



Organisation for Economic Co-operation and Development



EUROPEAN  
COMMISSION

EUROSTAT

Directorate F: Social statistics

## **Avoidable mortality: OECD/Eurostat lists of preventable and treatable causes of death (November 2019 version)**

## Table of contents

|   |           |
|---|-----------|
| 1. Introduction.....  | 3         |
| 2. Definitions, guiding principles and selection of causes of mortality.....  | 4         |
| 2.1. Definitions .....  | 4         |
| 2.2. Guiding principles .....   | 4         |
| 2.3. Selection of causes of mortality for the preventable and treatable categories.....                                       | 5         |
| 2.4. Age threshold to define premature deaths .....   | 5         |
| Annex A. Sources and calculations for the indicators of preventable and treatable causes of mortality.....                    | 13        |
| Annex B. Comparison of three lists of preventable mortality with the OECD/Eurostat list (November 2019 version) .....         | 14        |
| Annex C. Comparison of three lists of treatable causes of mortality with the OECD/Eurostat list (November 2019 version) ..... | 17        |
| <b>References</b> .....   | <b>21</b> |

## 1. INTRODUCTION

Assessing the performance of health systems is of increasing importance in OECD and EU countries. While avoidable mortality indicators are not meant to be a definite measure of health system performance, they provide a starting point to assess the performance of public health and health care policies in avoiding premature mortality from preventable and treatable causes of death.

In 2018, the OECD and Eurostat worked together with an expert group to develop new joint lists of preventable and treatable causes of mortality. These lists built on earlier work carried out by researchers (e.g., Nolte and McKee, 2004 and 2011), by some OECD countries and by Eurostat. The new OECD-Eurostat lists were approved during the OECD Working Party on Health Statistics meeting in October 2018 and during the Eurostat Working Group on Public Health Statistics in December 2018. For the OECD, it is the first time that such lists of avoidable mortality have been formally endorsed, while for Eurostat these lists are updating and revising the lists that were first adopted at the end of 2013 (Box 1).

### **Box 1. Revisions to the previous Eurostat lists of avoidable mortality were done in close coordination with OECD work on avoidable mortality**

The initiative of establishing indicators on avoidable mortality in the European Union was started by EU countries expressing a need for disseminating death statistics addressing specific public health needs, such as assessing health systems based on preventable and treatable deaths.

In 2012 Eurostat established a Task Force on Satellite lists that was composed of national experts, Eurostat and DG SANTE. The Task Force analysed different existing lists and methodologies and came up with a suggestion for Eurostat's lists for preventable and amenable mortality, which were based on the lists developed by the ONS in England in 2011. These lists of preventable and amenable deaths were approved by EU Member States during Eurostat's annual Working Group on Public Health statistics in December 2013. Eurostat started to report these indicators in 2014.

Both the list of causes of mortality and the age limits reflect current health expectations, medical technology and knowledge, and developments in health policy, and hence might be subject to revision. Therefore, Eurostat, in line with the opinion of the Task Force on Satellite lists, asked Member States in March 2018 to provide their views and comments on the 2013 lists of preventable and amenable mortality.

In 2018, the Eurostat's Technical Group on Causes of Death statistics agreed that it would be useful to work closely with the OECD working group on avoidable mortality to come up with joint lists to achieve consistency in the lists used at the European and OECD levels. Some countries expressed not only their support towards establishing a common OECD-Eurostat list, but also provided suggestions for certain modifications to the lists suggested by the OECD working group. These suggestions were communicated by Eurostat to the OECD working group, carefully reviewed and, where deemed to be scientifically justified, the changes were made.

Many important elements of the 2013 lists of avoidable mortality have remained under the new OECD-Eurostat joint lists that were adopted at the end of 2018, including the general definitions, the selection of many causes of death and the general age threshold. However, there are also some important improvements, including a mutually exclusive allocation of causes of death under the preventable and treatable categories and greater emphasis on preventable causes of death.

## 2. DEFINITIONS, GUIDING PRINCIPLES AND SELECTION OF CAUSES OF MORTALITY

### 2.1. Definitions

Preventable and treatable causes of mortality are defined as follows:

- **Preventable mortality:** Causes of death that can be mainly avoided through effective public health and primary prevention interventions (i.e. before the onset of diseases/injuries, to reduce incidence).
- **Treatable (or amenable) mortality:** Causes of death that can be mainly avoided through timely and effective health care interventions, including secondary prevention and treatment (i.e. after the onset of diseases, to reduce case-fatality).

[Note: The label "amenable" mortality used in the previous Eurostat list was changed to "treatable" to make more explicit the link with the health care interventions.]

### 2.2. Guiding principles

The following principles were used to guide the development of the lists of preventable and treatable causes of mortality:

1. The selection should build as much as possible on the **three lists used as a reference** -- Nolte and McKee, Eurostat (which is based mainly on ONS), and CIHI/Statistics Canada.<sup>1</sup>
2. The attribution of causes of death to the preventable or treatable mortality category was based on the criteria of whether it is **predominantly** prevention or health care interventions that can reduce these causes of death. There is no implication that each individual death from a cause in either category must necessarily be capable of avoidance through prevention or treatment.
3. For those causes of death that can be both **largely prevented and also treated** once they have occurred, these causes of death were attributed to the preventable category on the rationale that if these diseases are prevented, there would be no need for treatment.
4. Causes of death should generally not be fractioned as being partly preventable and treatable given the lack of evidence to do this accurately and systematically, except when there is no strong evidence of predominance, in which case a **50%-50% allocation** was used.
5. Any **double-counting** of the same causes of death between the two lists was **avoided**, so that the two lists can be used together to provide a broad assessment of the relative importance of prevention and health care interventions in reducing avoidable deaths.<sup>2</sup>
6. Causes of death that account for a **very small number** of deaths were **excluded** to keep the lists as concise as possible.
7. The same age threshold should be used **across all the selected causes of death** in the preventable and treatable mortality categories.<sup>2</sup>
8. The two lists should be **periodically updated** to reflect progress in public health/primary prevention and health care interventions and in life expectancy.

