Methodology

Definition

For the purpose of these statistics, 'avoidable' mortality is the number of deaths for which the underlying cause is one for which all or most such deaths (subject to age limits if appropriate) are considered potentially avoidable through public health interventions or timely and effective healthcare. Note that:

- not every death from such causes will be truly avoidable (for reasons which are given in the Further background information below;

- the underlying cause of a death is defined as the disease or injury which initiated the chain of morbid events leading directly to the death, or the accident or act which produced the fatal injury.

These statistics were produced using a definition of 'avoidable' mortality which was developed by the Office for National Statistics (ONS) and was published by ONS in May 2016 in its 'Review of Avoidable Mortality' available on the ONS website. This definition covers both:

- 'preventable' mortality: a particular cause of death is counted as (potentially) preventable if it is thought (in the light of the understanding of the determinants of health at the time of death) that all or most deaths from that cause (subject to age limits if appropriate) could be avoided by public health interventions in the broadest sense;

and

- 'amenable' mortality: a particular cause of death is counted as (potentially) amenable (treatable) if it is thought (in the light of medical knowledge and technology at the time of death) that all or most deaths from that cause (subject to age limits if appropriate) could be avoided through good quality healthcare.

For example:

- transport accidents are considered to be 'preventable', but not 'amenable', because (for example) road safety education could reduce dangerous driving and other risky behaviour by road users, resulting in fewer fatal road accidents, whereas (it is assumed) there is much less scope to reduce road deaths by improving healthcare for people who have been involved in road accidents;

- certain types of cancer (for example Hodgkin's lymphoma) are considered 'amenable', but not 'preventable', because, while (it is thought that) nothing

can be done to prevent their occurring, early detection and treatment should lead to a high survival rate;

- ischaemic (coronary) heart disease is considered both 'preventable' and 'amenable' because (for example) public health education (for example encouraging exercise and discouraging smoking) could reduce the number of people who are at risk, and because early detection and treatment of heart- and circulation-related problems should lead to fewer heart attacks and to a higher survival rate for the disease.

For the purpose of these statistics, 'avoidable' deaths are all deaths from those causes that are counted as 'preventable' or 'amenable' or both. Each such death is counted only once in the figure for 'avoidable' mortality. However, in cases where a cause of death is counted as both 'preventable' and 'amenable', deaths from that cause are counted in both categories when figures for them are given separately. It follows that the total number of 'avoidable' deaths will be less than the sum of the numbers of 'preventable' and 'amenable' deaths.

ONS's 'Revised Definition of Avoidable Mortality' includes a detailed list of all the causes of death that are counted as 'preventable' and 'amenable' in its Appendix 1. For ease of reference, please refer to a copy of ONS's Appendix 1 (PDF 101Kb). It will be seen that, for most of those causes of death, only deaths in a particular age-range are counted as 'preventable' or 'amenable' (or both).

The causes of death that are counted as 'avoidable' for children and young people (defined, for the purpose of such statistics, as those aged 0 to 19, inclusive) are set out in that publication's Appendix 2. That list is based on the one in Appendix 1, with:

- age ranges like '0-74' being restricted to '0-19' (as Appendix 2 relates only to children and young people); and

- no distinction between 'preventable' and 'avoidable' (as ONS did not consider it appropriate to split the relatively small number of deaths of children and young people in that way).

Further Background Information

Caution is recommended when interpreting the figures. 'Avoidable' mortality is based on the concept that premature deaths from certain medical conditions should be rare, and, ideally, should not occur if there is timely and effective healthcare. It was designed to highlight areas of potential weakness in healthcare that could benefit from further investigation: where there are many premature deaths caused by conditions for which effective public health and medical interventions are available. However, it was not intended for use to assess possible differences in the effectiveness of healthcare systems.

While a particular cause of death may be considered 'avoidable' for the purpose of these figures, this does not mean that every death from that cause could be avoided.

The relevant definitions say that ‘ … all or most deaths from that cause (subject to age limits if appropriate) could be avoided …’. It should be noted that:

- there is an upper age limit of 74 years for most of the causes of death included in the definition. This is because deaths at older ages are often difficult to attribute definitively to a single underlying cause, and because the likelihood of death is more affected by coexisting medical conditions and other factors.

- the reference to ‘or most’ means that there could always be some premature deaths from those causes. For example:

    - even with early detection and the best possible treatment, the survival rate for a particular type of cancer may never be 100%;

    - while the number of road deaths has dropped greatly from the peak levels seen from the mid-1960s to the end of the 1970s, and could well fall further in future, due to (for example) road safety measures and improvements in vehicle design, it is unlikely ever to be zero.

It must be remembered that these figures for ‘avoidable’ deaths, which are produced solely from the data that are recorded when a death is registered, cannot take into account factors such as a person’s lifestyle, how far a disease had progressed by the time it was diagnosed, and the likely effect, on the possibility of survival, of any other medical conditions that the person may have had. While some of the deaths from a particular cause might not have occurred had there been (for example) more timely or more effective healthcare, there would be others for whom that would not be the case, so it is not possible to say how many deaths were truly avoidable.

With advances in medical technology and wider public health interventions, deaths from a condition which was previously not ‘avoidable’ may become ‘avoidable’. This means that, when the list of what are considered ‘avoidable’ causes of death is updated, it may not be appropriate to produce figures for earlier years using the revised ‘avoidable mortality’ definition. For this reason, statistics are given here only for 2014 onwards, because that is the first year for which ONS has published figures based on what is now its current definition. ONS’s publication stated that it was not producing revised figures for earlier years based on that definition. National Records of Scotland understands that ONS plans to review the definition through consultation with users every 3-5 years.