

# The Human Cause-of-Death Database

Free access to coherent time series of cause-specific mortality

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www.causesofdeath.org - Main page   The Human Cause-of-Death Database   Directors: Dmitri Jdanov (MPIDR) and France Meslé (INED)				www.causesofdeath.org - Country page					
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Home	Data by co	untry	Zipped Data	Formats	Home	Data by country	/	Zipped Data	Formats
The Human Cause-of-Death Database (HCD) is a joint project of the <u>French Institute for Demographic Studies</u> (INED) in Paris, France and the <u>Max Planck Institute for Demographic Research</u> (MPIDR) in Rostock, Germany, based at the MPIDR. We seek to provide free and user-friendly access to coherent time series of cause-specific mortality for researchers, students, journalists, policy analysts, and others interested in analysis of cause-of-death patterns. In contrast to other existing databases on causes of deaths, we provide time series with causes of death classified according to a constant (fixed) list/classification of causes of			REGISTRATION Login	Russia Death Counts and Death Rates			ABOUT DATA FOR RUSSIA Background and Documentation		
			New User		Full list	Intermediate list	Short list	References	
			Change Password	Death counts by age	-	<u> 1965 - 2014</u>	<u> 1965 - 2014</u>	CAUSE-OF-DEATH LISTS	
death. The main goal of the database is to document trends of cause-specific mortality and to facilitate research on their				ABOUT THE PROJECT	Age-specific death rates	<u> 1965 - 2014</u>	<u> 1965 - 2014</u>	<u>1965 - 2014</u>	Full list for Russia
comparative analyses.		Background	Crude death rates	<u> 1965 - 2014</u>	<u> 1965 - 2014</u>	<u> 1965 - 2014</u>			
Although in each country the original series of vital statistics are based on the currently acting classifications of causes of			Overview	Standardized death rates	<u> 1965 - 2014</u>	<u> 1965 - 2014</u>	<u> 1965 - 2014</u>	Intermediate list	
death, we provide reconstructed data according to the most recent version of the classification in use (see Background for			History	III-defined death counts	-	<u> 1965 - 2014</u>	<u> 1965 - 2014</u>	Short list	
details). We pay special attention to rigorous data checking and documentation and to warranting data comparability across				What's New					Ill-defined
time and countries by means of universal and standardized methodology. Due to peculiarities of the original national cause-of-				What's New	Population Exposures and Birth Counts			OTHER MORTALITY DATA	
death nomenclatures and procedures, computational procedures may be somewhat modified accordingly. Respective country- specific information is given in the Background and Documentation text for the country in question. At present the database contains continuous data series for the following 16 countries:				GUIDELINES	Available data			FOR RUSSIA	
				User Agreement	Population exposures		1965 - 2014		Human Mortality Database
				Citation Guidelines	Birth counts 1965 - 2014		Human Life-Table Database		
Detailed data by country			Explanatory Notes	Russian Mortality Database					
Belarus Czech Republic England & Wales Estonia				PEOPLE	GENERAL			GENERAL	
France	Germany	Japan	Latvia	Research Team		<u>All country data in oi</u>	ne zip file R <sup>zip</sup>		Contact us
Lithuania	Moldova	Poland	Romania	Asknowledgements			Country and	last undated: 2016 01 21	
Russia	Spain	Ukraine	USA	Acknowledgements			Country page	e last upuateu: 2010-01-21	
HCD data series will be v	odated regularly. For more inform	nation, please begin by reading	an overview of the database. If	LINKS					
have any commente or c	antional on travella antining page		-	Human Martality Database					

Detailed data by country									
Belarus	Czech Republic	England & Wales	Estonia						
France	Germany	Japan	Latvia						
Lithuania	Moldova	Poland	Romania						
Russia	Spain	Ukraine	USA						

you have any comments or questions, or trouble gaining access to the data, please <u>write to us</u>

## BACKGROUND

The Human Cause-of-Death Database (HCD) is a joint project of the French Institute for Demographic Studies (INED) in Paris, France, and the Max Planck Institute for Demographic Research (MPIDR) in Rostock, Germany, based at the MPIDR.

