of death category (see Map 5) and falls into the sub-category of ‘Homicide and injury purposely inflicted by other persons’, along with a range of other methods of murder/assault, such as use of firearms or poisoning. See also Map 39 Suicide/undetermined by cutting.

Three quarters of those who have died due to this cause are males. As the age–sex bar chart shows, younger males are at a much higher risk. The rates in Glasgow and the south west of Scotland are immediately striking. London and other English urban centres follow with the next highest SMRs. Much of the remainder of rural and provincial Britain has substantially lower rates.

This cause of death includes killing by cutting or stabbing using a sharp object, most commonly a knife or broken glass. It includes killing which may be intentional or unintentional; many of these assaults are impulsive, related to alcohol and drug misuse, and assailants use whatever weapon is to hand. Often the knife used is a kitchen knife in a domestic incident. Women are more commonly murdered by their partners. Men are more commonly murdered by someone to whom they are unrelated.

Blunt-ended table knives were introduced in the 18th century to reduce the injuries resulting from arguments over the dinner table in public eateries (Hern et al, 2005). Many domestic kitchen knives, however, are of the dagger variety with a pointed tip and they often have a long blade. In contrast to a knife with a short blade these can penetrate deeply and can easily cause serious injury or death. Hern and colleagues argue that there is no culinary necessity for knives of this type and that banning them would drastically reduce their availability and therefore their use in personal attacks.

Broken drinking glasses and bottles are also used as weapons, often in fights in public places where alcohol has been consumed. This is known as ‘glassing’ and can lead to severe facial injuries. In these situations the assault and any resulting homicide is usually unplanned: the intention may be to cause injury, but not necessarily to kill.


ICD-9 codes: E966
ICD-10 codes: X99

<table>
<thead>
<tr>
<th>ICD-9</th>
<th>ICD-9 name</th>
<th>% of cases</th>
<th>ICD-10</th>
<th>ICD-10 name</th>
<th>% of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>E966</td>
<td>Assault by cutting and piercing instrument</td>
<td>100.0</td>
<td>X99</td>
<td>Assault by sharp object</td>
<td>100.0</td>
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</table>
**PEDESTRIAN HIT BY VEHICLE**

**This category includes** deaths to pedestrians due to collision with a vehicle of some kind.

See also Map 25 Pedal cyclist hit by vehicle, and Map 22 Motor vehicle accidents, which covers the deaths of the occupants of motor vehicles and motorcyclists.

The highest SMRs are found in urban areas, while rural south west England has the lowest rates. Contrast this with Map 22, which covers the deaths of those who are drivers or passengers: on that map, the highest SMRs are found in rural areas.

The age distribution for this cause of death is unusual in that for both men and women there are two peaks – in the teenage years/early 20s and later in the 70s and 80s (see age–sex bar chart). The peak in the younger age group is likely to reflect activity patterns – going out a lot and perhaps also not observing the Green Cross Code of their childhood. The more children are sheltered from cars when they are young, the less experience they will have of dealing with them; there is a tendency to blame victims of the road for their early deaths. The peak for the older age groups indicates the vulnerability of older people – they can generally move less quickly and their bodies are more fragile and less likely to heal.

For each mile travelled there are nearly 30 times more child pedestrian deaths than there are deaths to child car occupants (Sonkin et al, 2006). The children who are more likely to be pedestrians are those from lower-income families who are less likely to have a car. Strategies to reduce the number of pedestrian deaths include education, 20mph speed limits and speed bumps.

*Philosopher Roland Barthes died from this cause.*


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<tr>
<th>ICD-9</th>
<th>ICD-9 name</th>
<th>% of cases</th>
<th>ICD-10</th>
<th>ICD-10 name</th>
<th>% of cases</th>
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</thead>
<tbody>
<tr>
<td>E814.7</td>
<td>Motor vehicle traffic accident involving collision with pedestrian – Pedestrian</td>
<td>97.1</td>
<td>V03.1</td>
<td>Pedestrian injured in collision with car, pick-up truck or van – Traffic accident</td>
<td>49.0</td>
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<td>V04.1</td>
<td>Pedestrian injured in collision with heavy transport vehicle or bus – Traffic accident</td>
<td>17.1</td>
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<td>V09.2</td>
<td>Pedestrian injured in traffic accident involving other and unspecified motor vehicles</td>
<td>14.9</td>
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<td></td>
<td></td>
<td>V09.3</td>
<td>Pedestrian injured in unspecified traffic accident</td>
<td>9.7</td>
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<td>Other causes in group</td>
<td>2.9</td>
<td>Other causes in group</td>
<td>9.3</td>
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<tr>
<td></td>
<td>100.0</td>
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</table>
This is a sub-category of all cancer deaths (see Map 7) and includes only the form of skin cancer known as malignant melanoma.

See also Other neoplasms (Map 61), which includes other forms of skin cancer.

There is an obvious north-south divide on the map, with a gradient from higher rates on the south coast to lower rates in northern parts. This probably reflects the British climate, and also where those who can afford to holiday in the sun reside.

Malignant melanoma, the form of skin cancer that we map here, is the most serious type of skin cancer as it can spread to other parts of the body. The leading cause of skin cancer is over-exposure to sunlight. Rates have been increasing in recent years, thought to be due to increasing numbers of people taking increasing numbers of holidays abroad, and the popularity of the ‘tanned look’ and the use of tanning booths and sun lamps to achieve that look.

Skin cancer is very evenly distributed between males and females (see age–sex bar chart) although the age distributions are slightly different. For both males and females mortality increases incrementally with age until the 70s, reflecting, possibly, accumulated sun exposure over the life course.