---

<sup>1</sup> Annexes B and C provide a comparison of the selected causes of death in the OECD-Eurostat list on preventable causes (Annex B) and treatable causes (Annex C) with the three lists used as a reference.

<sup>2</sup> This is a change from the previous Eurostat approach.

### **2.3. Selection of causes of mortality for the preventable and treatable categories**

Table 1 below presents the selection of causes of death for the lists of preventable and treatable causes of mortality following the application of these guiding principles, along with a brief rationale for their inclusion.

### **2.4. Age threshold to define premature deaths**

Since their initial development in the 1970s, lists of avoidable mortality have focussed on premature deaths (or “untimely” deaths). This involves setting an age threshold to define premature deaths. The general age threshold that has traditionally been used in avoidable mortality lists in developed countries (including in the three reference lists) is under 75 years. This age threshold still reflects the life expectancy at birth in those OECD and EU countries that have the lowest life expectancies.

The OECD/Eurostat lists (November 2019 version) will therefore continue to use this age threshold of under 75 years. Following one of the guiding principles mentioned above, this age threshold will be used consistently across all the selected causes of death in the preventable and treatable categories, as there did not appear to be any strong rationale to use either a lower age or higher threshold for some causes of death.

It is recognised that the age threshold of 75 is arbitrary and only reflects a current definition of premature mortality. This age threshold should be reviewed in the future, in light of future gains in life expectancy. It is also recognised that one implication of this age threshold is that it results in some under-estimation of the overall number of deaths that could potentially be avoided through better prevention (e.g. injury prevention campaigns) or better health care for people aged 75 and over.<sup>3</sup>

---

<sup>3</sup> A new project in the context of the UN Titchfield City Group on Ageing is expected to involve the development of a different approach and separate measure of avoidable mortality in the older population (age 75+). This approach would recognise the complexities of the causal pathway to death that increase with age and the tendencies of multimorbidity in older people.

**Table 1: Joint OECD/Eurostat lists of preventable and treatable causes of mortality**

| Group               | Causes of deaths  | Preventable mortality | Treatable mortality | ICD-10 Code       | Age threshold | Rationale for inclusion   |
|---------------------|---|-----------------------|---------------------|-------------------|---------------|---|
| Infectious diseases | Intestinal diseases   | x                     |                     | A00-A09           | 0-74          | Most of these infections can be prevented through prevention measures (e.g. improve water and food safety)  |
|                     | Diphtheria, Tetanus, Poliomyelitis  | x                     |                     | A35, A36, A80     | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Whooping cough  | x                     |                     | A37               | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Meningococcal infection   | x                     |                     | A39               | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Sepsis due to streptococcus pneumonia and sepsis due to hemophilus influenzae | x                     |                     | A40.3, , A41.3    | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Haemophilus influenza infections  | x                     |                     | A49.2             | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Sexually transmitted infections (except HIV/AIDS)                             | x                     |                     | A50-A60, A63, A64 | 0-74          | These infections can be prevented through prevention measures.  |
|                     | Varicella   | x                     |                     | B01               | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Measles   | x                     |                     | B05               | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Rubella   | x                     |                     | B06               | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Viral Hepatitis   | x                     |                     | B15-B19           | 0-74          | This condition is preventable and will not require treatment if prevented.  |
|                     | HIV/AIDS  | x                     |                     | B20-B24           | 0-74          | This condition is preventable and will not require treatment if prevented.  |
|                     | Malaria   | x                     |                     | B50-B54           | 0-74          | This condition is preventable and will not require treatment if prevented.  |
|                     | Haemophilus and pneumococcal meningitis                                       | x                     |                     | G00.0, G00.1      | 0-74          | Most of these infections can be prevented through vaccination.  |
|                     | Tuberculosis  | x (50%)               | x (50%)             | A15-A19, B90, J65 | 0-74          | Reduction in deaths from tuberculosis in several countries has been about evenly achieved through greater prevention (reduction in incidence) and earlier detection and more effective treatment (higher survival rates). |

|        |  |   |   |                                     |      |  |
|--------|--|---|---|-------------------------------------|------|--|
|        | Scarlet fever                                  |   | x | A38                                 | 0-74 | Case-fatality rates can be reduced through early detection and appropriate antibiotic treatment.   |
|        | Sepsis   |   | x | A40 (excl. A40.3),A41 (excl. A41.3) | 0-74 | Case-fatality rates can be reduced through greater quality of care and reduced patient adverse events, and early detection and appropriate antibiotic treatment. |
|        | Cellulitis                                     |   | x | A46, L03                            | 0-74 | Case-fatality rates can be reduced through early detection and appropriate antibiotic treatment.   |
|        | Legionnaires disease                           |   | x | A48.1                               | 0-74 | Case-fatality rates can be reduced through early detection and appropriate antibiotic treatment.   |
|        | Streptococcal and enterococci infection        |   | x | A49.1                               | 0-74 | Case-fatality rates can be reduced through early detection and appropriate antibiotic treatment.   |
|        | Other meningitis                               |   | x | G00.2, G00.3, G00.8, G00.9          | 0-74 | Case-fatality rates can be reduced through early detection and appropriate antibiotic treatment.   |
|        | Meningitis due to other and unspecified causes |   | x | G03                                 | 0-74 | Case-fatality rates can be reduced through early detection and appropriate antibiotic treatment.   |
| Cancer | Lip, oral cavity and pharynx cancer            | x |   | C00-C14                             | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce smoking).   |
|        | Oesophageal cancer                             | x |   | C15                                 | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce smoking).   |
|        | Stomach cancer                                 | x |   | C16                                 | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce smoking and alcohol consumption, and improve nutrition).                        |
|        | Liver cancer                                   | x |   | C22                                 | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce smoking and alcohol consumption).   |
|        | Lung cancer                                    | x |   | C33-C34                             | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce smoking).   |
|        | Mesothelioma                                   | x |   | C45                                 | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce asbestos exposure).   |
|        | Skin (melanoma) cancer                         | x |   | C43                                 | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce sun exposure).  |