The main goal of the HCD is to provide access to detailed high-quality data on cause-specific mortality to a broad audience of users. In contrast to other existing databases on causes of death, the HCD provides time series with a coherent classification of causes, based on ICD-10. For comparability purposes, we provide mortality data classified according to a short list and an intermediate list of causes of death, identical for all countries. In addition, a detailed list is provided, which varies according to country-specific availability.

The following features make the HCD particularly attractive to its users:

- Continuous data series with coherent cause-of-death classification;
- Availability of basic age-standardized indicators
- Detailed documentation
- Free and easy access to all data
- A uniform and easy to use format of data files

#### **Detailed data by causes of death**

The HCD includes sex and age-specific death counts and death rates, crude death rates and standardized death rates by causes of death, after redistribution of ill-defined causes of death (according to country-specific methods described in the Background and Documentation for each country). Causes of death are classified according to three lists: short, intermediate and full.

TYPES OF DATA IN THE HCD

**The full list** is country-specific; it includes 4- or 3-digit items of ICD-10 or equivalent country-specific lists. For comparability, we also provide mortality data classified according to intermediate and short lists of causes of death, which are identical for all countries. The intermediate list consists of 104 items compared to 16 in the **short list**.

#### **Population exposures and birth counts**

The source for these data is the Human Mortality Database (www.mortality.org). In some cases we correct infant mortality and, respectively, birth counts

#### THE METHOD OF RECONSTRUCTION

Cause-of-death time series are disrupted by periodical changes in the disease classifications. This limits mortality analysis and only allows to analyze cause-specific time-trends for a short period (covered by the same classification) or only for broad groups of causes of death.

To reconstruct consistent series, it is necessary to establish transition coefficients between items of two successive classifications, in order to redistribute deaths classified according to the old classification into items of the new classification. When bridge coding (double classification of deaths simultaneously into the old and new classification) has been performed, transition coefficients can be inferred directly from the results, but there are only two countries in the database where this has been done (and only for the transition from ICD-9 to ICD-10), namely England and Wales and the U.S.A. For the other transitions coherent time series are reconstructed by producing ex-post double coding. The method developed at INED in the 1980s is used as a guideline, but the work was tailored to each country independently.

For each classification change, the method comprises three steps (Vallin and Meslé, 1988, 1998; Meslé and Vallin, 1996):

- Setting up a correspondence table which lists, for each item of one classification, all items of the succesive one that are a priori equivalent in terms of medical content.
- Building fundamental associations of items that identify the smallest possible number of items containing the same medical contents in both classifications and testing the consistency of the associations over time using a statistical test (Barbieri, Chung, and Boe, 2008; Camarda, Peccholdová, and Meslé, 2015).
- Setting up ex-post double-coding according to the structure of fundamental associations, to finally obtain transition coefficients.

Country	Period	Country	Period
Belarus	1965-2010	Lithuania	1956-2012
Czech Republic*	1994-2014	Moldova	1965-2012
England and Wales*	2001-2013	Poland	1959-2013
Estonia	1955-2012	Romania	1980-2012
France*	2000-2013	Russia	1965-2014
Germany*	1998-2013	Spain	1980-2012
Japan*	1995-2013	Ukraine	1965-2013
Latvia	1956-2012	USA*	1999-2013

\*Currently, we have several countries with short data series starting with the introduction of ICD-10 in the country. We are working on data reconstruction for these countries, and in the near future these data will be replaced by longer, reconstructed time series with constant classification of causes.

#### ACKNOWLEDGEMENTS

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### DATA AVAILABILITY

The results derived from the medical logic of the classification rules have to be checked statistically, to detect and solve any remaining breaks in the series. Such checks are carried out by age group and Sex.

In addition, national statistical offices introduce occasional changes independent of the official revisions of the classification. To address this problem, the statistical continuity of the series over time is systematically verified and any artificial disruption dealt with appropriately.

Finally country- and time-specific methods are used to deal with ill-defined causes (Ledermann, 1955; Vallin and Meslé, 1988).

Figure 1. Leukemia mortality trend in Russia before (left) and after reconstruction (right), age-standardized rates per 100 000



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