



Coronavirus Disease 2019 (COVID-19) Daily Situation Report of the Robert Koch Institute

15/04/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases	Deaths	Deaths (%)	Recovered
127,584 (+ 2,486*)	3,254 (+ 285*)	2.6%	ca. 72,600**

– Changes since the last report are marked *blue* in the text –

*Change from previous day; **Estimate

Summary (as of 15/04/2020, 12:00 AM)

- In total, **127,584** COVID-19 cases and **3,254** deaths due to COVID-19 have been electronically reported to the Robert Koch Institute in Germany.
- All 16 federal states are affected. The incidence (cases per 100,000) of COVID-19 is highest in Bavaria (**262**), Baden-Wuerttemberg (**230**), Saarland (**217**) and Hamburg (**210**).
- Most cases (68%) are between 15 and 59 years old; men (48%) and women (52%) are almost equally affected.
- **87%** of deaths, but only **18%** of all cases, occurred in persons aged 70 years or older.
- Reports on COVID-19 related outbreaks in nursing homes and hospitals are increasing. In some of these outbreaks, the number of deaths is relatively high.
- As of 10/04/2020 countries and regions are not longer classified as international risk areas.

Epidemiological Situation in Germany

Geographical distribution of cases

Epidemiological analyses are based on validated cases notified electronically to RKI according to the Protection Against Infection Law (Data closure: 12:00 AM daily).

Since January 2020, a total of **127,584 (+2,486)** laboratory-confirmed cases of coronavirus disease 2019 (COVID-19) have been electronically reported to and validated at the RKI, including **3,254** deaths (see Table 1 and Figure 1). In addition, diagnosis is ongoing for suspected cases in several federal states.

Information on confirmed cases are also available on the RKI website at

https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Fallzahlen.html and <https://corona.rki.de>.

Federal State	Total Number of cases	Number of new cases	Cases/100,000 pop.	Number of deaths
Baden-Wuerttemberg	25,438	398	230	767
Bavaria	34,294	725	262	954
Berlin	4,722	54	126	62
Brandenburg	1,950	34	78	42
Bremen	500	8	73	21
Hamburg	3,869	61	210	67
Hesse	6,347	164	101	173
Mecklenburg-Western Pomerania	624	5	39	11
Lower Saxony	8,019	134	100	224
North Rhine-Westphalia	25,835	535	144	607
Rhineland-Palatinate	5,004	124	123	77
Saarland	2,145	33	217	58
Saxony	3,819	68	94	73
Saxony-Anhalt	1,223	16	55	26
Schleswig-Holstein	2,245	81	78	54
Thuringia	1,550	46	72	38
Total	127,584	2,486	153	3,254

Table 1: Number and cumulative incidence (per 100,000 population) of notified laboratory-confirmed COVID-19 cases and deaths per federal state, Germany (15/04/2020, 12:00 AM).