|  |                             |         |         |              |      |   |
|--|-----------------------------|---------|---------|--------------|------|---|
|  | Bladder cancer              | x       |         | C67          | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce smoking).  |
|  | Cervical cancer             | x (50%) | x (50%) | C53          | 0-74 | Cervical cancer can be prevented through vaccination and screening can also find pre-cancerous abnormalities that can be treated to prevent cancer, but five-year survival after cancer detection is also relatively high and rising. |
|  | Colorectal cancer           |         | x       | C18-C21      | 0-74 | Case-fatality rates have been reduced through earlier detection and treatment. Five-year survival after detection is relatively high and rising.  |
|  | Breast cancer (female only) |         | x       | C50          | 0-74 | Case-fatality rates have been reduced through earlier detection and treatment. Five-year survival after detection is relatively high and rising.  |
|  | Uterus cancer               |         | x       | C54,C55      | 0-74 | Case-fatality rates have been reduced through earlier detection and treatment. Five-year survival after detection is relatively high and rising.  |
|  | Testicular cancer           |         | x       | C62          | 0-74 | Case-fatality rates have been reduced through earlier detection and treatment. Five-year survival after detection is relatively high and rising.  |
|  | Thyroid cancer              |         | x       | C73          | 0-74 | Case-fatality rates have been reduced through early detection and appropriate treatment.  |
|  | Hodgkin's disease           |         | x       | C81          | 0-74 | Case-fatality rates have been reduced through early detection and appropriate treatment.  |
|  | Lymphoid leukaemia          |         | x       | C91.0, C91.1 | 0-74 | Case-fatality rates have been reduced through early detection and appropriate treatment.  |
|  | Benign neoplasm             |         | x       | D10-D36      | 0-74 | Case-fatality rates have been reduced through early detection and appropriate treatment.  |



|                                    |                                   |         |         |                             |      |  |
|------------------------------------|-----------------------------------|---------|---------|-----------------------------|------|--|
| Endocrine and metabolic diseases   | Nutritional deficiency anaemia    | x       |         | D50-D53                     | 0-74 | This condition can be largely prevented through prevention measures (e.g. improve nutrition).  |
|                                    | Diabetes mellitus                 | x (50%) | x (50%) | E10-E14                     | 0-74 | Type 1 diabetes is not preventable, but appropriate treatments can reduce mortality. Type 2 diabetes is largely preventable (e.g. improve nutrition), but appropriate treatments can also reduce mortality.                            |
|                                    | Thyroid disorders                 |         | x       | E00-E07                     | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment.  |
|                                    | Adrenal disorders                 |         | x       | E24-E25 (except E24.4), E27 | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment.  |
| Diseases of the nervous system     | Epilepsy                          |         | x       | G40,G41                     | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment.  |
| Diseases of the circulatory system | Aortic aneurysm                   | x (50%) | x (50%) | I71                         | 0-74 | This condition is both preventable through prevention measures (similar risk factors as for ischaemic heart diseases) and treatable.   |
|                                    | Hypertensive diseases             | x (50%) | x (50%) | I10-I13, I15                | 0-74 | This condition is both preventable through prevention measures (e.g. reduce smoking, improve nutrition and physical activity) and treatable.   |
|                                    | Ischaemic heart diseases          | x (50%) | x (50%) | I20-I25                     | 0-74 | Reduction in deaths from IHD over the past decades in several countries has been about evenly achieved through greater prevention (reduction in incidence) and earlier detection and more effective treatment (higher survival rates). |
|                                    | Cerebrovascular diseases          | x (50%) | x (50%) | I60-I69                     | 0-74 | Reduction in deaths from CVD over the past decades in several countries has been about evenly achieved through greater prevention (reduction in incidence) and earlier detection and more effective treatment (higher survival rates). |
|                                    | Other atherosclerosis             | x (50%) | x (50%) | I70, I73.9                  | 0-74 | This condition is both preventable through prevention measures (e.g. improve nutrition) and treatable.   |
|                                    | Rheumatic and other heart disease |         | x       | I00-I09                     | 0-74 | Case-fatality rates can be reduced through appropriate treatment.  |

|                                    |   |   |     |                            |      |   |
|------------------------------------|---|---|-----|----------------------------|------|---|
|                                    | Venous thromboembolism  |   | x * | I26, I80, I82.9            | 0-74 | The majority of venous thrombosis events result from hospitalisations. These cases are treatable to the extent that they are linked to the quality of care that people receive. |
| Diseases of the respiratory system | Influenza   | x |     | J09-J11                    | 0-74 | Most of the deaths can be prevented through prevention measures (e.g. vaccination).   |
|                                    | Pneumonia due to Streptococcus pneumoniae or Haemophilus influenzae | x |     | J13-J14                    | 0-74 | Most of these infections can be prevented through vaccination.  |
|                                    | Chronic lower respiratory diseases                                  | x |     | J40-J44                    | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce smoking).  |
|                                    | Lung diseases due to external agents                                | x |     | J60-J64, J66-J70, J82, J92 | 0-74 | This condition can be largely prevented through prevention measures (e.g. reduce exposure to chemical, gases and other agents).   |
|                                    | Upper respiratory infections  |   | x   | J00-J06, J30-J39           | 0-74 | Case-fatality rates can be reduced through appropriate treatment.   |
|                                    | Pneumonia, not elsewhere classified or organism unspecified         |   | x   | J12, J15, J16- J18         | 0-74 | Case-fatality rates can be reduced through early detection and appropriate antibiotic treatment.  |
|                                    | Acute lower respiratory infections                                  |   | x   | J20-J22                    | 0-74 | Case-fatality rates can be reduced through appropriate treatment.   |
|                                    | Asthma and bronchiectasis   |   | x   | J45-J47                    | 0-74 | Case-fatality rates can be reduced through appropriate treatment (e.g. medication).   |
|                                    | Adult respiratory distress syndrome                                 |   | x   | J80                        | 0-74 | Case-fatality rates can be reduced through appropriate treatment.   |
|                                    | Pulmonary oedema  |   | x   | J81                        | 0-74 | Case-fatality rates can be reduced through appropriate treatment.   |
|                                    | Abscess of lung and mediastinum pyothorax                           |   | x   | J85, J86                   | 0-74 | Case-fatality rates can be reduced through appropriate treatment.   |
|                                    | Other pleural disorders   |   | x   | J90, J93, J94              | 0-74 | Case-fatality rates can be reduced through appropriate treatment.   |
| Diseases of the digestive system   | Gastric and duodenal ulcer  |   | x   | K25-K28                    | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment..  |
|                                    | Appendicitis  |   | x   | K35-K38                    | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment.   |
|                                    | Abdominal hernia  |   | x   | K40-K46                    | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment.   |

