**Data Sources, definitions and further information**

**Hospital Data**

**Hospitals:** If not otherwise indicated, hospitals are defined as health care facilities providing acute (curative) care beds for internal medicine and/or surgery excluding hospitals providing solely psychiatric beds, long-term care beds or rehabilitative care beds

**Total hospital beds:** It not otherwise indicated, they are the sum of 1) curative (acute) care beds, 2) rehabilitative care beds, 3) long-term care beds; and 4) other hospital beds for all included hospitals

**Austria**

Source of data: Federal Ministry of Social Affairs, Health, Care and Consumer Protection

* Hospitals in Austria: <https://www.sozialministerium.at/Themen/Gesundheit/Gesundheitssystem/Krankenanstalten/Krankenanstalten-und-selbststaendige-Ambulatorien-in-Oesterreich/Krankenanstalten-in-Oesterreich.html>
* Case-Fatality Ratio:   
  https://www.sozialministerium.at/Informationen-zum-Coronavirus/Neuartiges-Coronavirus-(2019-nCov).html

Reference period: January 2020

Further information:

* Hospital beds for intensive care: Beds designated as intensive care beds (specialty ‘anesthesiology and intensive care’) without neonatal intensive care

**Croatia**

Source of data: Croatian Institute of Public Health

* Croatian Health Statistics Yearbook (<https://www.hzjz.hr/hrvatski-zdravstveno-statisticki-ljetopis/hrvatski-zdravstveno-statisticki-ljetopis-za-2018/>)
* Case-Fatality Ratio:   
  https://www.koronavirus.hr/zupanije/139

Reference period: 2018

Further information:

* Hospitals: Data includes both private and public hospitals. Only hospitals with contract by the Croatian Health Insurance Fund were included.
* Hospital beds for intensive care: Hospitals beds dedicated for the specialty of resuscitation and anesthesia.

**Denmark**

Source of data: The Danish Health Authority, Statens Serum Insitut

* Data for hospital beds and Occupancy (‘data for sengepladser og Belægning’; <https://www.esundhed.dk/Emner/Patienter-og-sygehuse/sengepladser-_og_belaegning_paa_sygehuse>)
* Health Care Organization Register (SOR - Sundhedsvæsenets Organisationsregister)
* Case-Fatality Ratio:  
  https://www.ssi.dk/sygdomme-beredskab-og-forskning/sygdomsovervaagning/c/covid19-overvaagning

Reference period: September 2019

Further information:

* Hospitals: Regional hospitals as provided by the Health Care Organization Register (SOR) were included (i.e. private hospitals were excluded)
* Total hospital beds: all standardized hospital beds (‘normerede sengepladser’) per hospital
* Hospital beds for intensive care: standardized hospital beds assigned to intensive care or anesthesiology departments were included

**Estonia**

Source of data: National Institute for Health Development, Health Board of Estonia

* Health statistics and health research database: <http://pxweb.tai.ee/PXWeb2015/index_en.html>
* Case-Fatality Ratio:  
  https://www.terviseamet.ee/et/koroonaviirus/koroonakaart

Reference period: December 2018

Further information:

* Hospitals: All hospitals that were designated ‘masterplan hospitals’ (HP.1.1 hospitals; public sector) were included.
* Hospital beds for intensive care: Beds for intensive care include level I-III intensive care beds

**France**

Source of data: Ministry of Solidarity and Health, Santé publique France

* SAE statistics (‘Statistique annuelle des établissements de santé’): <http://www.data.drees.sante.gouv.fr/>
  + Hospital beds: SAE Table ‘capact18’
  + Intensive care beds: SAE Table ‘REA\_2018R’
* Case-Fatality Ratio:   
  https://www.santepubliquefrance.fr/dossiers/coronavirus-covid-19/coronavirus-chiffres-cles-et-evolution-de-la-covid-19-en-france-et-dans-le-monde

Reference period: December 2018

Further information:

* Hospitals: Data on hospitals from the SAE statistic identified by its identification number (‘Numéro finess’) both public and private
* Hospital beds for intensive care: Hospital beds for intensive care excluding neonatologie (SAE Code: ‘SITOT’)

**Germany**

Source of data: Federal Statistical Office, Federal Joint Committee, Robert Koch Institute

* Hospital beds and addresses: Hospital Directory (‘Krankenhausverzeichnis’; <https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Krankenhaeuser/Publikationen/_publikationen-krankenhaeuser.html>)
* Intensive Care beds on regional level: http://www.gbe-bund.de/oowa921-install/servlet/oowa/aw92/dboowasys921.xwdevkit/xwd\_init?gbe.isgbetol/xs\_start\_neu/&p\_aid=3&p\_aid=28538182&nummer=841&p\_sprache=D&p\_indsp=99999999&p\_aid=59732184
* Quality reports: <https://www.g-ba.de/themen/qualitaetssicherung/datenerhebung-zur-qualitaetssicherung/datenerhebung-qualitaetsbericht/>
* Case-Fatality Ratio:  
  https://experience.arcgis.com/experience/478220a4c454480e823b17327b2bf1d4

Reference period: December 2017 (Hospital Directory), 2018 (Quality Reports)

Further information:

* Hospital beds for intensive care: The number of hospital beds for intensive care on regional level (NUTS-1) were used as provided by the Federal Statistical Office. Intensive care beds were assigned to the number of hospitals (as stated by the Feredal Statistical Office) providing intensive care according to the Operation and Procedure Key ‘8-930’ (OPS 8-930) ‘Monitoring of respiration, heart and circulation without measuring pulmonary artery pressure and central venous pressure’. The number of intensive care beds on regional level was proportionally assigned to each hospital according to the respective number of OPS 8-930.

