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A new open-access database on French local mortality during the 20th century

Florian Bonnet - florian.bonnet@ined.fr

3rd HMD Conference

17 November 2020

1 Goals of the project

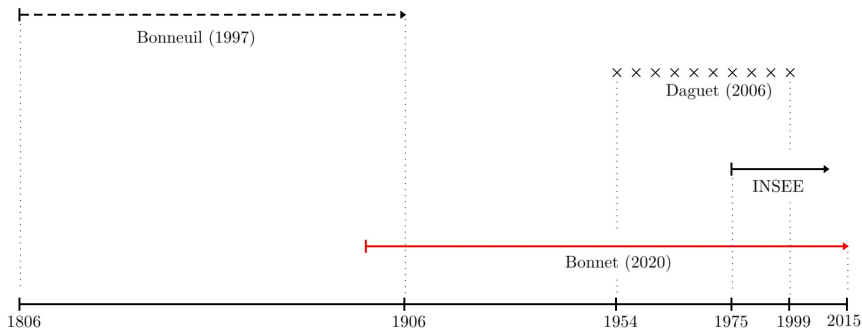
2 Raw data and methods

3 Results

4 In the future...


Main goals: annual lifetables for French departments

- Available databases on mortality at local level in France en 2020



Main goals: a dedicated website

- Open-access database with a dedicated website (as CHMD)



INTRODUCTION
METHODOLOGY
DATA EXPLANATION

CANADA

Newfoundland
Prince Edward Island
Nova Scotia
New Brunswick
Quebec
Ontario
Manitoba
Saskatchewan
Alberta
British Columbia
Northwest Territories
Yukon

Canadian Human Mortality Database

INTRODUCTION

The Canadian Human Mortality Database (CHMD) was created to provide detailed Canadian mortality and population data to researchers, students, journalists, policy analysts, and others interested in the history of human longevity. The project is an achievement of the Mortality and Longevity research team at the [Department of Demography, Université de Montréal](#), under the joint direction of Professors Robert Bourbeau and Nadine Ouellette. The project is also carried out in collaboration with demographers at the [Max Planck Institute for Demographic Research](#) (Rostock, Germany) and the [Department of Demography, University of California, Berkeley](#) (United States). The CHMD is a "satellite" of the [Human Mortality Database](#) (HMD), an international database which currently holds detailed data for 41 countries or regions. Consequently, the CHMD's underlying methodology corresponds to the one used for the HMD. Some adjustments were made to adapt to the unique situation of some Canadian provinces and the territories.

The CHMD gathers all required data (deaths counts, births counts, population size, exposure-to-risk, death rates) to compute life tables for Canada, its provinces and its territories. One of the great advantages of the database is to include data that is validated and corrected, when required, and made comparable, as much as possible, for the period ranging from 1921 thru 2016. For comparison purposes, various life tables published by governmental organizations are also available for download in the [Archives](#) section.

Canadian Human Mortality Database.

Available at: <http://www.bdlc.umontreal.ca/>.

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- 2 Raw data and methods
- 3 Results
- 4 In the future...

Raw data used: an exemple for civil deaths

- A huge number of archives digitized to compute lifetables

DÉCÈS EN 1905.

