



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

27/04/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases	Deaths	Deaths (%)	Recovered
155,193 (+1,018*)	5,750 (+110*)	3.7%	ca. 114,500**

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

*Change from previous day; **Estimate

Summary (as of 27/04/2020, 12:00 AM)

- In total, **155,193** COVID-19 cases and **5,750** deaths due to COVID-19 have been electronically reported to the Robert Koch Institute in Germany.
- The incidence (cases per 100,000) of COVID-19 is highest in Bavaria (**314**), Baden-Wuerttemberg (**280**), Saarland (**253**) and Hamburg (**243**).
- Most cases (67%) are between 15 and 59 years old; women (52%) and men (48%) are almost equally affected.
- 87% of deaths, but only 19% of all cases, occurred in persons aged 70 years or older.
- COVID-19 related outbreaks in nursing homes and hospitals continue to be reported. In some of these outbreaks, the number of deaths is relatively high.

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 **155,193 (+1,018)** laboratory-confirmed cases of coronavirus disease 2019 (COVID-19) have been electronically reported to and validated at the RKI, including **5,750** deaths (see Table 1 and Figure 1). 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>.

Table 1: Number and cumulative incidence (per 100,000 population) of notified laboratory-confirmed COVID-19 cases and deaths per federal state, Germany (27/04/2020, 12:00 AM).

Federal State	Total Number of cases	Number of new cases	Cases/100,000 pop.	Number of deaths
Baden-Wuerttemberg	31,043	282	280	1,249
Bavaria	41,070	158	314	1,621
Berlin	5,638	38	150	125
Brandenburg	2,721	27	108	100
Bremen	754	15	110	27
Hamburg	4,475	46	243	142
Hesse	7,979	33	127	320
Mecklenburg-Western Pomerania	674	1	42	16
Lower Saxony	9,847	62	123	391
North Rhine-Westphalia	31,879	210	178	1,131
Rhineland-Palatinate	5,879	44	144	152
Saarland	2,503	21	253	121
Saxony	4,458	30	109	147
Saxony-Anhalt	1,515	21	69	36
Schleswig-Holstein	2,638	8	91	98
Thuringia	2,120	22	99	74
Total	155,193	1,018	187	5,750

