

Prof. Dr. Karl Lauterbach

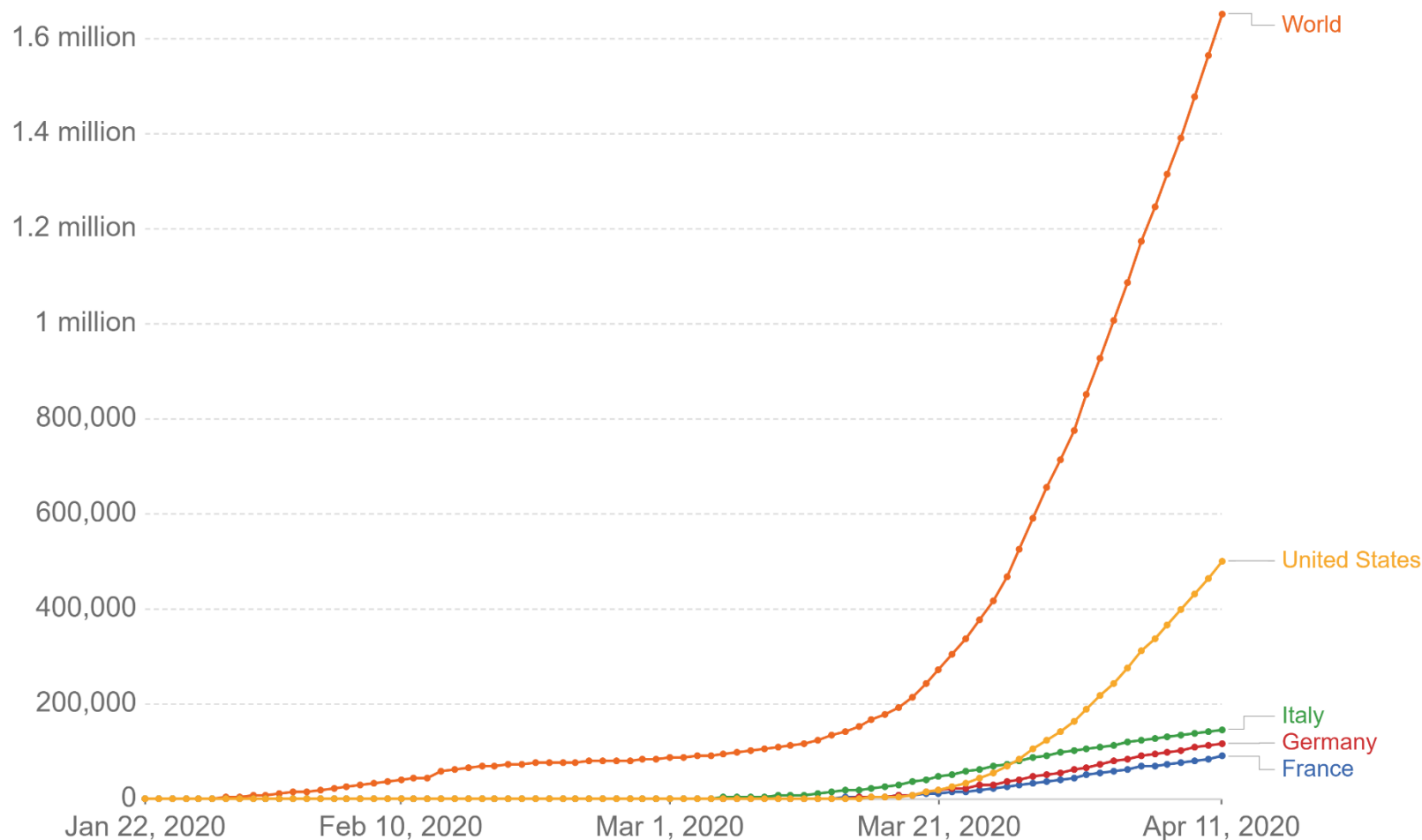
Member of the Bundestag
Director of the Institute of Health Economics
and Clinical Epidemiology,
University Hospital, Cologne
Adjunct Professor of Harvard TH Chan School of Public Health

„Lessons from Germany on Managing COVID-19 “

Confirmed COVID-19 cases, Jan 22, 2020 to Apr 11, 2020

Our World
in Data

The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.



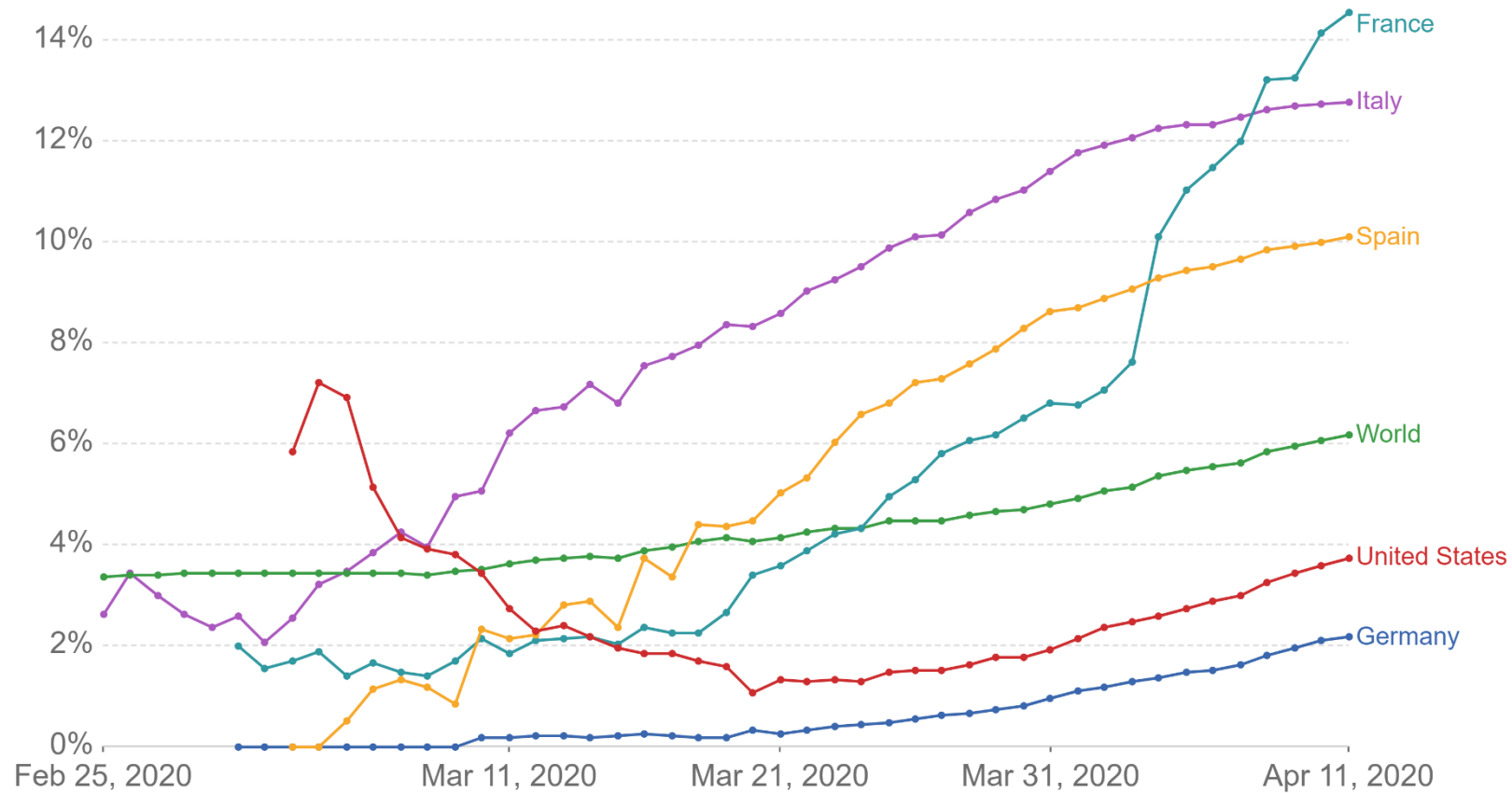
Source: European CDC – Situation Update Worldwide – Last updated 11th April, 10:45 (London time) OurWorldInData.org/coronavirus • CC BY

Case fatality rate of the ongoing COVID-19 pandemic, Feb 25, 2020 to Apr 11, 2020