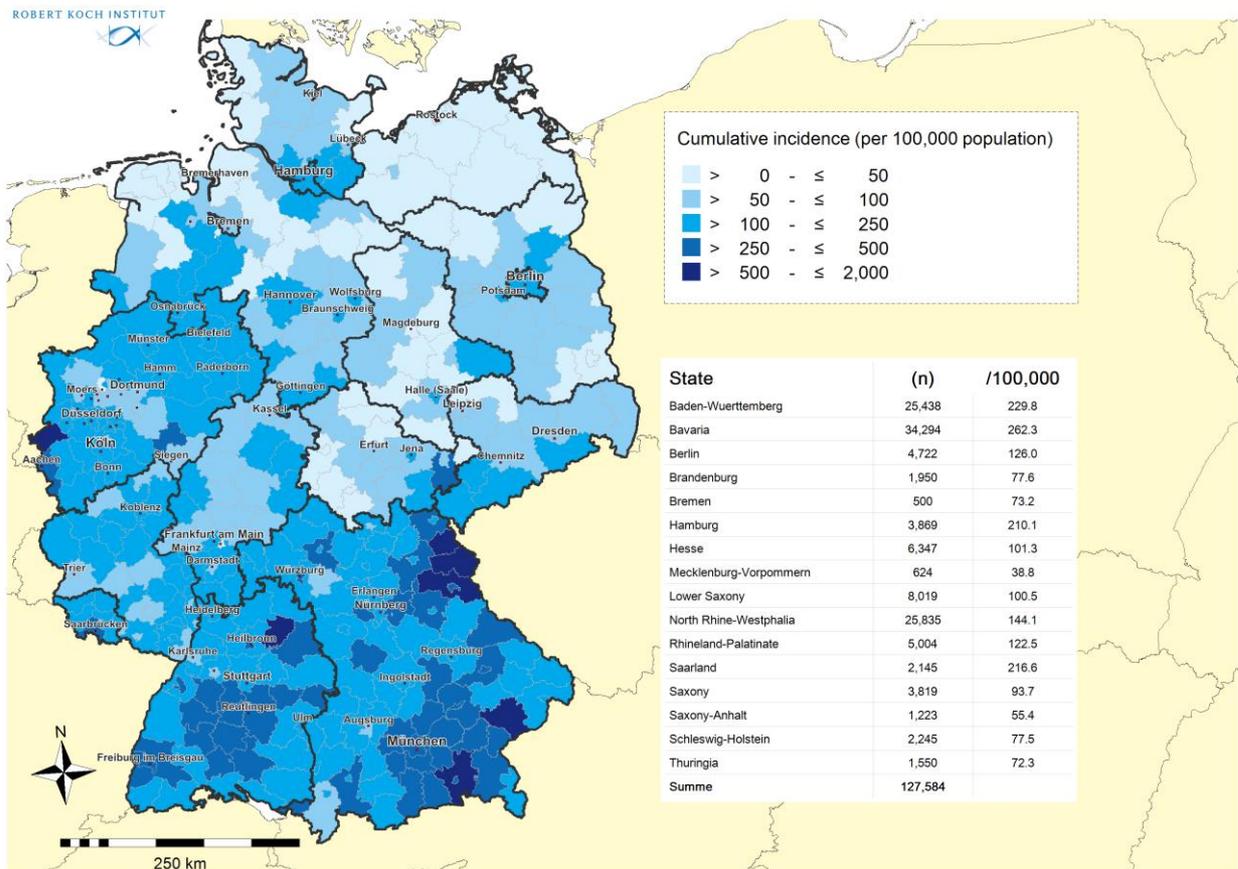


Figure 1: Number and cumulative incidence (per 100,000 population) of the 127,584 electronically reported COVID-19 cases in Germany by county and federal state (15/04/2020, 12:00 AM). Please see the COVID-19 dashboard (<https://corona.rki.de/>) for information on number of COVID-19 cases by county (local health authority).

Distribution of cases over time

COVID-19 cases were first notified in Germany in January 2020. In 47,305 cases, onset of symptoms is unknown and therefore date of reporting is shown (see Figure 2).