|  |  |                    |   |                                   |      |   |
|--|--|--------------------|---|-----------------------------------|------|---|
|  | Cholelithiasis and cholecystitis                             |                    | x | K80-K81                           | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Other diseases of gallbladder or biliary tract               |                    | x | K82-K83                           | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Acute pancreatitis   |                    | x | K85.0,1,3,8,9                     | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Other diseases of pancreas                                   |                    | x | K86.1,2,3,8,9                     | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
| Diseases of the genitourinary system                   | Nephritis and nephrosis                                      |                    | x | N00-N07                           | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Obstructive uropathy   |                    | x | N13,N20-N21, N35                  | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Renal failure  |                    | x | N17-N19                           | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Renal colic  |                    | x | N23                               | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Disorders resulting from renal tubular dysfunction           |                    | x | N25                               | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Unspecified contracted kidney, small kidney of unknown cause |                    | x | N26-N27                           | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Inflammatory diseases of genitourinary system                |                    | x | N34.1,N70-N73,N75.0,N75.1,N76.4,6 | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Prostatic hyperplasia  |                    | x | N40                               | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |
|  | Pregnancy, childbirth and perinatal period                   | Tetanus neonatorum | x |                                   | A33  | 0-74  |
| Obstetrical tetanus                                    |  | x                  |   | A34                               | 0-74 | Most of these infections can be prevented through vaccination.                        |
| Pregnancy, childbirth and the puerperium               |  |                    | x | O00-O99                           | 0-74 | Effective treatment is available in most cases to avoid maternal mortality.           |
| Certain conditions originating in the perinatal period |  |                    | x | P00-P96                           | 0-74 | Case-fatality rates can be reduced through early detection and appropriate treatment. |

|  |   |   |   |     |   |      |  |
|--|---|---|---|-----|---|------|--|
| Congenital malformations                     | Certain congenital malformations (neural tube defects)                                  |   | x |     | Q00, Q01, Q05   | 0-74 | These conditions can be prevented through prevention measures (improve maternal nutrition, e.g. folic acid consumption). |
|  | Congenital malformations of the circulatory system (heart defects)                      |   |   | x   | Q20-Q28   | 0-74 | These conditions can be treated through surgical operations  |
| Adverse effects of medical and surgical care | Drugs, medicaments and biological substances causing adverse effects in therapeutic use |   |   | x * | Y40-Y59   | 0-74 | These conditions are treatable through better drug prescription and adherence.   |
|  | Misadventures to patients during surgical and medical care                              |   |   | x * | Y60-Y69, Y83-Y84  | 0-74 | These conditions are treatable through better quality of care that patients receive.                                     |
|  | Medical devices associated with adverse incidents in diagnostic and therapeutic use     |   |   | x * | Y70-Y82   | 0-74 | These conditions are treatable through better quality of care that patients receive.                                     |
| Injuries                                     | Transport Accidents   |   | x |     | V01-V99   | 0-74 | Deaths can be prevented through public health interventions (e.g. road safety measures).                                 |
|  | Accidental Injuries   |   | x |     | W00-X39, X46-X59  | 0-74 | Deaths can be prevented through public health interventions (e.g. injury prevention campaigns).                          |
|  | Intentional self-harm   |   | x |     | X66-X84   | 0-74 | Deaths can be prevented through public health interventions (e.g. suicide prevention campaigns).                         |
|  | Event of undetermined intent  |   | x |     | Y16-Y34   | 0-74 | Deaths can be prevented through public health interventions (e.g. harm prevention campaigns).                            |
|  | Assault   |   | x |     | X86-Y09   | 0-74 | Deaths can be prevented through public health interventions.   |
| Alcohol-related and drug-related deaths      | Alcohol-related deaths  | Alcohol-specific disorders and poisonings | x |     | E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, Q86.0, R78.0, X45, X65, Y15 | 0-74 | Deaths can be largely prevented through public health interventions (e.g. alcohol control policies).                     |
|  |   | Other alcohol-related disorders           | x |     | K73, K74.0-K74.2, K74.6   | 0-74 | Deaths can be largely prevented through public health interventions (e.g. alcohol control policies).                     |
|  | Drug-related deaths**   | Drug disorders and poisonings             | x |     | F11-F16, F18-F19, X40-X44, X85, Y10-Y14   | 0-74 | Deaths can be largely prevented through public health interventions (e.g. drug control policies).                        |
|  |   | Intentional self-poisoning by drugs       | x |     | X60-X64   | 0-74 | Deaths can be largely prevented through public health interventions (e.g. drug control policies).                        |

\* Some of these conditions that are mainly acquired when people are hospitalised or in contact with health services might also be considered to be preventable, in the sense that the incidence of these health care-associated infections or health problems might be reduced through greater prevention in health care facilities.

\*\* Drug-related deaths include both illegal and legal drugs.

## **Annex A. Sources and calculations for the indicators of preventable and treatable causes of mortality**

### **OECD**

Data for the calculation of treatable and preventable mortality are drawn from the WHO Mortality Database. Annual data on treatable and preventable deaths are provided in absolute numbers and as standardised death rates according to age and sex. The standardisation is based on the 2010 OECD Standard Population.

### **Eurostat**

Data for the calculation of preventable and treatable causes of mortality are drawn from Eurostat's data collection on causes of death. The cause of death is defined as the disease or injury which started the sequence of morbid events which led directly to death, or the circumstances of the accident or violence which produced the fatal injury.