Our World
in Data

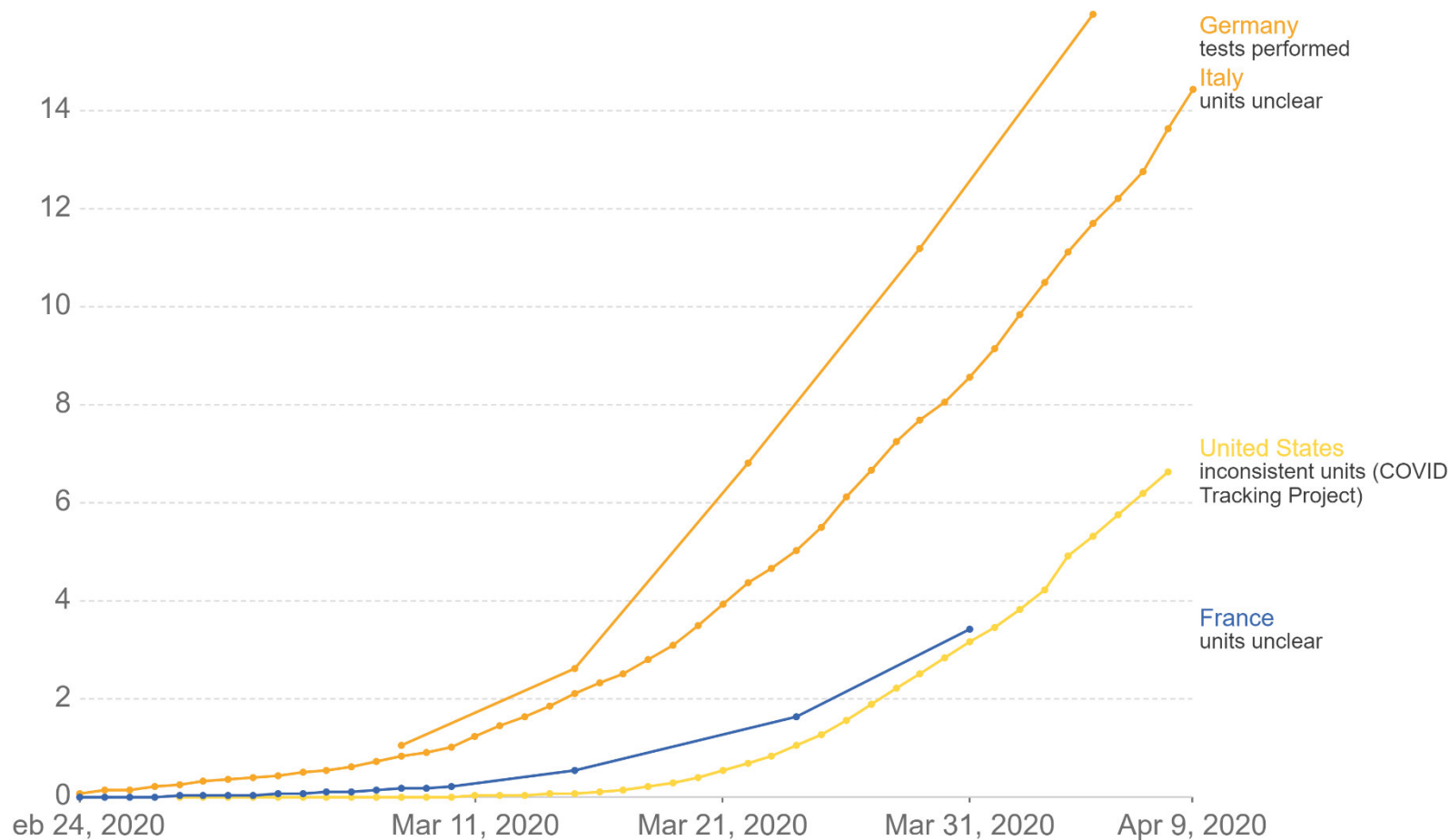
The Case Fatality Rate (CFR) is the ratio between confirmed deaths and confirmed cases.

During an outbreak of a pandemic the CFR is a poor measure of the mortality risk of the disease. We explain this in detail at OurWorldInData.org/Coronavirus



Source: European CDC – Situation Update Worldwide – Last updated 11th April, 10:45 (London time) OurWorldInData.org/coronavirus • CC BY
 Note: Only countries with more than 100 confirmed cases are included.

Total tests for COVID-19 per thousand people



Source: Official sources collated by Our World in Data

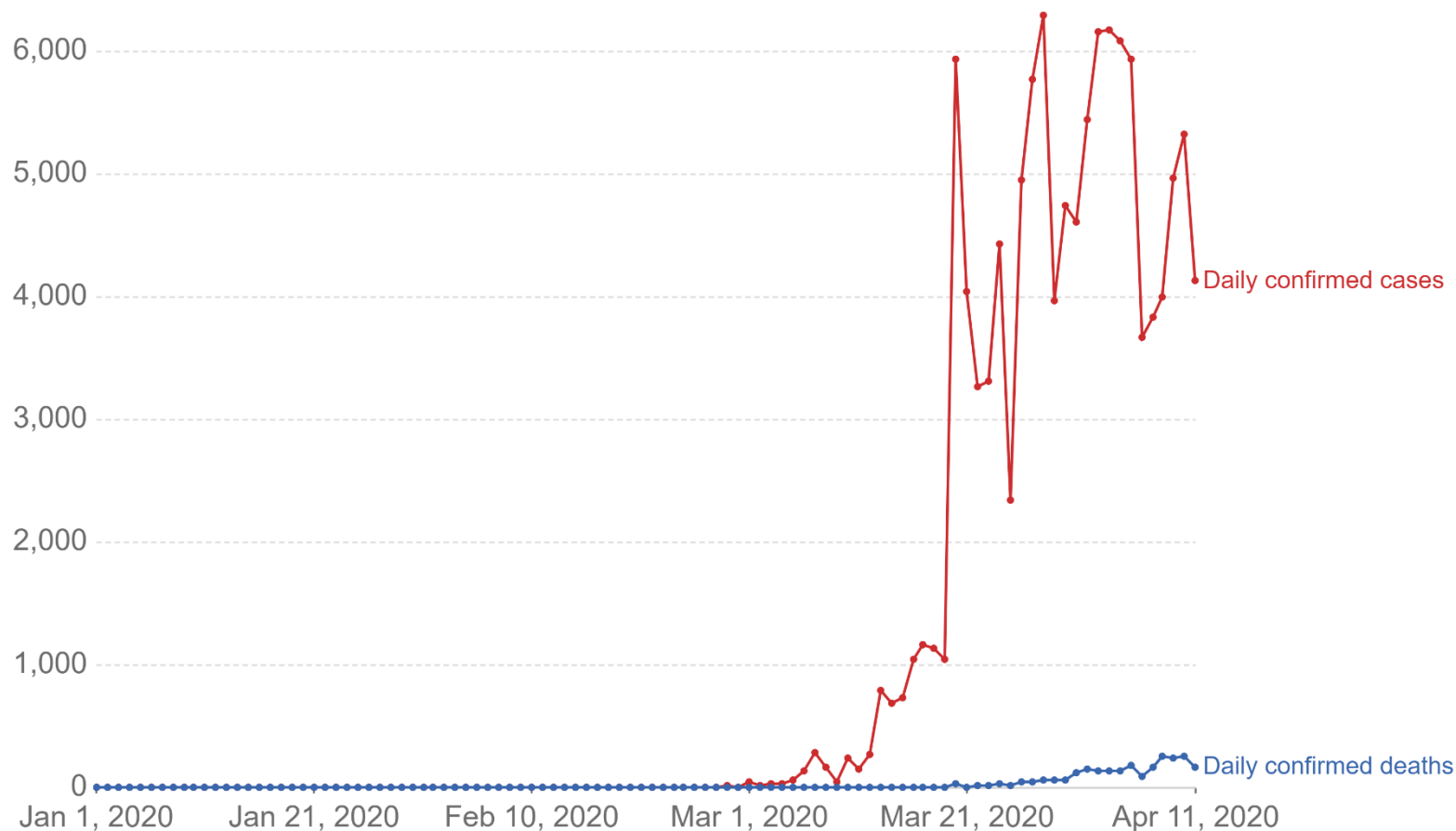
OurWorldInData.org/coronavirus • CC BY

Note: There are substantial differences across countries in terms of the units, whether or not all labs are included, the extent to which negative and pending tests are included and other aspects. Details for each country can be found at ourworldindata.org/covid-testing.

Daily new confirmed COVID-19 cases and deaths, Germany, Jan 1, 2020 to Apr 11, 2020

Our World
in Data

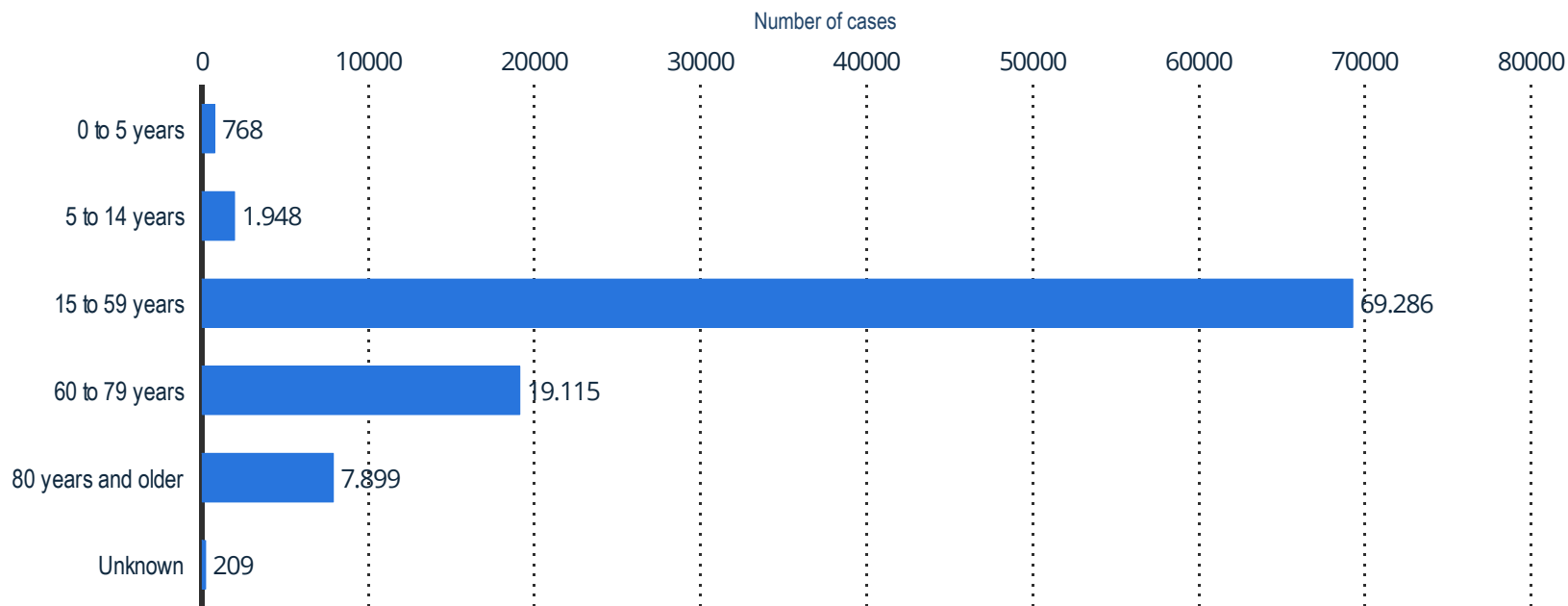
The confirmed counts shown here are lower than the total counts. The main reason for this is limited testing and challenges in the attribution of the cause of death.