TABLEAU XXXVIII. — Décès

NUMÉROS D'ORDRE.	DÉPARTEMENTS.	DE 0 À 4 ANS.	DE 5 À 9 ANS.	DE 10 À 14 ANS.	DE 15 À 19 ANS.	DE 20 À 24 ANS.	DE 25 À 29 ANS.	DE 30 À 34 ANS.	DE 35 À 39 ANS.	DE 40 À 44 ANS.	DE 45 À 49 ANS.	DE 50 À 54 ANS.	DE 55 À 59 ANS.	DE 60 À 64 ANS.	DE 65 À 69 ANS.	DE 70 À 74 ANS.	DE 75 À 79 ANS.	DE 80 À 84 ANS.	DE 85 À 89 ANS.	DE 90 À 94 ANS.	DE 95 À 99 ANS.	DE 100 ANS ET AU-DESSUS.	TOTAL.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	AIN.	506	53	35	66	63	29	18	20	16	20	17	22	16	40	46	32	21	12	1	1	1	1,067
2	AISSNE.	968	65	58	107	73	37	27	20	19	10	13	27	26	31	33	51	35	15	5	1	1	1,641
3	ALLIER.	427	68	55	75	55	20	19	11	18	9	11	10	12	16	22	21	15	11	7	1	1	886
4	ALPES (BASSES-).	228	25	30	17	15	15	8	5	5	8	12	11	19	17	13	13	11	1	1	1	1	454
5	ALPES (HAUTES-).	271	23	14	24	18	12	6	9	7	8	8	16	12	18	18	5	3	1	1	1	1	481
6	ALPES-MARITIMES.	748	71	52	86	72	48	36	24	24	27	30	16	33	40	29	46	18	9	2	1	1	1,411
7	ARDÈCHE.	975	66	57	117	70	42	28	14	11	17	17	23	48	46	53	38	29	13	1	1	1	1,605
8	ARDENNES.	593	52	37	49	47	20	19	7	13	7	11	11	21	20	26	45	39	15	6	1	1	1,047
9	ARIÈGE.	283	25	28	29	32	12	13	8	2	8	16	10	19	17	37	30	32	15	4	1	1	620
10	AUBE.	371	26	23	43	37	16	8	6	6	8	13	10	10	13	19	24	15	9	5	2	1	664
11	AUDE.	487	39	42	54	32	28	11	18	12	9	18	17	17	34	40	31	23	13	4	2	1	931
12	AVARON.	976	64	49	66	64	43	20	16	18	17	10	23	42	41	39	68	55	19	6	1	1	1,637
13	BELFORT (Terr.de)	224	17	2	31	26	12	9	14	15	26	13	24	26	37	38	38	33	11	1	1	1	596
14	BONCHES-DU-RHÔNE.	1,594	157	91	154	174	101	85	65	72	51	75	76	109	93	87	79	51	21	6	2	1	3,143
15	CALVADOS.	629	60	47	75	59	32	27	16	30	16	24	24	41	51	61	54	53	26	10	1	1	1,336
16	CANTAL.	396	44	31	40	24	10	13	6	16	8	14	28	31	35	46	56	35	19	13	2	1	867
17	CHARENTE.	373	41	32	64	39	26	10	8	9	12	14	10	9	15	18	24	15	5	1	1	1	724
18	CHARENTE-INFÈRE.	522	53	68	69	64	30	21	16	15	13	11	14	25	16	19	27	13	16	1	1	1	1,012

Deaths of women in 1905, *Mouvement de la population, Statistique Générale de la France.*

Methods used: the HMD protocol

- The HMD protocol was mainly used to get French lifetables at the department level

HMD Main Menu
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Full Protocol
Special Methods
Data
What's New
Explanatory Notes
Data Availability
Zipped Data Files
Citation Guidelines
Links
Max Planck Institute

The Human Mortality Database

Vladimir Shkolnikov, *Director*

Max Planck Institute for Demographic Research

Magali Barbieri, *Associate Director*

University of California, Berkeley and INED, Paris

John Wilmoth, *Founding Director*

United Nations and formerly University of California, Berkeley

In response to the COVID-19 pandemic, the HMD team decided to establish a new data resource: **Short-term Mortality Fluctuations (STMF) data series**. Objective and internationally comparable data are crucial to determine the effectiveness of different strategies used to address epidemics. Weekly death counts provide the most objective and comparable way of assessing the scale of short-term mortality elevations across countries and time. [Here](#) we provide weekly death counts for 36 countries: Austria, Belgium, Bulgaria, Chile, Canada, Croatia, Czech Republic, Denmark, England and Wales, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Israel, Italy, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Northern Ireland, Norway, Poland, Portugal, Republic of Korea, Russia, Scotland, Slovenia, Slovakia, Spain, Sweden, Switzerland and the USA. The same data in the pooled CSV file are available for download [here](#). Data formats and methods are described in the [STMFNote](#). We also strongly recommend reading the [metadata text](#). Following the HMD practice, we also publish [original input data in standardized format](#). During the next few weeks data will be frequently updated and new countries will be added. The most recent

Human Mortality Database.

Available at <https://www.mortality.org/>.