Causes of death data are available for EU Member States on an annual basis. From 2011 onwards, transmission of data on the causes of deaths is mandatory for all EU Member States.

Indicators on preventable and treatable causes of mortality are calculated and published annually. Annual data on treatable and preventable deaths are provided in absolute numbers and as standardised death rates according to age and sex. The standardisation is based on the revised European Standard Population (2013).

Underlying population for the calculation of treatable and preventable mortality are residents dying either inside or outside of their home country.

## Annex B. Comparison of three lists of preventable mortality with the OECD/Eurostat list (November 2019 version)

**Table 2. Comparison of three lists of preventable mortality with the OECD/Eurostat list (November 2019 version)**

| Group                            | Causes of deaths                                  | ICD-10 Code                       | Nolte and McKee (2011) | Eurostat (2014) based mainly on ONS (2011) | Statistics Canada/CIHI (2012) | Joint OECD/Eurostat list (November 2019 version)             |
|----------------------------------|---|-----------------------------------|------------------------|--|-------------------------------|--|
| Infectious diseases              | Intestinal diseases                               | A00-A09                           |                        |  | x                             | x  |
|                                  | Tuberculosis                                      | A15-A19, B90                      |                        | x  |                               | x (50%; other 50% treatable)                                 |
|                                  | Diphtheria, Tetanus, Poliomyelitis                | A35, A36, A80                     |                        | x*   | x                             | x  |
|                                  | Whooping cough                                    | A37                               |                        | x*   | x                             | x  |
|                                  | Meningococcal infection                           | A39                               |                        |  | x                             | x  |
|                                  | Sepsis due to Streptococcus pneumonia             | A40.3                             |                        |  | x                             | x  |
|                                  | Sepsis due to Haemophilus influenza               | A41.3                             |                        |  | x                             | x  |
|                                  | Haemophilus influenza infection, unspecified site | A49.2                             |                        |  | x                             | x  |
|                                  | Sexually transmitted infections, except HIV/AIDS  | A50-A60, A63, A64                 |                        |  | x                             | x  |
|                                  | Varicella   | B01                               |                        | x  | x                             | x  |
|                                  | Measles   | B05                               |                        | x*   | x                             | x  |
|                                  | Rubella   | B06                               |                        | x*   | x                             | x  |
|                                  | Hepatitis C                                       | B17.1, B18.2                      |                        | x  | x                             | x  |
|                                  | Other viral hepatitis                             | B15-B17.0, B17.2-B18.1, B18.4-B19 |                        |  | x                             | x  |
|                                  | HIV/AIDS  | B20-B24                           |                        |  | x                             | x  |
|                                  | Haemophilus meningitis                            | G00.0                             |                        |  |                               | x  |
| Pneumococcal meningitis          | G00.1   |                                   |                        |  | x                             |  |
| Cancer                           | Lip, oral cavity and pharynx cancer               | C00-C14                           |                        | x  | x                             | x  |
|                                  | Oesophageal cancer                                | C15                               |                        | x  | x                             | x  |
|                                  | Stomach cancer                                    | C16                               |                        | x  | x                             | x  |
|                                  | Colon and rectum cancer                           | C18-C21                           |                        | x  |                               |  |
|                                  | Liver cancer                                      | C22                               |                        | x  | x                             | x  |
|                                  | Lung cancer                                       | C33-C34                           | x                      | x  | x                             | x  |
|                                  | Skin (melanoma) cancer                            | C43                               |                        | x  | x                             | x  |
|                                  | Skin (non-melanoma) cancer                        | C44                               |                        |  | x                             | (lack of evidence of preventability and insufficient deaths) |
|                                  | Mesothelioma                                      | C45                               |                        | x  |                               | x  |
|                                  | Breast Cancer                                     | C50                               |                        | x  |                               | (allocated to treatable)                                     |
|                                  | Cervical cancer                                   | C53                               |                        | x  |                               | x (50%; other 50% to amenable)                               |
| Bladder cancer                   | C67   |                                   |                        |  | x                             |  |
| Endocrine and metabolic diseases | Nutritional deficiency anaemia                    | D50-D53                           |                        |  | x                             | x  |
|                                  | Diabetes mellitus                                 | E10-E14                           |                        | x (0-49 years only)                        | x (50%; other 50% treatable)  | x (50%; other 50% treatable)                                 |

