

# **ABOUT MORTALITY DATA FOR THE UNITED KINGDOM**

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## **GENERAL**

The Office for National Statistics (ONS) is the main governmental department that provides statistical and registration services in the United Kingdom. The ONS was created in 1996 through a merger of the Central Statistical Office (CSO)—established in 1941 by the then Prime Minister, Winston Churchill, to aid the war effort—and the Office for Population Censuses and Surveys (OPCS)—founded in 1970 by the Director of the CSO (ONS, 2009).

The ONS also incorporates the General Register Office for England and Wales (GRO). The GRO is responsible for the registration of all births, marriages, and deaths in England and Wales, and for maintaining a central archive dating back to 1837. The Northern Ireland Statistics and Research Agency (NISRA) and National Records of Scotland (NRS) are the official statistical organizations for these territories of the United Kingdom.

The HMD data cover the period since 1922. During the war period (1939-1950), this series comprises only the civilian population. During other periods, the mortality estimates from this series represent the total population.

### ***Source of Data***

All of the raw data used for the Human Mortality Database come from the Office for National Statistics (ONS), the Northern Ireland Statistics and Research Agency (NISRA), and National Records of Scotland (NRS).

### ***Specific Details***

We derived our estimates for the United Kingdom based on the sum of the HMD estimates (i.e., deaths, population estimates) for England and Wales (Civilian Population), Scotland, and Northern Ireland (see Appendix 1 for details). The resulting estimates for the United Kingdom are not fully equivalent to those that would be obtained by direct implementation of the HMD methodology to the raw data (i.e., official death counts and population estimates) for the United Kingdom as a whole.

## **TERRITORIAL COVERAGE**

There have been no territorial changes since 1922.

## **Revision NOTES**

### ***Changes with the December 2017 revision:***

**Life tables:** All life tables have been recalculated using a modified methods protocol. The revised protocol (Version 6) includes two changes: 1) a more precise way to calculate  $a_0$ , the mean age at death for children dying during the first year of life and 2) the use of birth-by-month data (where and when available) to more accurately estimate population exposures. These changes have been implemented simultaneously for ALL HMD series/countries. For more details about these changes, see the revised Methods Protocol (at <http://www.mortality.org/Public/Docs/MethodsProtocol.pdf>), particularly section 7.1 on Period life tables and section 6 and Appendix E, on death rates. The life tables calculated under the prior methods (Version 5) remain available at [v5.mortality.org](http://v5.mortality.org) but they have not been, and will not be, updated.

## **REFERENCES**

Office for National Statistics (ONS). (2009). About ONS. Retrieved 25 March 2009 (<http://www.ons.gov.uk/about/index.html>).

## **APPENDIX:**

### **Description of the original data used for HMD calculations**

The demographic data for the United Kingdom are collected by separate agencies for each of three regions (England and Wales, Scotland, and Northern Ireland). Thus, the raw input data (i.e., official death counts and population estimates) from these three sources vary somewhat in format and the range of years for which they are available. Consequently, we treat them as three separate sources of input data. That is, we calculate HMD estimates of deaths (by Lexis triangle to age 110+) and population as of January 1<sup>st</sup> (by single year of age to 110+) for each of the three regions. Then, we derive corresponding estimates for the UK as a whole by summing across England and Wales, Scotland, and Northern Ireland.

For the period 2011-2020 (2011-2021 for Scotland) we used newly published inter-censal population estimates based on the 2021 census for England & Wales and Northern Ireland and the 2022 census for Scotland.

The procedure is different for monthly births, which are calculated by summing up raw input monthly births for England and Wales (Civilian Population), Scotland, and Northern Ireland. There is an important difference in definitions used for publication of these data for the years 2006-2021: births by registration were used for England and Wales and Scotland, whereas births by occurrence were used for Northern Ireland.

We use these combined estimates to calculate life tables for the UK. The data series for the UK is restricted to the period for which data are available in all three regions (i.e., since 1922).

Notably, the combined estimates for the UK are not fully equivalent to those that would be obtained if we somehow combined the three sources of raw data into one set of input data for the UK and then implemented the HMD methodology to directly produce HMD estimates for the UK as a whole.

For a description of the input data for England and Wales, Scotland, and Northern Ireland, please refer to the respective Background & Documentation files:

*England and Wales (Civilian Population):*

<http://www.mortality.org/hmd/GBRCENW/InputDB/GBRCENWcom.pdf>

*Scotland:*

[http://www.mortality.org/hmd/GBR\\_SCO/InputDB/GBR\\_SCOcom.pdf](http://www.mortality.org/hmd/GBR_SCO/InputDB/GBR_SCOcom.pdf)

*Northern Ireland:*

[http://www.mortality.org/hmd/GBR\\_NIR/InputDB/GBR\\_NIRcom.pdf](http://www.mortality.org/hmd/GBR_NIR/InputDB/GBR_NIRcom.pdf)