Methods used: specificities of French departments

- Specific methods were used too to consider French specificities

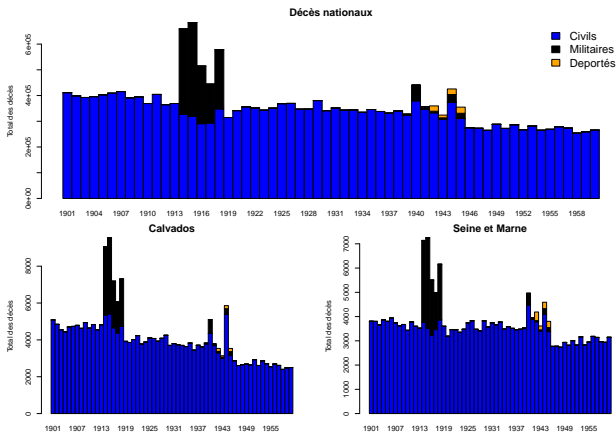


Figure: Civilian and military deaths at national and local level.

Source: French Human Mortality Database.

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Available data

- **Lifetables for each year, gender and French department between 1901 and 2015.**

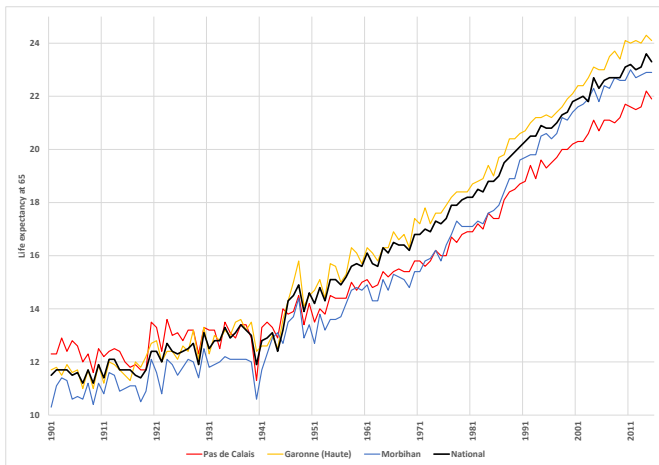


Figure: Life expectancy at age 65, women. Source: French Human Mortality Database.

A dedicated website to get the lifetables: the FRD

- A dedicated website for economic and demographic data at the local level in France



The French Regional Database

The French Regional Database is a project whose main objectives are to provide historical demographic and economic data about French regions and to improve general knowledge of the French regional characteristics, through their analysis over time.

This project is based on the digitization of archives available in the French statistical institutes (Institut National de la Statistique et des Etudes Economiques, Institut National d'Etudes Démographiques, Ministry of Economy and Finance), relating among other things to population movement (births according to the age of the mother, deaths by age and sex, deaths by cause), censuses (population by age



Source: French Regional Database.

Available at: <https://frdata.org/en/french-human-mortality-database/>.

A dedicated website to get the lifetables: the FHMD

- A dedicated website for lifetables at the local level in France



French Human Mortality Database

The French Human Mortality Database (FHMD) was created to provide detailed data to anyone interested in the history of human longevity in France. This project was carried out by Florian Bonnet, under the supervision of Hippolyte d'Albis and Magali Barbieri (researcher at the University of California at Berkeley and INED in Paris).

The French Human Mortality Database is a "satellite" of the Human Mortality Database (HMD), which currently holds many historical national lifetables. Consequently, the FHMD's underlying methodology corresponds to the one used for the HMD. Some adjustments were made to adapt to the unique situation of some specific geographic units or periods of time.

The French Human Mortality Database uses data that is validated and corrected, when required, and made comparable, as much as possible, for the period ranging from 1901 to 2015. This database will be updated yearly to reflect the most recent local data.