|                                    |  |                            |   |                        |                              |  |
|------------------------------------|--|----------------------------|---|------------------------|------------------------------|--|
| Diseases of the circulatory system | Rheumatic heart disease                    | I01, I02, I05–I09          |   |                        | x                            | (allocated to treatable)   |
|                                    | Ischaemic heart diseases                   | I20-I25                    |   | x                      | x (50%; other 50% treatable) | x (50%; other 50% treatable)   |
|                                    | Venous thromboembolism                     | I26, I82.9                 |   | x                      | x                            | (allocated to treatable)   |
|                                    | Phlebitis and thrombophlebitis             | I80.0,I80.4–I80.8          |   |                        | x                            | (allocated to treatable)   |
|                                    | Other phlebitis and thrombophlebitis       | I80.1-I80.3, I80.9         |   | x                      | x                            | (allocated to treatable)   |
|                                    | Cerebrovascular diseases                   | I60-I64,I67,I69            |   |                        | x (50%; other 50% treatable) | x (50%; other 50% treatable)   |
|                                    | Other atherosclerosis                      | I70,I73.9                  |   |                        | x (50%; other 50% treatable) | x (50%; other 50% treatable)   |
|                                    | Aortic aneurysm                            | I71                        |   | x                      | x                            | x (50%; other 50% treatable)   |
| Diseases of the respiratory system | Influenza                                  | J09-J11                    |   | x                      | x                            | x  |
|                                    | Pneumonia due to Streptococcus pneumonia   | J13                        |   |                        |                              | x  |
|                                    | Pneumonia due to Haemophilus influenza     | J14                        |   |                        |                              | x  |
|                                    | Chronic obstructive pulmonary disorder     | J40-J44                    |   | x                      | x                            | x  |
|                                    | Lung diseases due to external agents       | J60–J64, J66–J70, J82, J92 |   |                        | x                            | x  |
| Diseases of the digestive system   | Chronic liver disease                      | K73, K74.0,1,2,6           |   |                        | x                            | x (allocated to alcohol-related deaths)  |
| Unintentional injuries             | Transport Accidents                        | V01-V99                    | x | x (also 75+ years old) | x                            | x  |
|                                    | Falls                                      | W00-W19                    |   | x (also 75+ years old) | x                            | x  |
|                                    | Other external causes of accidental injury | W20-W64                    |   | x (also 75+ years old) | x                            | x  |
|                                    | Drowning                                   | W65-W74                    |   | x (also 75+ years old) | x                            | x  |
|                                    | Fires and flames                           | X00-X09                    |   | x (also 75+ years old) | x                            | x  |
|                                    | Accidental poisonings                      | X40-X49                    |   | x (also 75+ years old) | x                            | x (X46-X49; X40-X44 allocated to drug-related deaths; X45 allocated to alcohol-related deaths) |
|                                    | Overexertion, travel and privation         | X50-X59                    |   | x (also 75+ years old) | x                            | x  |
| Intentional injuries               | Intentional self-harm                      | X60-X84                    |   | x (also 75+ years old) | x                            | x (X66-X84; X60-X64 allocated to drug-related deaths; X65 allocated to alcohol-related deaths) |
|                                    | Event of undetermined intent               | Y10-Y34                    |   | x (also 75+ years old) | x                            | x (Y16-Y34; Y10-Y14 allocated to drug-related deaths; Y15 allocated to alcohol-related deaths) |
|                                    | Assault                                    | X85-Y09                    |   | x (also 75+ years old) | x                            | x(X86-Y09; X85 allocated to drug-related deaths)   |
|                                    | Sequelae of intentional self-harm          | Y87.0                      |   |                        | x                            | (insufficient deaths)  |
|                                    | Sequelae of assault                        | Y87.1                      |   |                        | x                            | (insufficient deaths)  |

|   |   |   |   |                        |   |  |
|---|---|---|---|------------------------|---|--|
| Alcohol-related and drug-related deaths                             | Alcohol-related deaths  | F10, G31.2, K29.2, K70, I42.6, G62.1, K86.0 | x | x                      | x | x (E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K73, K74.0-K74.2, K74.6, K85.2, K86.0, Q86.0, R78.0, X45, X65, Y15) |
|   | Drug-related deaths   | F11-F16, F18-F19                            |   | x                      | x | x (F11-F16, F18-F19, X40-X44, X60-X64, X85, Y10-Y14)   |
| Pregnancy and childbirth  | Tetanus neonatorum  | A33   |   |                        | x | x  |
|   | Spina Bifida  | Q05   |   | x                      |   | x (Q00, Q01, Q05)  |
|   | Obstetrical tetanus   | A34   | x |                        |   | x  |
| Factors influencing health status and contacts with health services | Drugs, medicaments and biological substances causing adverse effects in therapeutic use | Y40-Y59                                     |   |                        | x | (allocated to treatable)   |
|   | Misadventures to patients during surgical and medical care                              | Y60-Y66, Y69                                |   | x (also 75+ years old) | x | (allocated to treatable)   |
|   | Medical devices associated with adverse incidents in diagnostic and therapeutic use     | Y70-Y82                                     |   |                        | x | (allocated to treatable)   |
|   | Surgical and other medical procedures as the cause of abnormal reaction                 | Y83-Y84                                     |   | x (also 75+ years old) | x | (allocated to treatable)   |

\* These causes of death were included in the ONS update of 2015, but not included in the Eurostat list.  
Sources: Nolte and McKee (2011), Eurostat (2014), CIHI/Statistics Canada (2012), ONS (2016).



## Annex C. Comparison of three lists of treatable causes of mortality with the OECD/Eurostat list (November 2019 version)

**Table 3. Comparison of three lists of treatable causes of mortality with the OECD/Eurostat list (November 2019 version)**

| Group                                       | Causes of deaths   | ICD-10 Code                          | Nolte and McKee (2011) | Eurostat (2014) based mainly on ONS (2011) | Statistics Canada/ CIHI (2012)    | Joint OECD/Eurostat list (November 2019 version) |
|---|--|--------------------------------------|------------------------|--|-----------------------------------|--|
| Infectious diseases                         | Intestinal infections  | A00-A09                              | x                      | x*   |                                   | (allocated to preventable)                       |
|   | Respiratory tuberculosis, bacteriologically and histologically confirmed | A15                                  | x                      |  |                                   | x (50%; other 50% to preventable)                |
|   | Tuberculosis and sequelae of tuberculosis                                | A16-A19, B90                         | x                      | x  | x                                 | x (50%; other 50% to preventable)                |
|   | Diphtheria, Tetanus, Poliomyelitis                                       | A35, A36, A80                        | x                      | x*   |                                   | (allocated to preventable)                       |
|   | Whooping cough   | A37                                  | x                      | x*   |                                   | (allocated to preventable)                       |
|   | Scarlet fever  | A38                                  |                        | x  | x                                 | x  |
|   | Meningococcal infection  | A39                                  |                        | x  |                                   | (allocated to preventable)                       |
|   | Meningitis due to other and unspecified causes                           | G03                                  |                        | x  |                                   | x  |
|   | Septicaemia  | A40 (excl. A40.3), A41 (excl. A41.3) | x                      | x  | x                                 | x  |
|   | Sepsis due to Streptococcus pneumoniae                                   | A40.3                                | x                      | x  |                                   | (allocated to preventable)                       |
|   | Sepsis due to Haemophilus influenzae                                     | A41.3                                | x                      | x  |                                   | (allocated to preventable)                       |
|   | Cellulitis   | A46, L03                             |                        | x  | x                                 | x  |
|   | Legionnaires disease   | A48.1                                |                        | x  | x                                 | x  |
|   | Streptococcal and enterococci infection, unspecified site                | A49.1                                |                        |  | x                                 | x  |
|   | Varicella  | B01                                  |                        |  | x*                                | (allocated to preventable)                       |
|   | Measles  | B05                                  | x                      |  | x*                                | (allocated to preventable)                       |
|   | Rubella  | B06                                  |                        |  | x*                                | (allocated to preventable)                       |
|   | Hepatitis C  | B17.1, B18.2                         |                        |  | x                                 | (allocated to preventable)                       |
|   | HIV/AIDS   | B20-B24                              |                        |  | x                                 | (allocated to preventable)                       |
|   | Malaria  | B50-B54                              |                        |  | x                                 | x (allocated to preventable)                     |
| Meningitis                                  | G00.2, G00.3, G00.8, G00.9   |                                      |                        | x  | x                                 |  |
| Pneumoconiosis associated with tuberculosis | J65  |                                      |                        |  | x (50%; other 50% to preventable) |  |
| Cancer                                      | Colorectal cancer  | C18-C21                              | x                      | x  | x                                 | x  |
|   | Skin (melanoma) cancer   | C43                                  |                        | x  |                                   | (allocated to preventable)                       |