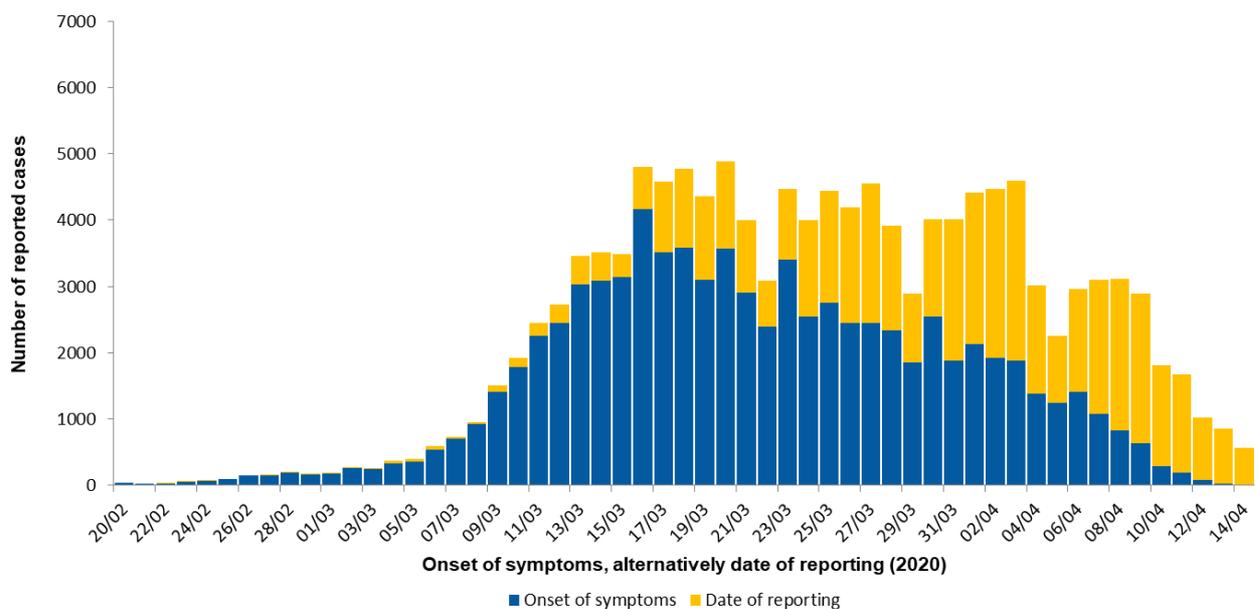


Figure 2: Number of electronically reported COVID-19 cases in Germany by date of symptom onset and alternatively by date of reporting from 20/02/2020 (15/04/2020, 12:00 AM)

Note: The report is a snapshot and is continuously updated.

Demographic distribution of cases

Of reported cases, 48% are male and 52% are female. Among notified cases, 1,011 were children under 5 years of age, 2,501 children aged 5 to 14 years, 86,548 persons aged 15 to 59 years, 24,669 persons aged 60 to 79 years and 12,625 persons aged 80 years and older (see Figure 3). The age of 230 notified cases is unknown. The median age of cases is 50 years.

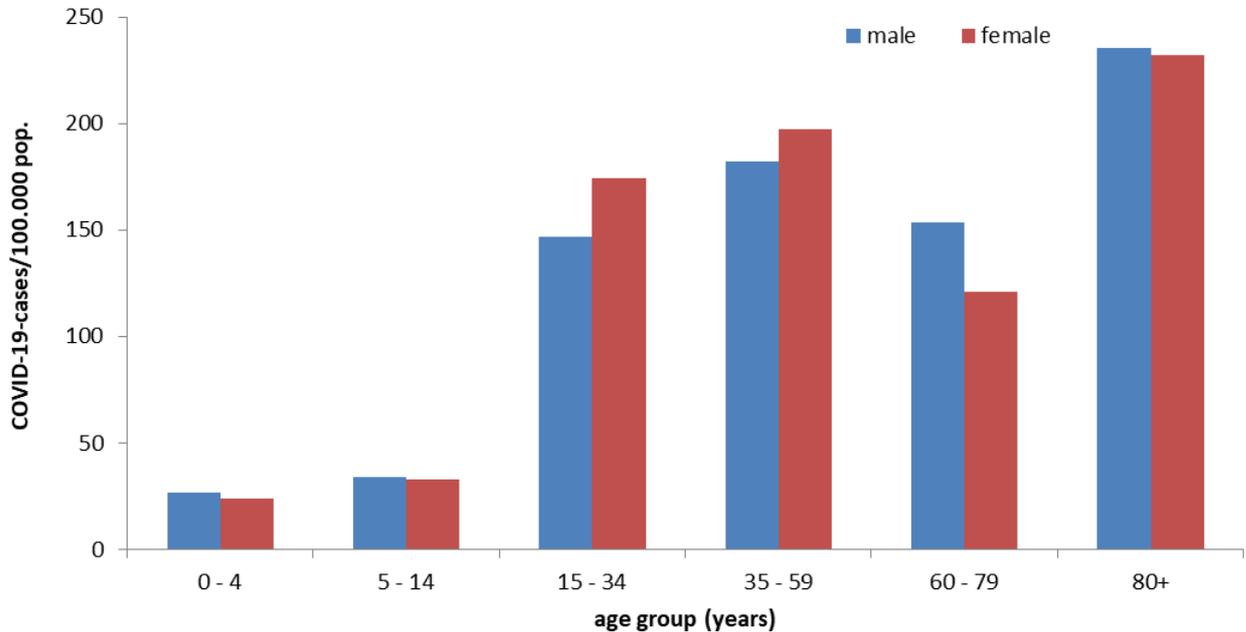


Figure 3: Electronically reported COVID-19 cases/100,000 population in Germany by age group and sex (n=126,584) for cases with information available (15/04/2020, 12:00 AM).