Source: European CDC – Situation Update Worldwide – Last updated 11th April, 10:45 (London time) OurWorldInData.org/coronavirus • CC BY

Number of coronavirus (COVID-19) cases in Germany in 2020, by age group

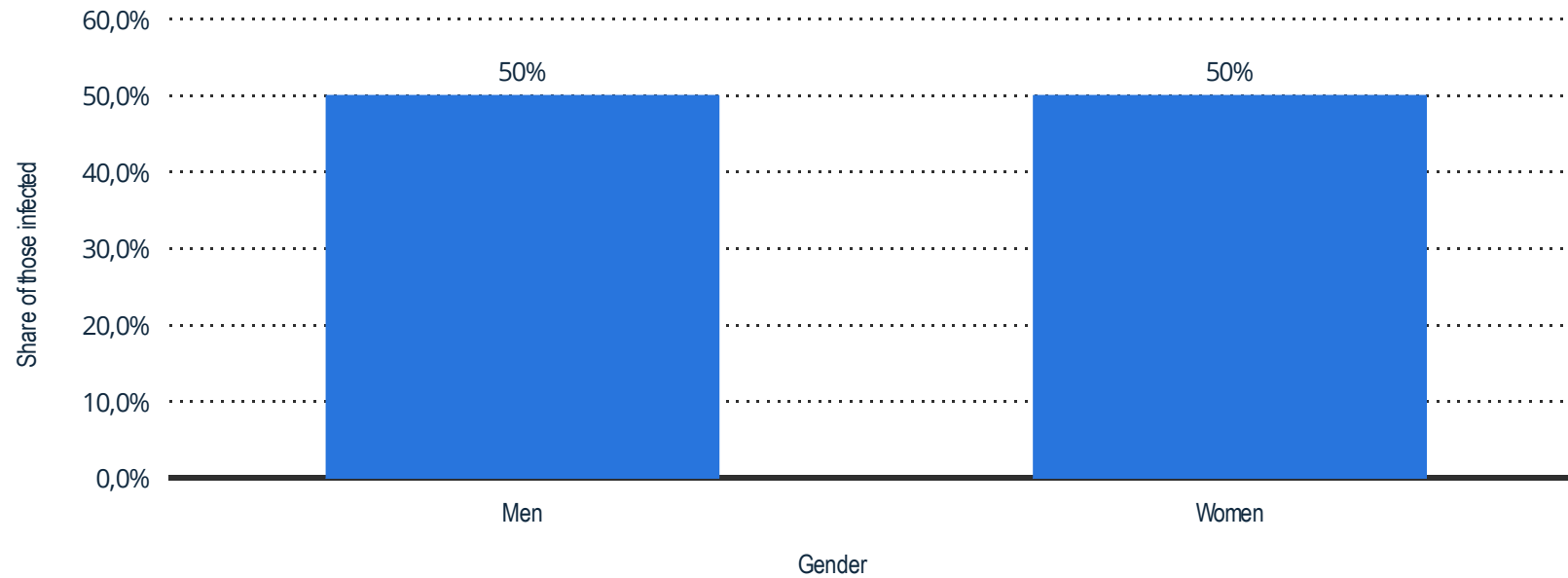
Coronavirus (COVID-19) case numbers by age group in Germany 2020



Note: Germany; as of April 7, 2020

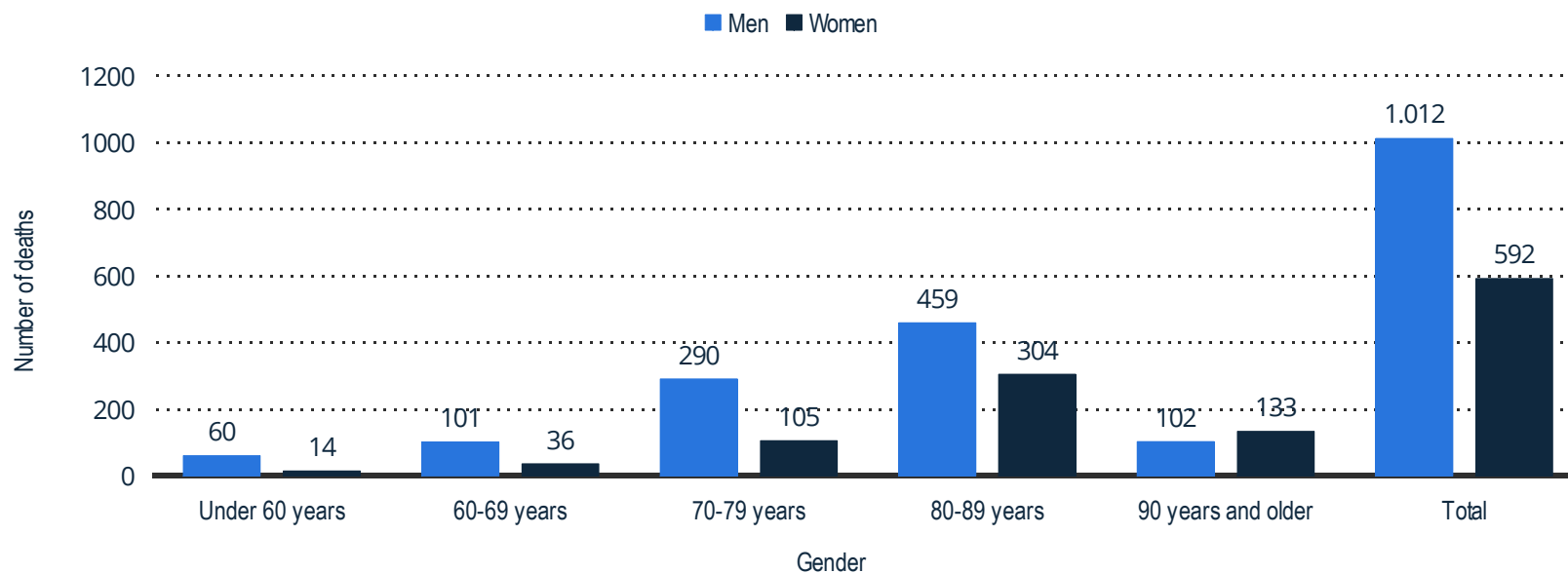
Source(s): Robert Koch-Institut;statista

Distribution of coronavirus (COVID-19) cases in Germany in 2020, by gender



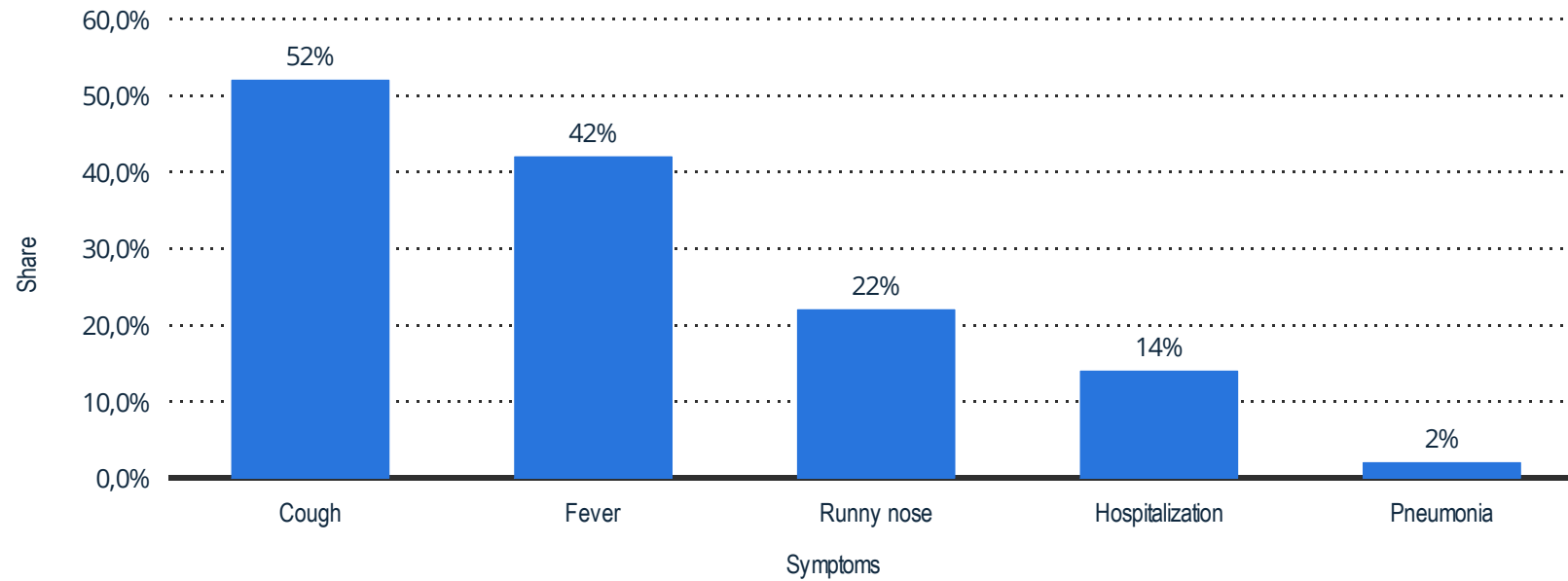
Note: Germany; as of April 7, 2020.
Source(s): Robert Koch-Institut; statista