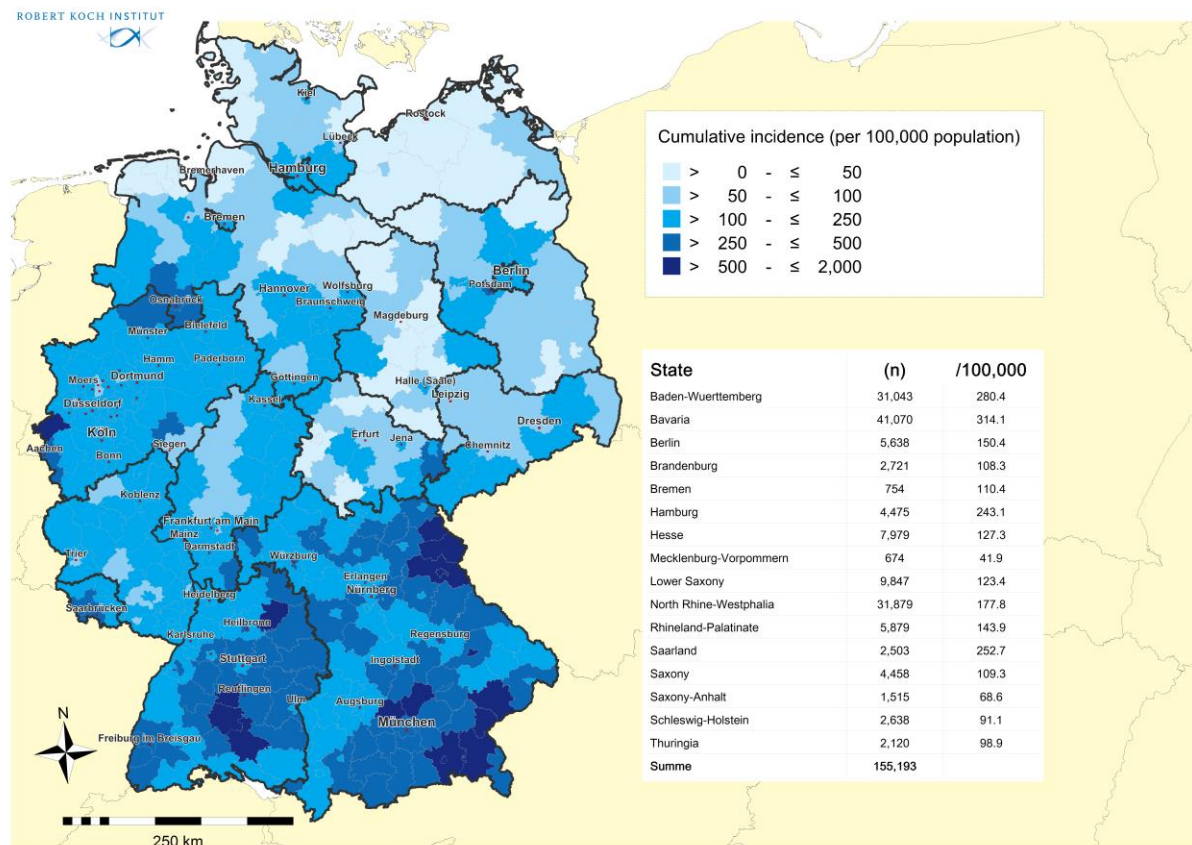


Figure 1: Number and cumulative incidence (per 100,000 population) of the 155,193 electronically reported COVID-19 cases in Germany by county and federal state (27/04/2020, 12:00 AM). Please see the COVID-19 dashboard (<https://corona.rki.de/>) for information on number of COVID-19 cases by county (local health authority).

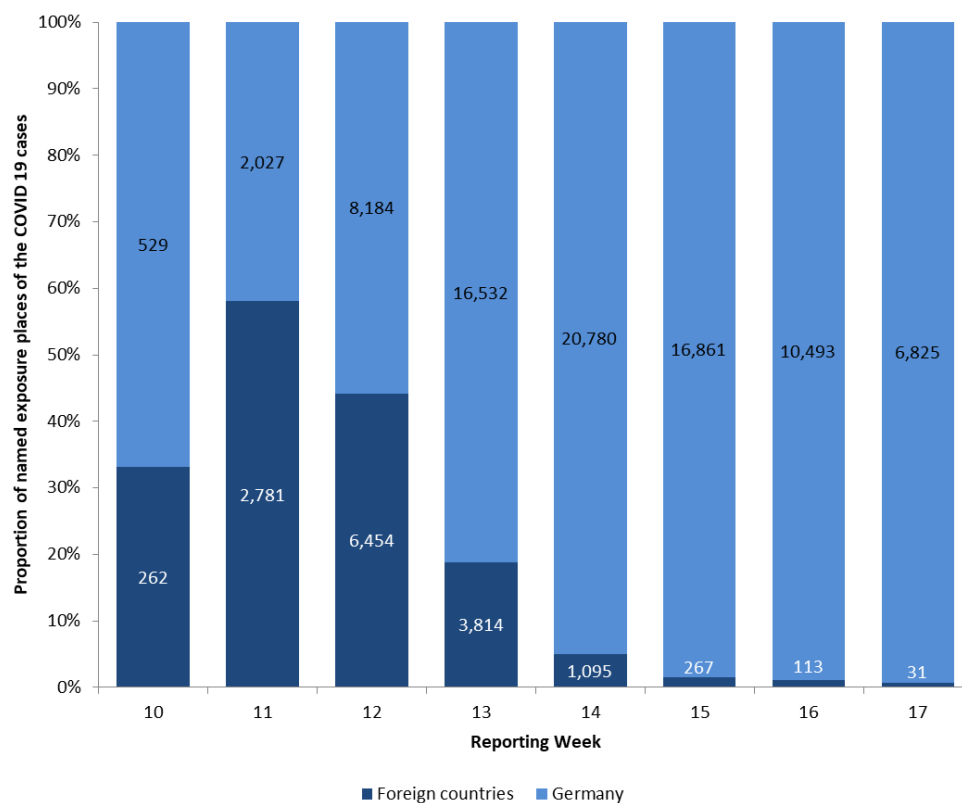


Figure 2: Overview of the reported COVID-19 cases in Germany by place of exposure (n=97,150 cases with corresponding data in the reporting weeks 10-17; 27/04/2020, 12:00 AM).