**Italy**

Source of data: Ministry of Health

* Dataset: Beds per hospital establishment and discipline (‘Posti letto per stabilimento ospedaliero e disciplina’; <http://www.dati.salute.gov.it/dati/dettaglioDataset.jsp?menu=dati&idPag=96>
* Case-Fatality Ratio:  
  https://www.arcgis.com/apps/opsdashboard/index.html#/b0c68bce2cce478eaac82fe38d4138b1

Reference period: January 2018

Further information:

* Hospitals: Dataset includes both public and equivalent hospital facilities
* Hospital beds: Dedicated beds under ordinary circumstances (‘Posti letto degenza ordinaria’)
* Hospital beds for intensive care: Intensive care beds excluding neonatal intensive care.

**Lithuania**

Source of data: Institute of Hygiene (Health Information Centre)

* Data were retrieved via E-Mail directly from the Institute of Hygiene
* Case-Fatality Ratio:   
  https://coronavirus.jhu.edu/map.html

Reference period: 2018

Further information:

* Hospitals: Both private and public hospitals were included
* Hospital beds for intensive care: The hospitals beds for ‘Intensive care, anaesthesiology’ were used

**Luxembourg**

Source of data: Ministry of Health, Luxembourg Government

* Annual Health Report (‘Carte sanitaire’)
* Case-Fatality Ratio: https://gouvernement.lu/fr/dossiers.gouv\_msan+fr+dossiers+2020+corona-virus.html

Reference period: 2017

Further information:

* Hospitals: All acute care hospitals in Luxembourg (‘Etablissements généraux aigus’) were included. These are the hospitals classified as ‘acute’ in the 2009 Hospital Plan.
* Hospital beds for intensive care: Hospital beds designated as intensive care beds (‘soins intensifs’)

**Poland**

Source of data: Register of Health Care Entities (‘Rejestr Podmiotów Wykonujących Działalność Leczniczą (RPWDL))

* <https://rpwdl.csioz.gov.pl/>
* Case-Fatality Ratio:  
  https://www.gov.pl/web/koronawirus/wykaz-zarazen-koronawirusem-sars-cov-2

Reference period: 2017

Further information:

* Hospital beds for intensive care: Beds designated as ‘Anesthesiology and intensive care unit’

**Slovakia**

Source of data: Institute of Health Policy (Ministry of Health), Ministry of Investments, Regional Development and Informatization of the Slovak Republic

* Data were obtained via E-Mail
* Case-Fatality Ratio:  
  https://korona.gov.sk/koronavirus-na-slovensku-v-cislach/

Reference period: 2018

Further information:

* Hospital beds for intensive care: The hospital beds designated for intensive care units (‘Jednotka intenzívnej starostlivost’;JIS) were used regardless of assigned specialty (but excluding intensive care for neonatology or pediatrics).

**Slovenia**

Source of data: National Institute of Public Health

* Data were obtained via E-Mail: Register of Healthcare Providers and Healthcare Professionals (‘Register izvajalcev zdravstvene dejavnosti in delavcev v zdravstvu (RIZDDZ))
* Case-Fatality Ratio:  
  https://www.nijz.si/sl/dnevno-spremljanje-okuzb-s-sars-cov-2-covid-19

Reference period: 2018

Further information:

* Hospitals: All Hospitals listed in the hospital list of Slovenia provided by the National Institute of Public Health (‘Seznam bolnišnic’)
* Hospital beds for intensive care: All hospitals providing the specialty ‘intensive care’ were chosen. Psychiatric hospitals were excluded. For the included hospitals the number of hospital beds for intensive care were obtained via E-Mail from the National Institute of Public Health.

**Sweden**

Source of data: Swedish Association of Local Authorities and Regions (SALAR) and The Swedish Intensive Care Registry (SIR), Public Health Agency of Sweden

* SALAR: Financial and business statistics (‘Verksamhetsstatistik’: <https://skr.se/ekonomijuridikstatistik/statistik/ekonomiochverksamhetsstatistik.1342.html>
* SIR: Intensive care beds: <https://portal.icuregswe.org/seiva/en/Rapport>
* Case-Fatality Ratio:  
  https://experience.arcgis.com/experience/2dc63e26f509468f896ec69476b0dab3

Reference period: 2018

Further information:

* Hospitals: In Sweden there is no consistent definition of what a ‘hospital’ is. We used the entities described in the ‘Financial and business statistics’ which both includes private and public entities.
* Hospital beds: We used the number of available beds described in the ‘Financial and business statistics’ (‘Disponibla vårdplatser’)
* Hospital beds for intensive care: All three reported ICU categories were included (category I,II and III). It has to be noted that only units that have reported data to the Swedish Intensive Care Registry were included

**England**

Source of data: NHS England and Care Quality Commission

* Hospital data: NHS dataset ‘hospitals’: <https://www.nhs.uk/about-us/nhs-website-datasets/>
* Hospital beds: Bed Availability and Occupancy Data: <https://www.england.nhs.uk/statistics/statistical-work-areas/bed-availability-and-occupancy/bed-data-overnight/>
* Intensive Care: Critical Care Bed Capacity: <https://www.england.nhs.uk/statistics/statistical-work-areas/critical-care-capacity/critical-care-bed-capacity-and-urgent-operations-cancelled-2019-20-data/>
* Cross check of Hospital bed data from Care Quality Commission: <https://www.cqc.org.uk/>
* Case-Fatality Ratio:  
  <https://coronavirus.data.gov.uk/>

Reference period: 2019

Further information:

* Hospital beds for intensive care: The beds designated for the specialty ‘critical care medicine’ were used