Number of coronavirus (COVID-19) deaths in Germany in 2020, by gender and age



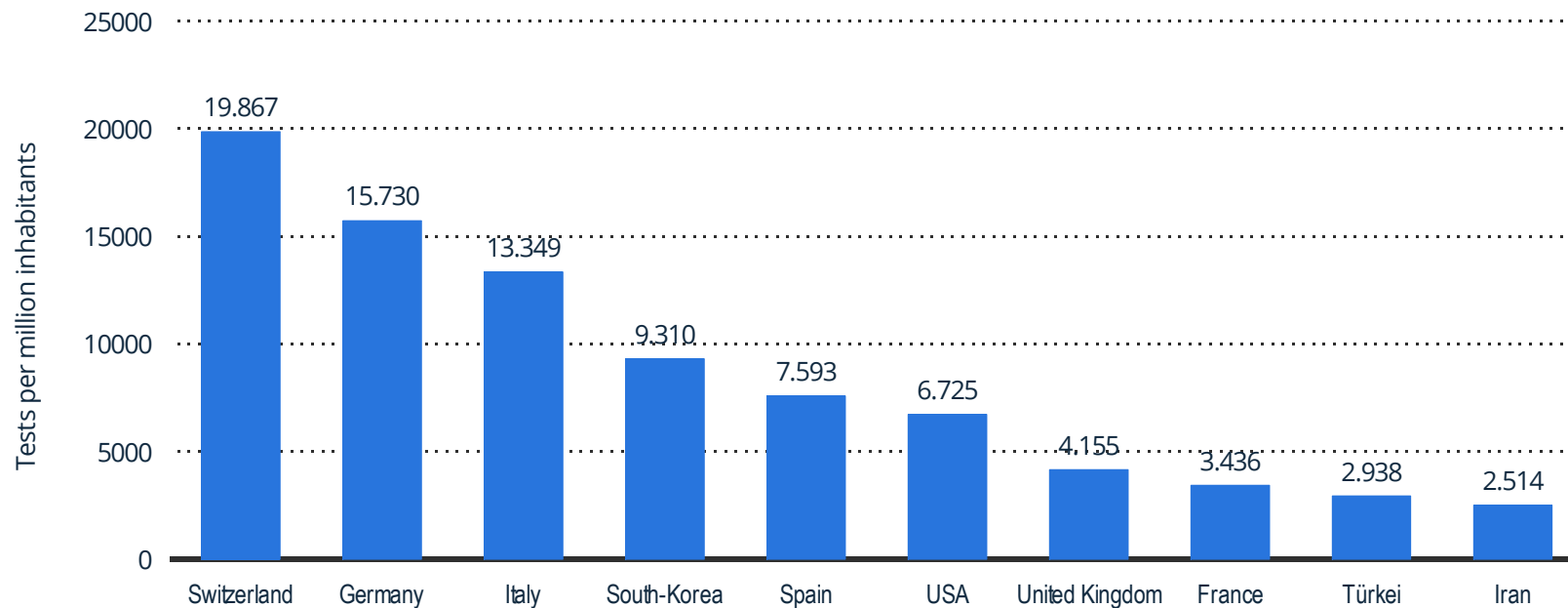
Note: Germany; as of April 7, 2020.
Source(s): Robert Koch-Institut; statista

Most frequent symptoms caused by the coronavirus (COVID-19) in Germany in 2020



Note: Germany; As of April 7, 2020
Source(s): Robert Koch-Institut;statista

Average number of tests for coronavirus (COVID-19) carried out in selected countries (tests per million inhabitants; as of 9 April 2020)



Source): Worldometers; statista

A German Corona Chronology 2020

January 28: The German Press Agency reports the first infection with the novel coronavirus in Germany.

February 11: The novel lung disease from China is called "Covid-19" by the WHO. The virus is given the name Sars-CoV-2.

March 1 /2: More than 100 corona infections confirmed in Germany.
The Robert Koch Institute (RKI) sets the corona danger level to "moderately" high.

March 8: The Federal Minister of Health officially recommends to cancel events with more than 1000 people in Germany.
The number of confirmed corona infections in Germany climbs to more than 1000.

March 9: For the first time in Germany a person dies after a corona infection.

March 11: The German Chancellor says that in order to slow down the spread of the corona virus, major events with more than 1000 participants should be cancelled.

Source: German Press, Federal Ministry of Health

A German Corona Chronology 2020

March 13: The German government puts together the largest crisis package ever. The state development bank KfW is to support companies threatened by bankruptcy with loans. Total volume of the rescue operation: up to 500 billion euros. Schools and day-care centres will be closed nationwide at least until the end of the Easter holidays. Many companies are sending their employees to their home offices at the same time. The Federal Minister of Health appeals to all German hospitals to recruit additional staff in view of the corona crisis and to postpone scheduled operations and interventions now. At the same time, he guarantees that the resulting economic consequences for the hospitals will be compensated by the statutory health insurance funds.

March 16: Germany closes down. The federal government and the federal states agree on a unified approach "to further restrict social contacts in the public sector in view of the corona epidemic in Germany". Bars, clubs, discotheques, pubs and theatres, operas, concert halls, museums, trade fairs, cinemas, leisure and animal parks, playgrounds, sports facilities, swimming pools and fitness studios are closed. Overnight stays in hotels and pensions for tourist purposes are no longer permitted. Church services will no longer take place. The borders are also closed: From 8 o'clock onwards, it is no longer possible to simply enter Germany from France, Switzerland, Denmark, Austria and Luxembourg. The North and Baltic Sea islands are also closed to tourists.

Source: German Press, Federal Ministry of Health

A German Corona Chronology 2020

March 17: The RKI assesses the corona risk to the health of the population as "high" overall. The burden on the health system could be "very high" locally.

March 22: Federal and state governments agree on a kind of contact ban. Means: Reduction of contacts to fellow human beings to a minimum. Going outside in one's free time is still allowed, but not in groups of more than two people (exception: families). Minimum distance to other people on the street: 1.5 metres. The rules are initially valid for two weeks.

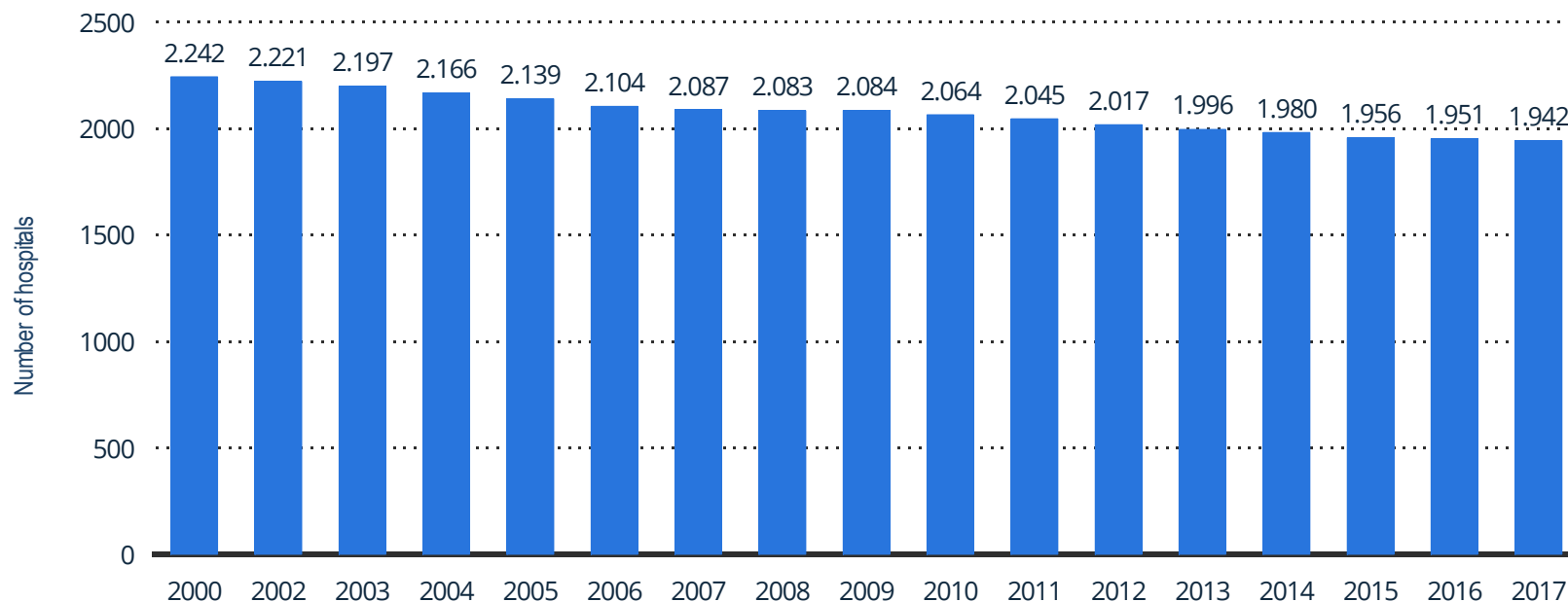
March 23: The number of corona deaths in Germany rises to more than 100, with more than 25,000 confirmed infections in Germany so far.