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

Since international travel restrictions have been in place, the number and proportion of COVID-19 cases exposed abroad has declined sharply (see Figure 2). Currently, only isolated cases are reported for which a probable exposure abroad is indicated.

Distribution of cases over time

COVID-19 cases were first notified in Germany in January 2020. In 53,193 cases, onset of symptoms is unknown and therefore date of reporting is shown (see Figure 2).

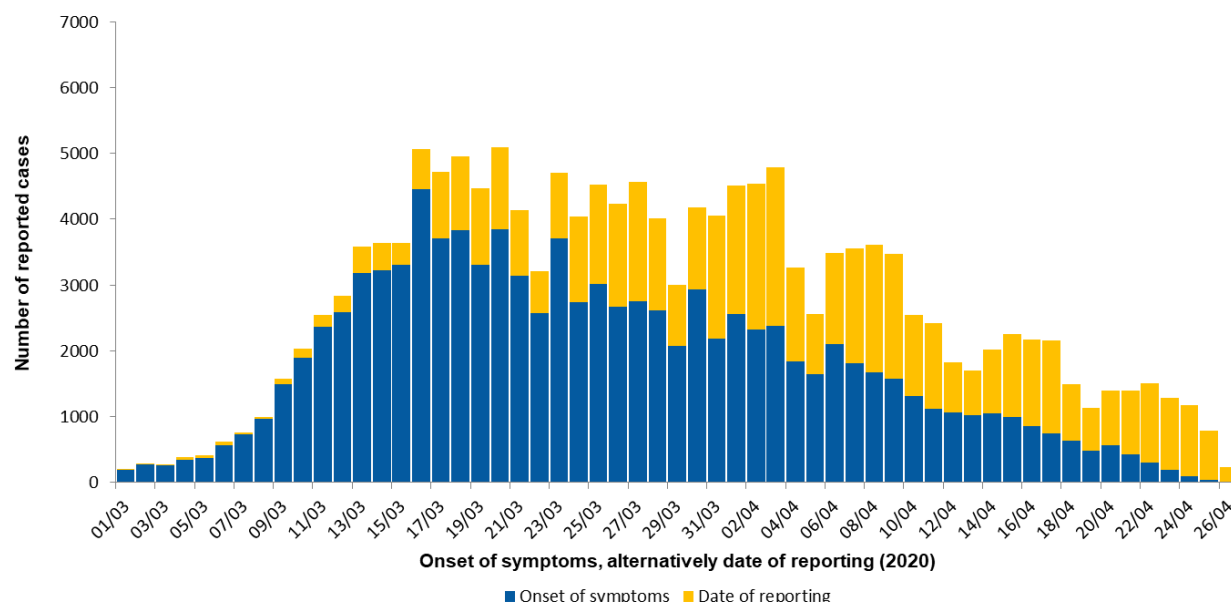


Figure 2: Number of electronically reported COVID-19 cases in Germany by date of symptom onset and alternatively by date of reporting from 01/03/2020 (27/04/2020, 12:00 AM).

Demographic distribution of cases

Of reported cases, 52% are female and 48% are male. Among notified cases, 2,610 were children under 10 years of age (1.7%), 6,454 children and youth aged 10 to 19 years (4.2%), 66,482 persons aged 20 to 49 years (43%), 50,194 persons aged 50 to 69 years (32%), 24,940 persons aged 70 to 89 years (16%) and 4,321 persons aged 90 years and older (2.8%). The age of 191 notified cases is unknown. The middle age of cases is 50 years (median 50 years). The highest incidences are in the age groups above 90 years (see Figure 3), with only 2.8% of reported cases.