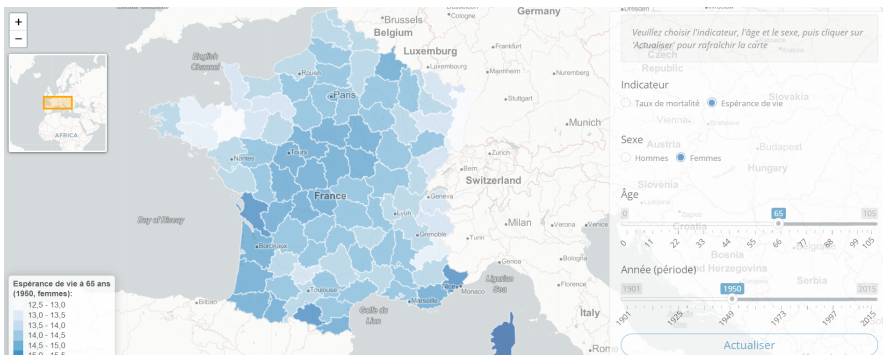
The protocol used to compute regional lifetables is published in Demographic Research (Bonnet, F. (2020). Computations of French lifetables by department, 1901-2014. Demographic Research, 42, 741-762). We thank users of the French Human Mortality Database to cite this paper as reference.

Source: French Human Mortality Database.

Available at: <https://frdata.org/en/french-human-mortality-database/>.

A dedicated website to see the results (1)

- Tool for specific comparisons: maps of mortality.



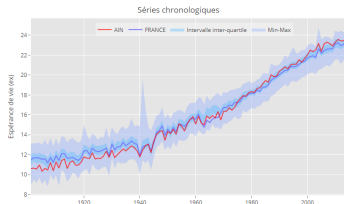
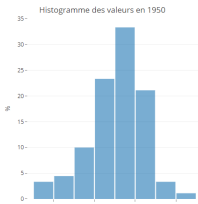
Source: French Human Mortality Database.

Available at: https://shiny.demog.berkeley.edu/hmd/FMDB_MapApp/.

A dedicated website to see the results (2)

- Tool for specific comparisons: temporal trends of mortality.

Département	Code	Âge	Taux de mortalité pour 1000 habitants	Espérance de vie à (x) ans
AIN	01	65	20	14,336
AISNE	02	65	22	14,352
ALLIER	03	65	17	14,994
ALPES-DE-HAUTE-PROVENCE	04	65	18	14,386
ALPES-MARITIMES	06	65	17	15,970
ARDECHE	07	65	19	14,807
ARDENNES	08	65	20	15,138
ARIEGE	09	65	16	15,594
AUBE	10	65	18	14,983



Source: French Human Mortality Database.

Available at: https://shiny.demog.berkeley.edu/hmd/FMDB_MapApp/.

Methodological papers

- A documentation to get all the methodological details of computations



The screenshot displays the homepage of the Demographic Research journal. The header features the journal's logo, name, and tagline. A navigation bar includes links to Articles, Special Collections, for Authors, for Readers, and About the Journal, along with a search bar. The main content area highlights the current volume and older volumes, with a list of articles. The featured article is 'Computations of French lifetables by department, 1901–2014' by Florian Bonnet. Below the article title are buttons for downloading the PDF and submitting a response letter. The article's metadata, including the date received, date published, word count, and keywords, is also displayed.

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VOLUME 42 - ARTICLE 26 | PAGES 741–762

Computations of French lifetables by department, 1901–2014

BY » **Florian Bonnet**

DOWNLOAD PDF **SUBMIT A RESPONSE LETTER**

DATE RECEIVED: 09 Jan 2019
DATE PUBLISHED: 28 Apr 2020
WORD COUNT: 7849
KEYWORDS: » **deportees**, » **French departments**, » **historical demography**.

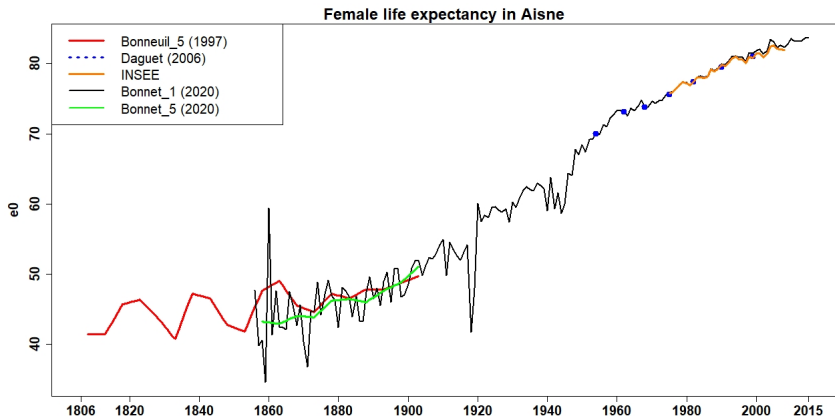
Source: Demographic Research.