|                                    |  |                  |                |                |                                |   |
|------------------------------------|--|------------------|----------------|----------------|--------------------------------|---|
|                                    | Skin (non-melanoma) cancer   | C44              | x              |                |                                | (insufficient deaths)   |
|                                    | Breast cancer  | C50              | x              | x              | x                              | x   |
|                                    | Cervical cancer  | C53              | x              | x              | x                              | x (50%; other 50% to preventable)                                   |
|                                    | Uterus cancer  | C54-C55          | x              | x*             | x                              | x   |
|                                    | Testicular cancer  | C62              | x              | x*             | x                              | x   |
|                                    | Bladder cancer   | C67              |                | x              | x                              | (allocated to preventable)  |
|                                    | Thyroid gland  | C73              |                | x              | x                              | x   |
|                                    | Hodgkin's disease  | C81              | x              | x              | x                              | x   |
|                                    | Lymphoid leukaemia   | C91.0, C91.1     | x              | x              | x                              | x   |
|                                    | Other lymphoid leukaemia   | C91.2-C91.9      | x              | x              |                                | (insufficient evidence of treatability)                             |
|                                    | Myeloid leukaemia  | C92.0            | x              | x              |                                | (insufficient evidence of treatability)                             |
|                                    | Chronic myeloid leukaemia  | C92.1            | x              |                | x                              | (insufficient evidence of treatability)                             |
|                                    | Other leukaemia  | C92.2-C95        | x              |                |                                | (insufficient evidence of treatability)                             |
|                                    | Benign neoplasm  | D10-D36          |                | x              | x                              | x   |
| Endocrine and metabolic diseases   | Thyroid disorders  | E00-E07          | x              | x*             | x                              | x   |
|                                    | Diabetes mellitus  | E10-E14          | x (0-49 years) | x (0-49 years) | x (50%; other 50% preventable) | x (50%; other 50% preventable)                                      |
|                                    | Cushing's syndrome and adrenogenital disorders                                       | E24,E25          |                |                | x                              | X (except E24.4 allocated to alcohol-related deaths in preventable) |
|                                    | Primary adrenocortical insufficiency   | E27.1            |                | x*             | x                              | x   |
|                                    | Other Addison's diseases   | E27.2-E27.9      |                |                | x                              | x   |
|                                    | Congenital metabolic disorders   | E74.0, E74.2     |                |                | x                              | (insufficient deaths)   |
|                                    | Diseases of the nervous system   | Epilepsy         | G40-G41        | x              | x                              | x   |
| Diseases of the circulatory system | Acute rheumatic fever  | I01-I04          |                | x              |                                | x   |
|                                    | Chronic rheumatic heart disease  | I05-I09          | x              | x              |                                | x   |
|                                    | Hypertensive disease   | I10-I13, I15     | x              | x              | x                              | x (50%; other 50% preventable)                                      |
|                                    | Ischaemic heart disease  | I20-I25          | x (50%)        | x              | x (50%; other 50% preventable) | x (50%; other 50% preventable)                                      |
|                                    | Venous thromboembolism   | I26, I80, I82.9  |                |                |                                | x   |
|                                    | Haemorrhage, stroke, sequelae of cerebrovascular disease                             | I60-64, I67, I69 | x              | x              | x (50%; other 50% preventable) | x (50%; other 50% preventable)                                      |
|                                    | Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction | I65              | x              | x              |                                | x (50%; other 50% preventable)                                      |
|                                    | Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction    | I66              | x              | x              |                                | x (50%; other 50% preventable)                                      |
|                                    | Cerebrovascular disorders in diseases classified elsewhere                           | I68              | x              | x              |                                | x (50%; other 50% preventable)                                      |