March 25: Parliament adopts a huge Corona aid package. Total volume: 750 billion euros (including loans for companies, emergency aid for hospitals and solo self-employed persons). In return, Germany will incur new debts of 156 billion euros. In order to support the health care system and nursing staff in coping with the corona epidemic, the parliament passes two laws: The "COVID19 Hospital Relief Act" will cushion the economic consequences for hospitals and contract physicians. The "Law for the protection of the population in the event of an epidemic situation of national importance" will improve the ability to respond to epidemics.

April 6: The notification of free intensive care beds in hospitals becomes mandatory.

Source: German Press, Federal Ministry of Health

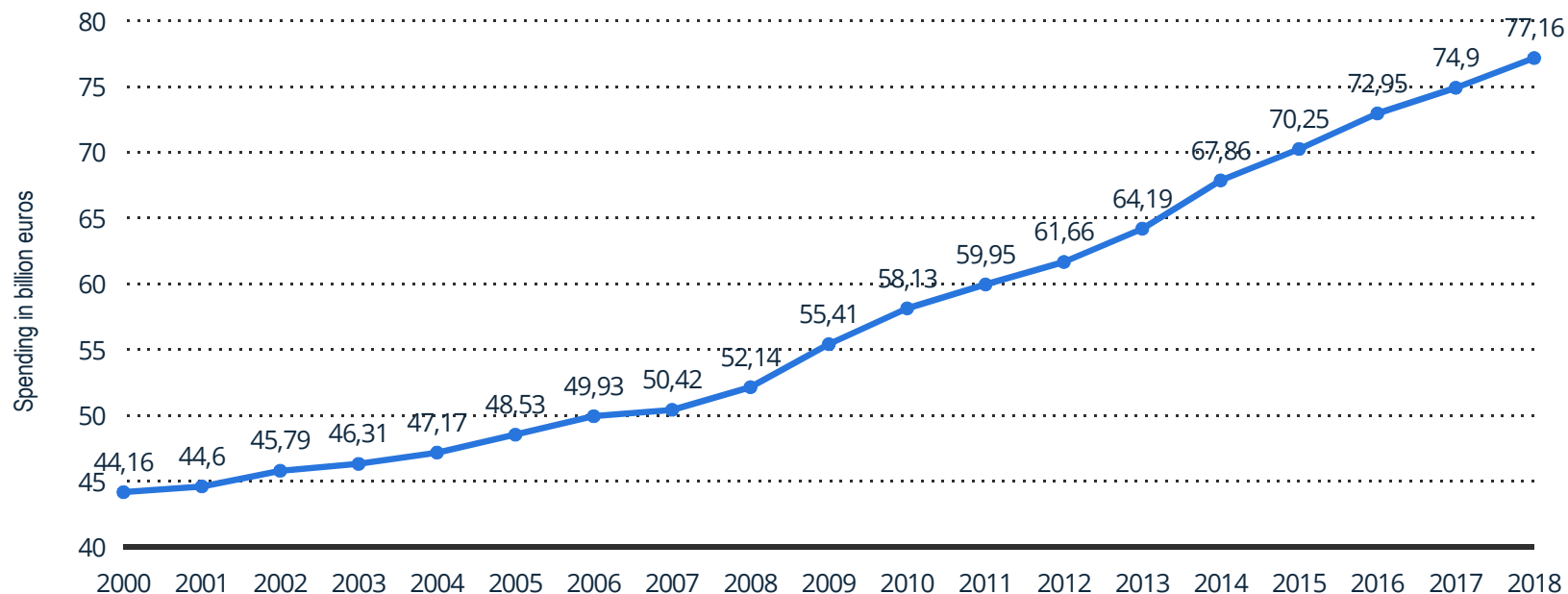
Number of hospitals in Germany from 2000 to 2017



Note: Germany; 2000 to 2017

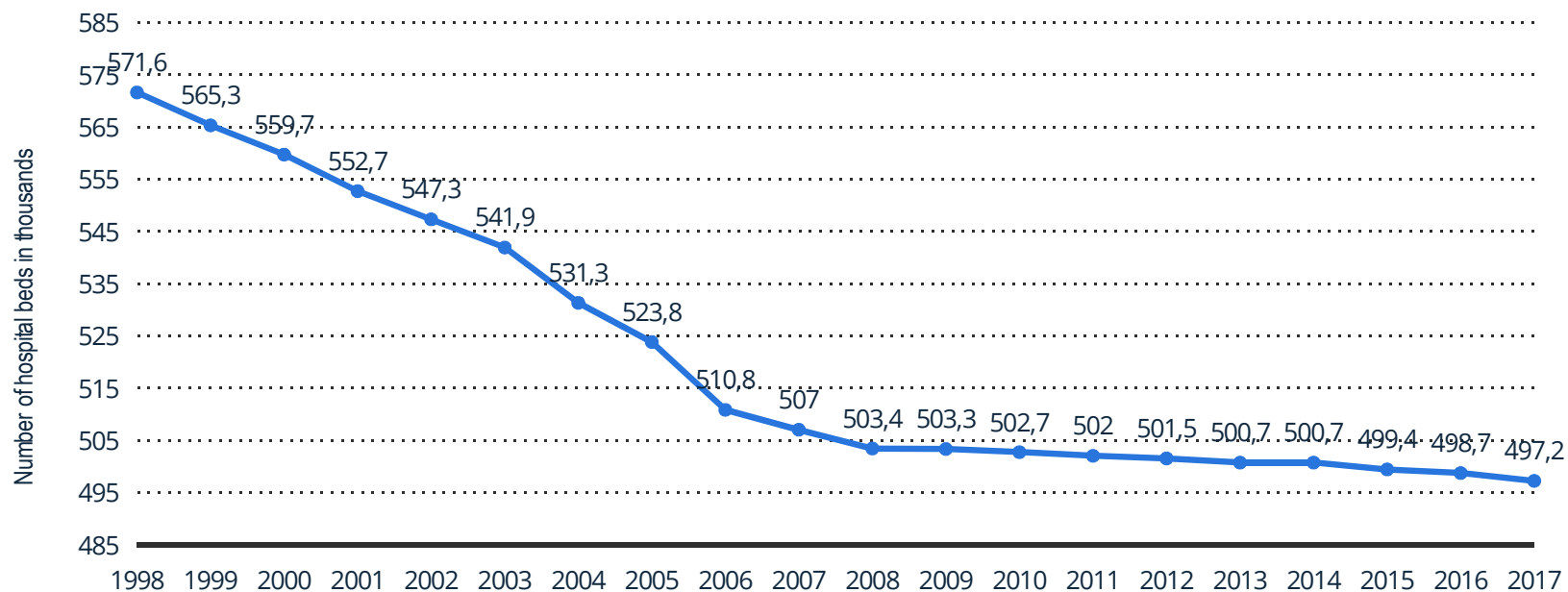
Source(s): Statistisches Bundesamt; statista

Statutory health insurance spending on hospital treatments in Germany from 2000 to 2018 (in billion euros)



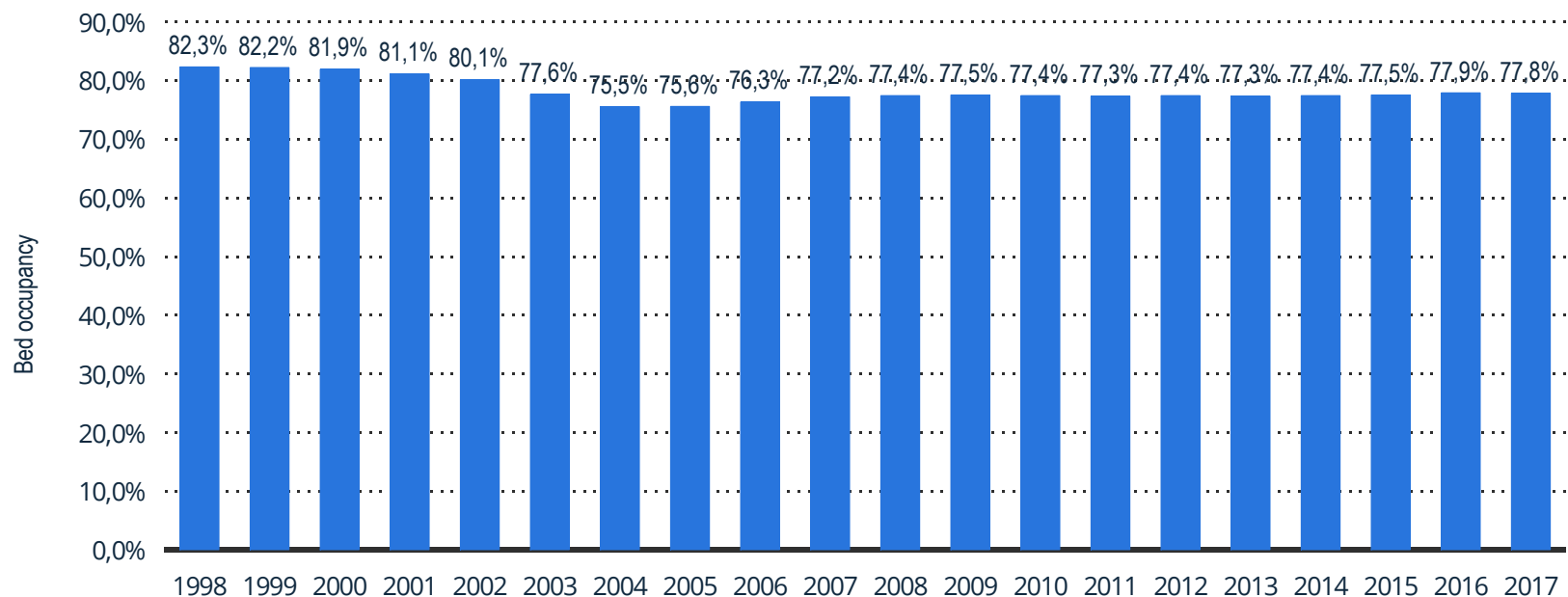
Note: Germany; 2000 to 2018
Source(s): BMG;statista