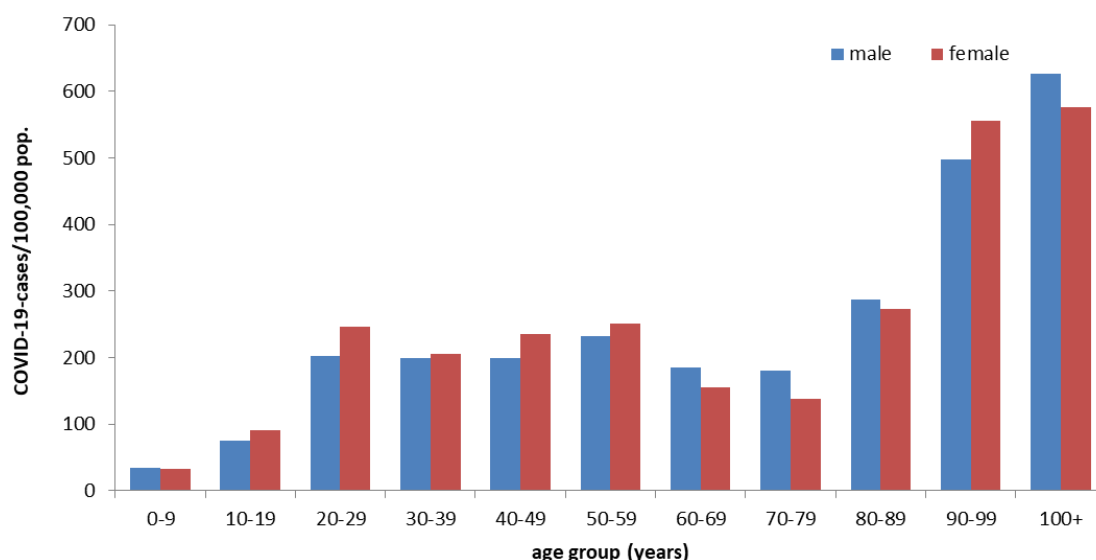


Figure 3: Electronically reported COVID-19 cases/100,000 population in Germany by age group and sex (n=154,565) for cases with information available (27/04/2020, 12:00 AM).

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

Clinical aspects

Information on symptoms is available for 124,055 (80%) of the notified cases. Common symptoms are cough (50%), fever (42%) and rhinorrhoea (21%). Pneumonia was reported in 3,345 cases (2.7%). Hospitalisation was reported for 21,181 (17%) of 123,520 COVID-19 cases with information on hospitalisation available.

Approximately 114,500 persons 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 5,750 COVID-19 related deaths reported in Germany concerned 3,263 (57%) men and 2,482 (43%) women (sex was unknown in 5 cases) (Table 2). The median age was 82 years. Of all deaths, 4,993 (87%) were in persons 70 years or older, but only 19% of all cases were in this age group. COVID-19 related outbreaks continue to be reported in nursing homes and hospitals. In some of these outbreaks, the number of deaths is relatively high.

Sex	Age group (in years)										
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100+
Male	0	1	3	5	35	137	386	917	1.399	376	3
Female	1	0	2	4	9	42	129	414	1.206	643	32
Total	1	1	5	9	44	179	515	1.331	2.605	1.019	35

Table 2: Number of notified COVID-19 deaths by age group and sex (Data available for 5,744 of the 5,750 notified deaths; 27/04/2020, 12:00 AM)

Occupation, accommodation or care in facilities

In accordance with the Infection Against Protection Law (IfSG), information on occupation, accommodation or care in a facility relevant for infection control is documented and electronically transmitted to RKI for notified COVID-19 cases (Table 3).