ICD-9 codes: 172
ICD-10 codes: C43

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<tr>
<td>172</td>
<td>Malignant melanoma of skin</td>
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<td>C43</td>
<td>Malignant melanoma of skin</td>
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<td></td>
<td></td>
<td>100.0</td>
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</tbody>
</table>
MAP 54  SKIN CANCER

Skin cancer (SMR)
- 200 – 399
- 150 – 199
- 140 – 149
- 130 – 139
- 120 – 129
- 110 – 119
- 100 – 109
- 91 – 99
- 83 – 90
- 77 – 82
- 71 – 76
- 67 – 70
- 50 – 66
- 25 – 49
- Below 25

Individual causes of death
The Grim Reaper’s road map

68 LUNG CANCER

This category is a sub-category of All cancer deaths (see Map 7). Lung cancer is the second most common specific cause of death of men aged between 45 and 74 after heart disease. It is the third most common cause for women aged 50–74.

See also Map 61 Other neoplasms.

Smoking is strongly linked to deprivation. The map shows a north–south gradient with lower rates in the south. Scotland, and particularly Glasgow, has the highest rates; Scotland also has the highest smoking rates. Clusters are found in Liverpool and Manchester, in Tyneside and along the north east coast, and in central London. Within central London, the neighbourhoods covering the cities of Westminster and London, and Kensington and Chelsea – more affluent areas – have lower rates than their neighbours. The maps for male and female deaths are similar, except for higher rates for men in the West Midlands.

This category includes cancer of the lung and the bronchi, the airways of the lungs. It accounts for more than one in 20 of all deaths in the period covered in this atlas (1981 to 2004 inclusive).

The musicians George Melly and George Harrison died of lung cancer.

ICD-9 codes: 162
ICD-10 codes: C33-C34

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<th>% of cases</th>
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</thead>
<tbody>
<tr>
<td>162</td>
<td>Malignant neoplasm of trachea, bronchus and lung</td>
<td>100.0</td>
<td>C34</td>
<td>Malignant neoplasm of bronchus and lung</td>
<td>99.9</td>
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<td>Other causes in group</td>
<td>0.1</td>
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Most lung cancer is caused by smoking. Lung cancer has been more common in men as traditionally they have had higher rates of smoking. However, as rates of smoking in women increased so did their rates of lung cancer.

Lung cancer is often diagnosed at an advanced stage of disease. It is one of the most difficult cancers to treat and has one of the lowest survival outcomes of any form of cancer.
Heart attack and chronic heart disease are a sub-category of All cardiovascular deaths (See Map 9). 95% of the deaths here are due to atherosclerosis of the coronary arteries.

See also Map 89 Aortic aneurysm and Map 100 Other heart disease.

As a cause of death is more specifically defined, the map of its topography becomes smoother. The neighbourhoods where rates are highest tend to be surrounded by areas with the next highest rates. These are almost all in the north, and rates peak in Scotland, particularly both in and around Glasgow, which is surrounded by a ring of slightly lower rates.

Further south, in Wales, Stoke and south Yorkshire are similar rings that highlight the peaks of risk in those areas. Around these areas are found in turn neighbourhoods where rates are average, and next to them areas where you are less likely than most people to die from this most common of causes. Only a few such areas of low risk are found in the north of England, in Scotland and in Wales. Such areas are ubiquitous in the south, where the very lowest rates are found. There are rarely great differences between adjoining areas. Where there are, within the centre of London, is where very rich and very poor live almost side by side.

Heart disease is a major cause of death in Britain and accounts for one quarter of all deaths over the total period studied here. Smoking, high blood pressure, high cholesterol levels, obesity, low physical activity levels and diabetes are important causes of this condition.

Ischaemic heart disease is when there is a build-up of plaques within the walls of the arteries that supply the heart with oxygen and nutrients. People are often not aware that they have the condition until the disease is at an advanced stage; often a sudden heart attack is the first symptom. A heart attack occurs when the blood supply to part of the heart is interrupted, often from complete blockage of an artery by broken-off plaque.

Although a heart attack is often thought to be something that happens to men, almost half of the deaths from this cause are of women (46%), although they tend to die at a slightly older age than do men.

The author Douglas Adams and the educationalist Ted Wragg are among the millions of people to have died of this cause.

ICD-9 codes: 410-414, 429
ICD-10 codes: I20-I22, I24-I25, I51

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<th>ICD-10 name</th>
<th>% of cases</th>
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<tr>
<td>410</td>
<td>Acute myocardial infarction</td>
<td>59.2</td>
<td>I21</td>
<td>Acute myocardial infarction</td>
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<td>414</td>
<td>Other forms of chronic ischaemic heart disease</td>
<td>36.7</td>
<td>I25.1</td>
<td>Atherosclerotic heart disease</td>
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<td>I25.9</td>
<td>Chronic ischaemic heart disease, unspecified</td>
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<tr>
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<td>100.0</td>
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<td></td>
<td>Other causes in group</td>
<td>4.1</td>
</tr>
</tbody>
</table>

3,741,101 cases
25.22% of all deaths
average age = 75.3
male:female ratio = 54:46
MAP 84 HEART ATTACK AND CHRONIC HEART DISEASE

Heart attack & chronic heart disease (SMR)
150 – 199
140 – 149
130 – 139
120 – 129
110 – 119
100 – 109
91 – 99
83 – 90
77 – 82
71 – 76
67 – 70
50 – 66