Clinical aspects

Information on symptoms is available for 104,218 of the notified cases. The most common symptoms are cough (51%), fever (42%) and rhinorrhoea (22%). Pneumonia was reported in 2,416 cases (2%).

Hospitalisation was reported for 15,613 (16%) of 98,381 COVID-19 cases with information on hospitalisation available.

Approximately 72,600 persons are estimated to have recovered from their COVID-19 infection. As the exact date of recovery is unknown in most cases, an algorithm was developed to estimate the number of recovered cases.

The 3,254 COVID-19 related deaths reported in Germany concerned 1,907 (59%) men and 1,344 (41%) women (sex was unknown in 3 cases, age was unknown in 2 cases). The median age was 82 years. Of all deaths, 2,809 (87%) were in persons 70 years or older, but only 18% of all cases were in this age group. Reports on COVID-19 related outbreaks in nursing homes are increasing. In some of these outbreaks, the number of deaths is relatively high.

Sex	Age groups (years)				
	<60	60 - 69	70 - 79	80 - 89	≥90
male	115	219	521	835	217
female	35	71	240	671	325

Table 2: Number of COVID-19 cases notified as having died by age group and sex (available for 3,249 of the 3,254 deaths; 15/04/2020, 12:00 AM).

SARS-CoV-2 infections among staff working in medical facilities

Of notified cases with a SARS-CoV-2 infection, 6,058 were reported among staff working in medical facilities as defined by §23 of the German Protection Against Infection law (IfSG), such as hospitals, outpatient clinics and practices, dialysis clinics or outpatient nursing services. Among these cases, 72% were female and 28% male. The median age was 42 years. Hospitalisation was reported for 239 (4%) of 5,639 cases with information on hospitalisation available. There were 7 COVID-19 related deaths among medical staff.

Estimation of the reproduction number (R)

The reproduction number, R, is the mean number of persons infected by a case. R can only be estimated and not directly extracted from the notification system. The current estimate is $R = 0.9$ (95% confidence interval: 0.8-1.1) and is based on an assumed mean generation time of 4 days. Due to public holidays and a larger delay in reporting, only electronic notifications until 12/04/2020 were included in the estimation. Cases with disease onset on the preceding 3 days were excluded from the estimation as their low number due to incomplete reporting would lead to an unstable estimate. For more details on the methodology see Epid. Bull. 17 | 2020 (in German)

https://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2020/17/Art_02.html

DIVI intensive care register

A registry of the German Interdisciplinary Association for Intensive and Emergency Medicine (DIVI), the RKI and the German Hospital Federation (DKG) was set up to document the capacities for intensive care as well as the number of COVID-19 cases treated in participating hospitals.

As of 15/04/2020, 941 hospitals or departments reported to DIVI to the registry. A total of 23,763 intensive care beds were registered, of which 13,861 (58%) are occupied and 9,902 beds are currently available (Table 3).

	Number of patients	Percentage	Changes to previous day
Currently in ICU	2,679		+191
- of these: mechanically ventilated	1,996	75%	+148
Discharged from ICU	4,017		+561
- of these: deaths	1,246	31%	+228

Table 3: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (15/04/2020, 8:15 am). Migration of the registry to a new server has led to reporting delays, thus comparisons with data prior to 03/04/2020 are not meaningful.

Currently, likely fewer than half of all ICU beds in Germany are captured by the registry. Source:

<https://www.intensivregister.de/#/intensivregister>

Laboratory tests

Data on SARS-CoV-2 test numbers from university hospitals, research institutions as well as clinical and outpatient laboratories throughout Germany are collected and merged weekly at the RKI. These data are transmitted via an internet-based survey of the RKI via Voxco (RKI test laboratory query), by the network for respiratory viruses (RespVir), the antibiotic resistance surveillance established at the RKI or via an internal query of a laboratory network.