Thus far, 8,808 cases with a SARS-CoV-2 infection have been notified among staff working in medical facilities as defined by Section 23 IfSG. Among the cases reportedly working in medical facilities, 72% were female and 28% male. The median age was 41 years. Hospitalisation was reported for 383 of 8,808 cases among staff working in medical facilities with information available (4.3%). There were 13 COVID-19 related deaths among staff working in medical facilities. The proportion of cases reported as working in medical facilities among all cases increased over time from at least 3.7% in Week 12, 5.0% in Week 13, 5.8% in Week 14, 7.0% in Week 15 to 7.5% in Week 16, 2020, in Week 17 at least 6.0%. Due to missing data on occupation 41% of cases, the true proportion of cases working in medical facilities may be higher.

The high number of case among persons cared for or working in various care facilities is consistent with the numerous reported outbreaks, especially in nursing homes. The low number of cases attending or working in facilities concerned with child care or education reflects that children are not as affected.

The proportion of persons with COVID-19 reported as working in the above facilities who actually acquired their infection in these settings is unknown.

Table 3: Notified COVID-19-cases according to possible occupation, accommodation or care in facilities relevant for transmission of infectious diseases (154,349 cases; 27/04/2020, 12:00 AM)

Facility according to	Cared for/ accommodation in facility	Occupation in facility	Total
§ 23 IfSG (e.g. hospitals, outpatient clinics and practices, dialysis clinics or outpatient nursing services)	2,014	8,808	10,822
§ 33 IfSG (e.g. day care facilities, kindergartens, facilities for after school care, schools or other educational facilities, children's homes, holiday camps)	1,507*	1,807	3,314
§ 36 IfSG (e.g. facilities for the care of older, disabled, or other persons in need of care, homeless shelters, community facilities for asylum-seekers, repatriates and refugees as well as other mass accommodation and prisons)	10,948	6,687	17,635
§ 42 IfSG (e.g. kitchens in the catering trade, in inns, restaurants, canteens, cafés, or other establishments with or for communal catering)	Not applicable	941	941
No occupation, care or accommodation in the above institutions			61,484
Unknown			60,153

*for care according to § 33 IfSG only cases below 18 years of age are taken into account, as other information may be assumed to be incorrect.

IfSG: Protection Against Infection Law

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 $R = 1.0$ (95% confidence interval: 0.8-1.1) and is based on current electronically notified cases (27/04/2020, 12:00 A.M.) and an assumed mean generation time of 4 days. 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 established to document the capacities for intensive care as well as the number of COVID-19 cases treated in participating hospitals. The DIVI intensive care register documents the number of available intensive care beds in the reporting hospitals on a daily basis. Since 16/04/2020, reporting is compulsory for all hospital sites with intensive care beds.

As of 27/04/2020, a total of 1,236 hospitals or departments reported to the DIVI registry. Overall, 31,516 intensive care beds were registered, of which 18,727 (59%) are occupied, and 12,789 beds (41%) are currently available. The number of COVID-19 cases treated in participating hospitals are shown in Table 3.

Table 3: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (27/04/2020, 9:15 AM). Migration of the registry to a new server led to temporary reporting delays, thus comparisons with data prior to 03/04/2020 are not meaningful. Source: <https://www.intensivregister.de/#/intensivregister>

	Number of patients	Percentage	Change to previous day
Currently in ICU	2,409		-132
- of these: mechanically ventilated	1,729	72%	-128
Discharged from ICU	8,351		+121
- of these: deaths	2,466	30%	+24

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

- Data on current disease activity can be found in the daily situation reports and on the RKI dashboard <https://corona.rki.de/>.
- 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.
- 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-bundestkanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248> (in German)
- 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-gesetzespaket-im-bundesrat.html> (in German)
- On 15/04/2020, the German government and the federal states agreed to gradually reduce social distancing measures <https://www.bundesregierung.de/breg-de/themen/coronavirus/fahrplan-corona-pandemie-1744202> (in German)
- All federal states implemented regulations to wear (non-medical) face masks, mostly starting as of 27.4.2020 (partly earlier). With exception of the federal state of Berlin, this is applied to public transport and at retail in all states; in Berlin the regulation applies to public transport, and there is a recommendation for retail (but no mandatory regulation).

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