Number of hospital beds in Germany from 1998 to 2017 (in 1,000)



Note: Germany; 1998 to 2017
Source(s): Statistisches Bundesamt; staista

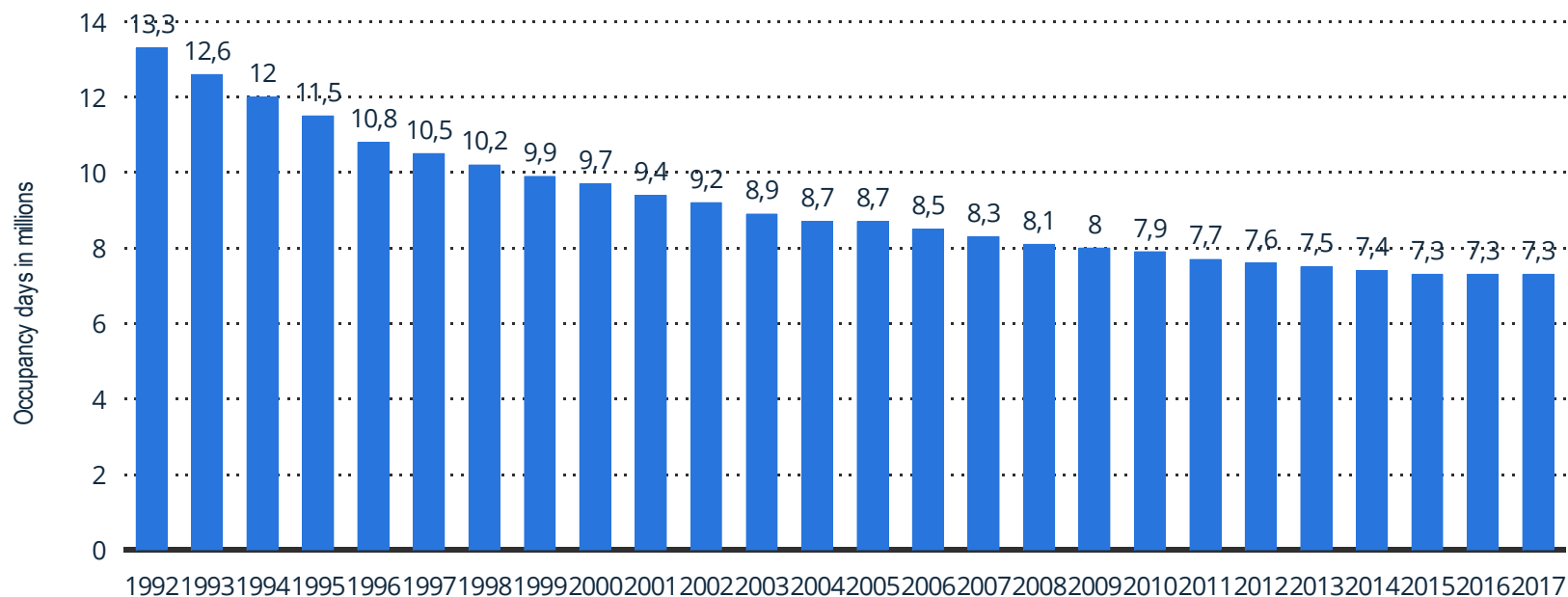
Bed capacity utilization in hospitals in Germany from 1998 to 2017



Note: Germany; 1998 to 2017.

Source(s): Statistisches Bundesamt; [ID 578484](#)

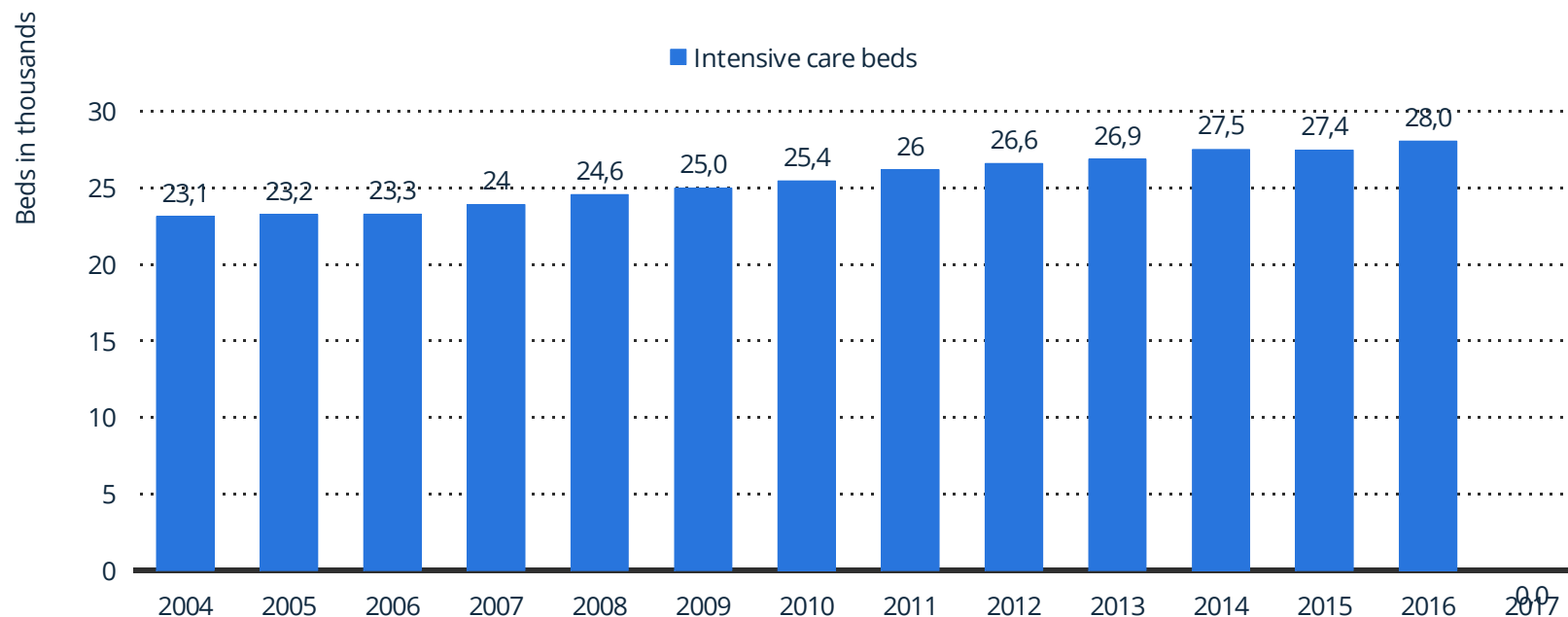
Average length of stay in hospitals in Germany from 1992 to 2017 (in days)



Note: Germany; 1992 to 2017.

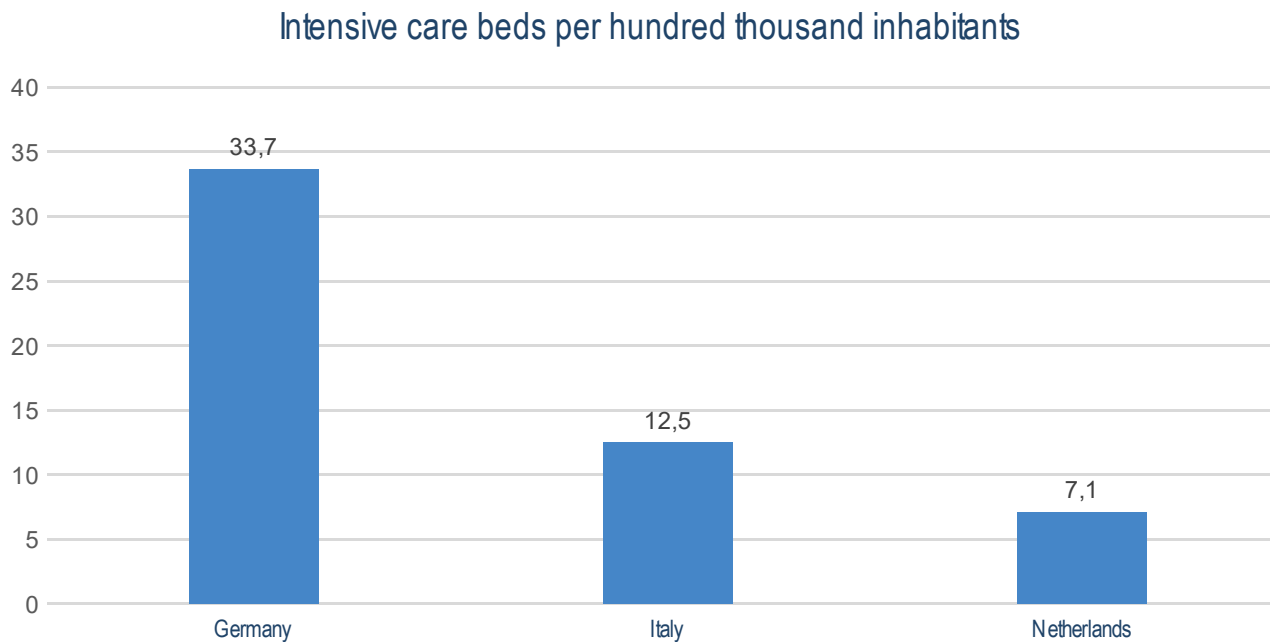
Source(s): Statistisches Bundesamt; statista