Available at: <https://www.demographic-research.org/>.

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Future extensions: 1856-2015

- **An extension of the database for the period 1856-1900**



Source: Own calculations.

Future extensions: 1901-2018

- An extension of the database for the period 2016-2018

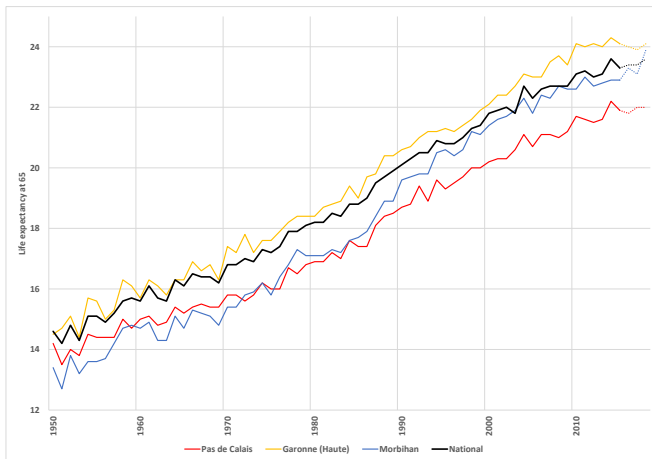


Figure: Life expectancy at age 65, women.

Source: French Human Mortality Database and own calculations.

Future extensions: lifetables for both sexes

- **Lifetables for both sexes combined ; raw data on website**

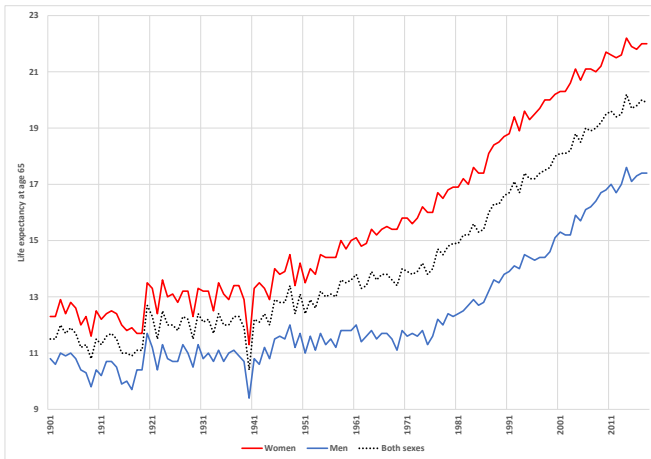


Figure: Life expectancy at age 65 in *Pas-de-Calais*, by gender.

Source: French Human Mortality Database.

Future extensions: bayesian estimations

- **Lifetables computed with HMD protocol and Alexander et al. (2019) bayesian model**

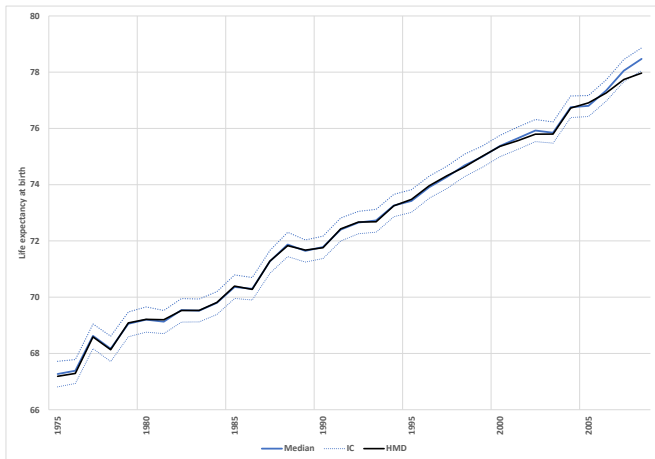


Figure: Life expectancy at birth in *Bas-Rhin*, women. Source: Own calculations