A total of at least 1,728,357 tested samples have been reported until week 15/2020. Among these, 132,766 samples (7,7%) have tested positive for SARS-CoV-2.

Table 4: Laboratory tests performed for SARS-CoV-2 in Germany, calendar weeks 11 - 15 (15/04/2020)

Calendar week 2020	Number of tests	Positive tests	Number of participating laboratories
≤10	124,716	3,892 (3,1%)	90
11	127,457	7,582 (5,9%)	114
12	348,619	23,820 (6,8%)	152
13	361,374	31,391 (8,7%)	150
14	406,052	36,779 (9,1%)	150
15	360,139	29,302 (8,1%)	149
Sum	1,728,357	132,766	

In addition to the number of tests carried out, information on daily test capacity is queried. In week 16, 112 laboratories reported a total capacity of 123,304 tests per day. 109 laboratories provided information on their working days per week, which ranged from 5 to 7 working days. Assuming a minimum of 5 working days per week for laboratories without provided information on working days, a testing capacity of at least 730,156 feasible PCR tests for the detection of SARS-CoV-2 (daily test capacity of the respective laboratory x working days, sum of all transmitting laboratories) can be derived. In week 15, 25 laboratories reported a backlog of 3,423 samples to be processed. 47 laboratories reported delivery problems for reagents and, increasingly, for swabs.

In addition to this aggregated weekly recording of SARS-CoV-2 laboratory tests, more detailed data on SARS-CoV-2 tests have been collected by the laboratories involved in Antibiotic Resistance Surveillance (ARS) since January 1, 2020. As of 14/04/2020, 39,663 (8.6%) of 458.745 tests have tested positive for SARS-COV-2 in 50 laboratories.

Assessment by the RKI

At the global and the national level, the situation is very dynamic and must be taken seriously. Severe and fatal courses occur in some cases. The number of cases, hospitalisations and fatalities in Germany continues to increase. The RKI currently assesses the risk to the health of the German population overall as **high** and as **very high** for risk groups. The probability of serious disease progression increases with increasing age and underlying illnesses. The risk of disease varies from region to region. The burden on the health care system depends on the geographical and age distribution of cases, health care capacity and initiation of containment measures (isolation, quarantine, social distancing etc.), and may be very high in some geographical regions. This assessment may change on short notice as a result of new findings.

Measures taken by Germany

International risk areas

As of 10/04/2020 countries and regions are not longer classified as international risk areas. Due to pandemic spread, there is a global risk of acquiring COVID-19. In a considerable number of countries

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there are outbreaks with sometimes large numbers of cases; the exact numbers of cases in other countries are not known. Therefore there is a risk of transmission in Germany as well as in many other, not always well-defined regions worldwide.

All arriving travellers in Germany are to remain in quarantine for 14 days:

<https://www.bundesregierung.de/breg-de/themen/coronavirus/neue-einreiseregeln-1739634> (*in German*)

Other measures

- Outbreaks are ongoing in many districts, some with high case numbers. Data on current disease activity can be found on the dashboard <https://corona.rki.de/> and in the daily situation reports.
- RKI teams are currently supporting outbreak containment measures with a focus on outbreaks in retirement and health care homes as well as hospitals in several federal states.
- A new federal law was implemented on 28/03/2020 for the protection of the public in the event of epidemic situations, granting the federal government additional competencies for the control of epidemics. <https://www.bundesgesundheitsministerium.de/presse/pressemitteilungen/2020/1-quartal/corona-gesetzpaket-im-bundesrat.html> (*in German*)
- As of 23/03/2020, gatherings of more than 2 persons (with the exception of families and household members) are banned in all federal states. Restaurants and businesses concerned with body care were closed. In public spaces, all persons must maintain a distance of 1.5 metres to other individuals <https://www.bundesregierung.de/breg-de/themen/coronavirus/besprechung-der-bundeskanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248> (*in German*)
- On April 15, 2020, the German government and the federal states have agreed to gradually reduce social distancing measures <https://www.bundesregierung.de/breg-de/themen/coronavirus/fahrplan-corona-pandemie-1744202> (*in German*)