Number of hospital beds for intensive medical care in Germany in the years 2004 to 2017 (in 1,000)



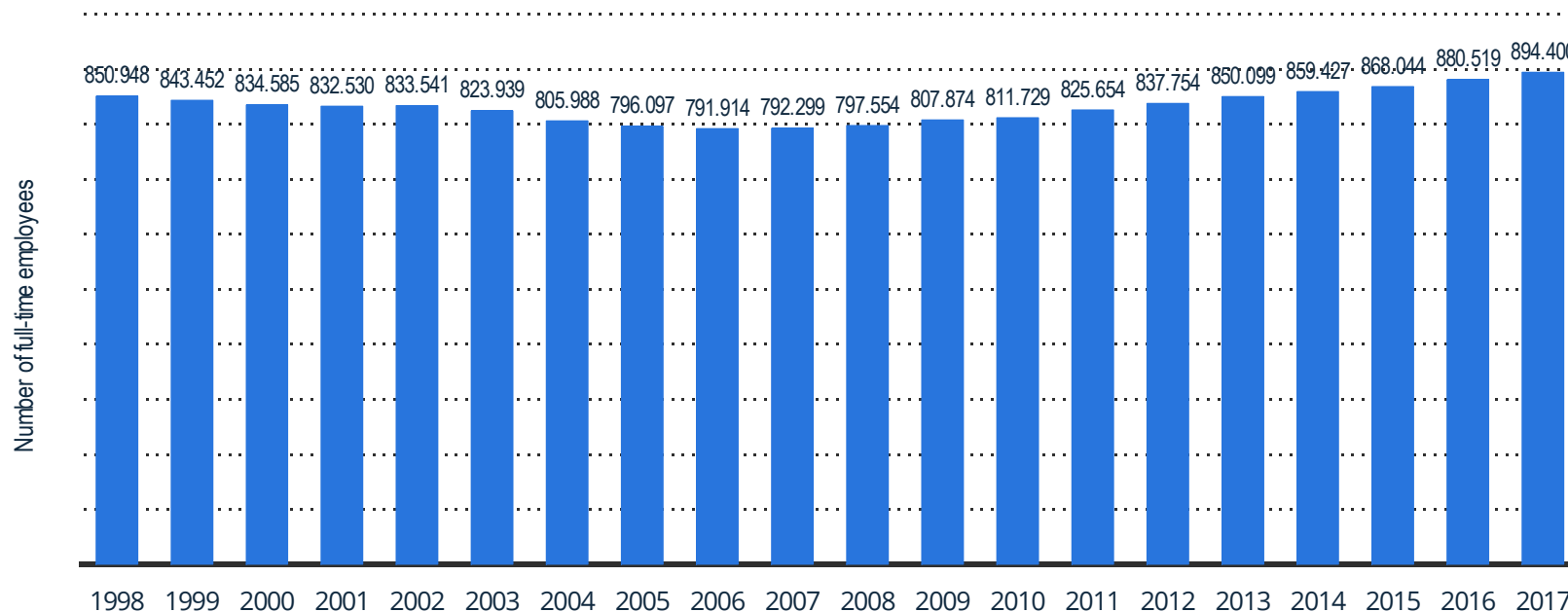
Source: Statistisches Bundesamt, statista

Intensive care beds per hundred thousand inhabitants in selected European Countries



Source: science media center germany

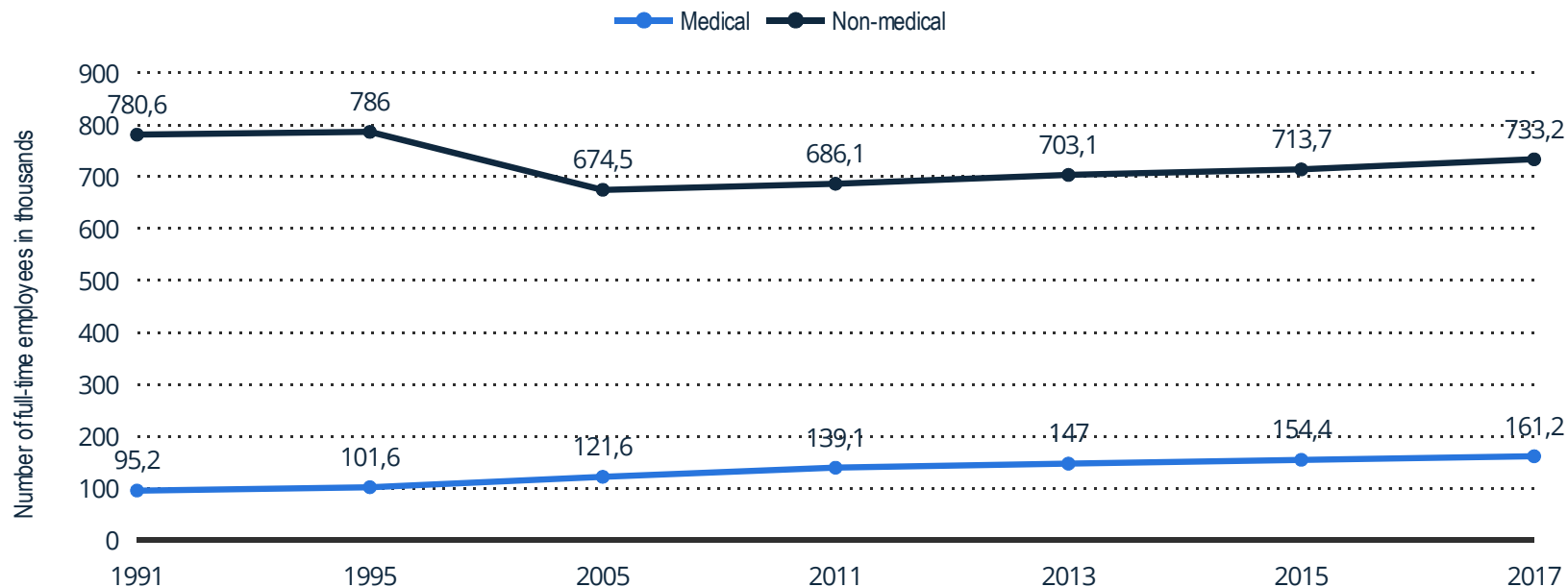
Number of full-time employees in hospitals in Germany from 1998 to 2017



Note: Germany; 1998 to 2017.

Source(s): Statistisches Bundesamt; statista

Number of medical and non-medical employees in hospitals in Germany from 1991 to 2017 (in 1,000)