|  |  |  |                |                 |                                |   |
|--|--|--|----------------|-----------------|--------------------------------|---|
|  | Other atherosclerosis  | I70, I73.9   |                |                 | x (50%; other 50% preventable) | x (50%; other 50% preventable)          |
|  | Aortic aneurysm  | I71  |                |                 |                                | x (50%; other 50% preventable)          |
| Diseases of the respiratory system             | Acute upper respiratory infections   | J00-J06  | x              | x*              | x                              | x                                       |
|  | Influenza due to identified zoonotic or pandemic influenza virus                                       | J09  | x              | x               |                                | (allocated to preventable)              |
|  | Influenza due to identified seasonal influenza virus   | J10-J11  | x              | x               |                                | (allocated to preventable)              |
|  | Pneumonia, not elsewhere classified or organism unspecified  | J12, J15, J16, J18   | x              | x               | x                              | x                                       |
|  | Pneumonia due to Streptococcus pneumoniae, due to Haemophilus influenzae, and not elsewhere classified | J13, J14, J17  | x              | x               |                                | x (J17)                                 |
|  | Acute lower respiratory infections   | J20-J22  | x (1-14 years) | x* (1-14 years) | x                              | x                                       |
|  | Upper respiratory infections   | J30-J39  | x (1-14 years) | x* (1-14 years) | x                              | x                                       |
|  | Chronic lower respiratory diseases   | J40-J44  | x (1-14 years) | x*              |                                |   |
|  | Asthma   | J45  | x              | x               | x                              | x                                       |
|  | Status asthmaticus   | J46  | x (1-14 years) | x               |                                | x                                       |
|  | Bronchiectasis   | J47  | x (1-14 years) |                 | x                              | x                                       |
|  | Adult respiratory distress syndrome  | J80  |                | x               | x                              | x                                       |
|  | Pulmonary oedema   | J81  | x (1-14 years) |                 | x                              | x                                       |
|  | Pyothorax and abscess of lung and mediastinum  | J85,J86  | x (1-14 years) |                 | x                              | x                                       |
|  | Other pleural disorders  | J90,J93,J94  |                | x               | x                              | x                                       |
|  | Other respiratory disorders  | J98  |                | x               | x                              | (insufficient evidence of treatability) |
|  | Diseases of the digestive system   | Gastric ulcer, duodenal ulcer, peptic ulcer (site unspecified) | K25-K27        | x               | x                              | x                                       |
| Gastrojejunal ulcer                            |  | K28  |                | x               | x                              | x                                       |
| Appendicitis                                   |  | K35-K38  | x              | x               | x                              | x                                       |
| Abdominal hernia                               |  | K40-K46  | x              | x               | x                              | x                                       |
| Cholelithiasis and cholecystitis               |  | K80-K81  | x              | x               | x                              | x                                       |
| Other diseases of gallbladder or biliary tract |  | K82-K83  |                | x               | x                              | x                                       |
| Acute pancreatitis                             |  | K85.0,1,3,8,9  |                | x               | x                              | x                                       |
| Other diseases of pancreas                     |  | K86.1-K86.9  |                | x               | x                              | x                                       |
| Postcholecystectomy syndrome                   | K91.5  |  | x              |                 | (insufficient deaths)          |   |
| Diseases of the musculoskeletal system         | Osteomyelitis  | M86  |                |                 | x                              | (insufficient deaths)                   |
|  | Nephritis and nephrosis  | N00-N07  | x              | x               | x                              | x                                       |
|  | Obstructive uropathy   | N13,N20-N21, N35   |                | x               | x                              | x                                       |

|  |   |                                   |                        |                        |   |  |
|--|---|-----------------------------------|------------------------|------------------------|---|--|
| Diseases of the genitourinary system                               | Renal failure   | N17-N19                           | x                      | x                      | x | x  |
|  | Renal colic   | N23                               |                        |                        | x | x  |
|  | Disorders resulting from impaired renal tubular function                                | N25                               | x                      | x                      | x | x  |
|  | Unspecified contracted kidney, small kidney of unknown cause                            | N26-N27                           | x                      | x                      |   | x  |
|  | Prostatic hyperplasia   | N40                               | x                      | x                      | x | x  |
|  | Inflammatory diseases of genitourinary system   | N34.1,N70-N73,N75.0,N75.1,N76.4,6 |                        |                        | x | x  |
|  | Postprocedural urethral stricture   | N99.1                             |                        | x                      |   | (insufficient deaths)  |
| Pregnancy and childbirth   | Pregnancy, childbirth and the puerperium  | O00-O99                           | x                      |                        | x | x  |
| Perinatal deaths   | Tetanus neonatorum  | A33                               | x                      | x                      |   | (allocated to preventable)   |
|  | Obstetrical tetanus   | A34                               | x                      |                        |   | (allocated to preventable)   |
|  | Certain conditions originating in the perinatal period                                  | P00-P96                           | x                      | x                      | x | x  |
| Congenital malformations   | Other congenital malformations  | Q00-Q19, Q30-Q99                  |                        |                        | x | (Q00, Q01, Q05 allocated to preventable; others excluded due to insufficient evidence of preventability or treatability) |
|  | Congenital cardiovascular anomalies   | Q20-Q28                           | x                      | x                      | x | x  |
| Factors influencing health status and contact with health services | Drugs, medicaments and biological substances causing adverse effects in therapeutic use | Y40-Y59                           |                        |                        |   | x  |
|  | Misadventures to patients during surgical and medical care                              | Y60-Y69, Y83-Y84                  | x (also 75+ years old) | x (also 75+ years old) |   | x  |
|  | Medical devices associated with adverse incidents in diagnostic and therapeutic use     | Y70-Y82                           |                        |                        |   | x  |

\* These causes of death were included in the ONS update of 2015, but not included in the Eurostat list.  
Sources: Nolte and McKee (2011), Eurostat (2014), CIHI/Statistics Canada (2012), ONS (2016).

## References

CIHI / Statistics Canada (2012), Health Indicators 2012.

CIHI / Statistics Canada (2016), Indicator library: List of conditions for potentially avoidable mortality and mortality from preventable and treatable causes indicators, Methodology notes.

Eurostat (2014), Amenable and preventable deaths statistics, [http://ec.europa.eu/eurostat/statistics-explained/index.php/Amenable\\_and\\_preventable\\_deaths\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Amenable_and_preventable_deaths_statistics)

Nolte, E. and M. McKee (2004), Does Health Care Save Lives? Avoidable Mortality Revisited, Nuffield Trust, London.

Nolte, E. and M. McKee (2011), Variations in Amenable Mortality—Trends in 16 High-Income Nations, Health Policy, 103, 1: pp. 47–52.

ONS (2011), Definition of avoidable mortality, <http://www.ons.gov.uk/ons/about-ons/get-involved/consultations/archived-consultations/2011/definitions-of-avoidable-mortality/definition-of-avoidable-mortality.pdf>

ONS (2016), Revised Definition of Avoidable Mortality and New Definition for Children and Young People, available at:

<https://www.ons.gov.uk/aboutus/whatwedo/statistics/consultationsandsurveys/allconsultationsandsurveys/reviewofavoidablemortalitydefinition>.