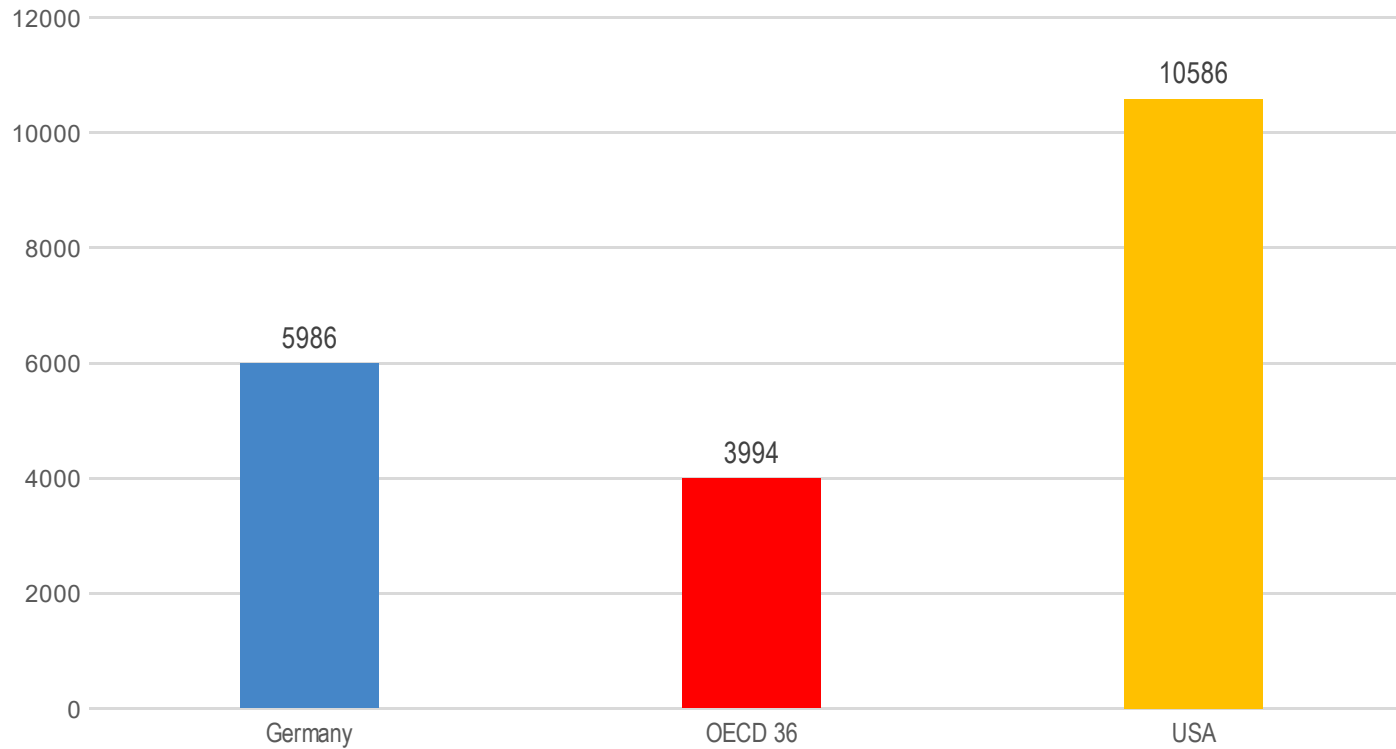


Note: Germany; 1991 to 2017.

Source(s): Statistisches Bundesamt; statista

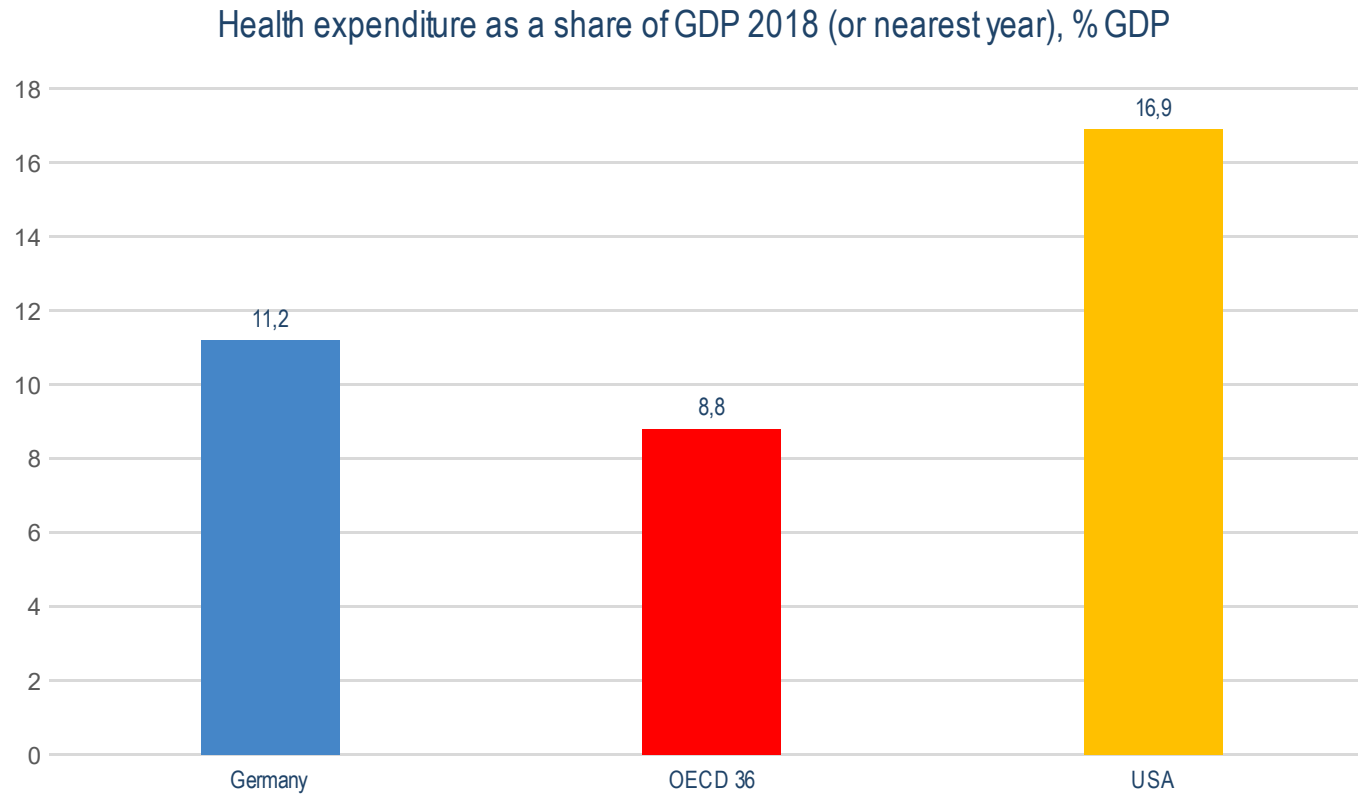
Germany and United States – Health Expenditure

Health expenditure per capita (2018 or nearest year), USD PPP



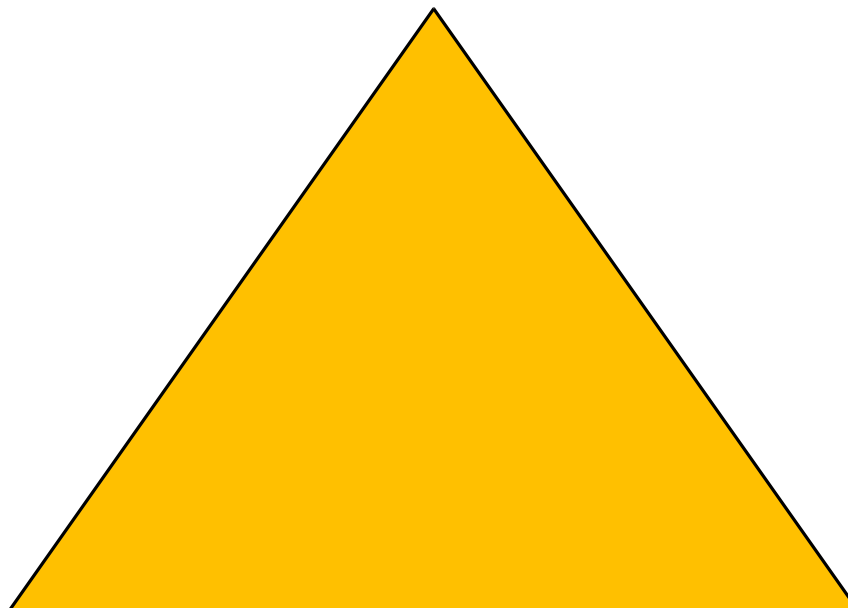
Source: OECD

Germany and United States – Health Expenditure



Source: OECD

Low Energy Bluetooth App (PEPP-PT)



wearing masks

- surgical masks
- in particular: in public transport and in rooms or at work where safety distances are difficult to maintain

testing

- massive testing of contacts of new cases and around new cases
- tracking of all new cases with the Low Energy Bluetooth App.

Low Energy Bluetooth App (PEPP-PT)

1. User voluntarily loads an app on his smartphone; Bluetooth must always be switched on!

The app stores and encrypts only locally on the mobile phone a list of mobile phones that are :

- have also installed the app,
- Bluetooth turned on,
- at least 15 minutes and
- are less than 2 meters away

2. A doctor diagnoses a user as corona-positive

- the infected person releases the data use in the app,
- the other app users from the infected person's list receive a message,
- the affected users can report to the public health department and possibly get tested.

Phases of the lockdown

- **10 March:** Federal states **ban major events** with more than 1000 people
- **16-17 March: Germany closes down.** Schools and day-care centres are to be closed. Also bars, clubs, discotheques, pubs and theatres, operas, concert halls, museums, trade fairs, cinemas, leisure parks and zoos as well as playgrounds, sports facilities, swimming pools and fitness studios. Overnight stays in hotels and guesthouses for tourist purposes are no longer permitted. Church services are no longer held. The borders are also closed.
- **20 March: Exit restrictions** in the federal states are introduced. Restaurants and service businesses are closed.
- **22 March:** Federal and state governments agree on a **ban on contact**. Reduction of contact with fellow human beings to a minimum. The way to work remains possible. Going outside in one's free time is still allowed, but not in groups of people more than two (exception: families). Minimum distance to other people on the street: 1.5 metres. The rules are to apply for two weeks at first.

The Robert Koch Institute (RKI)

- The RKI, based in Berlin, is a federal institute and the central institution in Germany for the monitoring and prevention of diseases, especially infectious diseases. It advises the Federal Ministry of Health using scientific findings and informs the public.
- It employs 1200 people from 90 different professions, about half of whom are scientists.
- The RKI has the legal mandate to develop scientific findings as a basis for health policy decisions. Its primary tasks are the scientific investigation, epidemiological and medical analysis and evaluation of diseases with high risk, high prevalence or high public or health policy significance

Source: www.rki.de

Crisis Communication

- "The worst case scenario, with all its consequences for the population in Germany, must be made unmistakably, decisively and transparently clear."
- "In order to mobilize the social staying power, keeping silent about the worst case is not an option. If you want to avert danger, you must know it."
- "This requires all state authorities to provide comprehensive and coordinated information and education as well as concrete instructions for action.,,"

Source: Federal Ministry of the Interior, for Building and Homeland