



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

17/06/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases	Deaths	Deaths (%)	Recovered
187,184 (+ 345*)	8,830 (+ 30*)	4.7%	ca. 173,600**

*Change from previous day; **Estimate

COVID-19 cases are notified to the local public health department in the respective districts, in accordance with the German Protection against Infection Law (IfSG). The data are further transmitted through the respective federal state health authority to the Robert Koch Institute (RKI). This situation report presents the uniformly recorded nationwide data on laboratory-confirmed COVID-19 cases transmitted to RKI.

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

Summary (as of 17/06/2020 12:00 AM)

- The number of newly transmitted COVID-19 cases to RKI continues to decrease in comparison to previous weeks. The cumulative nationwide incidence over the past 7 days was **2.5** cases per 100,000 inhabitants. A total of **156** districts transmitted zero cases.
- In total, **187,184** laboratory-confirmed COVID-19 cases and **8,830** deaths due to COVID-19 have been electronically reported to the RKI in Germany.
- COVID-19 outbreaks continue to be reported in nursing homes and hospitals.
- Outbreaks of COVID-19 have been reported in several federal states (including in institutions for asylum seekers and refugees, in meat processing plants and logistics companies, among seasonal harvest workers and in connection with religious events and family gatherings).

Epidemiological Situation in Germany

Geographical distribution of cases

Epidemiological analyses are based on validated cases notified electronically to the RKI in line with the Protection Against Infection Law (Data closure: 12:00 AM daily). Since January 2020, a total of **187,184 (+345)** laboratory-confirmed cases of coronavirus disease 2019 (COVID-19) have been electronically reported to and validated by the RKI (see Table 1). A total of **156** districts reported no cases in the past 7 days. Information on laboratory-confirmed cases is 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 laboratory-confirmed COVID-19 cases and deaths for each federal state electronically reported to RKI, Germany (17/06/2020, 12:00 AM).

Federal State	Total number of cases	Number of new cases	Cases/100,000 pop.	Cases in the last 7 days	7-day incidence per 100,000 pop.	Number of deaths	Number of deaths/100,000 pop.
Baden-Wuerttemberg	35,177	27	318	145	1.3	1,811	16.4
Bavaria	47,710	20	365	235	1.8	2,546	19.5
Berlin	7,402	33	197	296	7.9	209	5.6
Brandenburg	3,362	28	134	43	1.7	163	6.5
Bremen	1,607	14	235	59	8.6	49	7.2
Hamburg	5,149	2	280	26	1.4	257	14.0
Hesse	10,386	15	166	118	1.9	496	7.9
Mecklenburg-Western Pomerania	786	2	49	9	0.6	20	1.2
Lower Saxony	12,968	18	162	263	3.3	615	7.7
North Rhine-Westphalia	39,573	158	221	692	3.9	1,655	9.2
Rhineland-Palatinate	6,856	10	168	33	0.8	233	5.7
Saarland	2,773	0	280	8	0.8	168	17.0
Saxony	5,350	1	131	11	0.3	221	5.4
Saxony-Anhalt	1,775	4	80	47	2.1	57	2.6
Schleswig-Holstein	3,122	0	108	9	0.3	152	5.2
Thuringia	3,188	13	149	71	3.3	178	8.3
Total	187,184	345	225	2,065	2.5	8,830	10.6

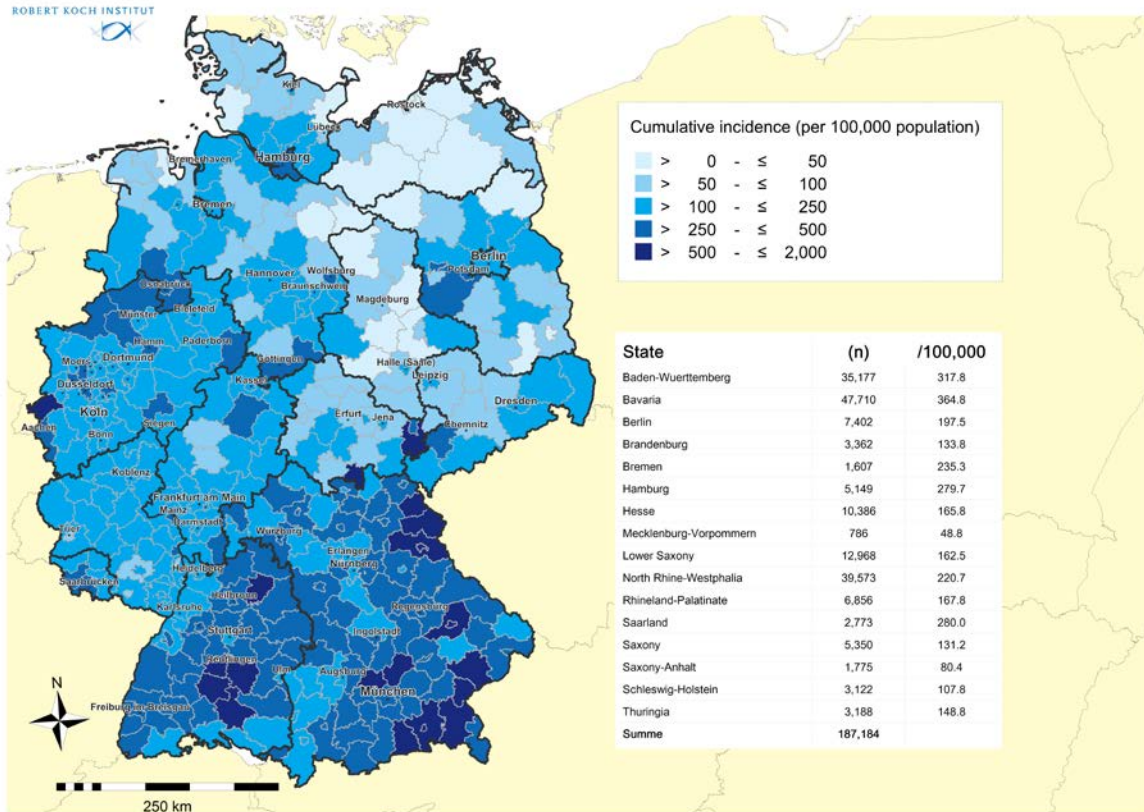


Figure 1: Number and cumulative incidence (per 100,000 population) of the 187,184 electronically reported COVID-19 cases in Germany by county and federal state (17/06/2020, 12:00 AM). Please see the COVID-19 dashboard (<https://corona.rki.de/>) for information on number of COVID-19 cases by county (local health authority).

Distribution of cases over time

The first COVID-19 cases in Germany were notified in January 2020. Figure 2 shows COVID-19 cases transmitted to RKI according to date of illness onset from 01.03.2020 onwards. With regard to all cases reported from 01.03.2020 onwards, the onset of symptoms is unknown in 55,418 cases (30%). When the onset of symptoms is unknown, the date of reporting is provided in Figure 2.

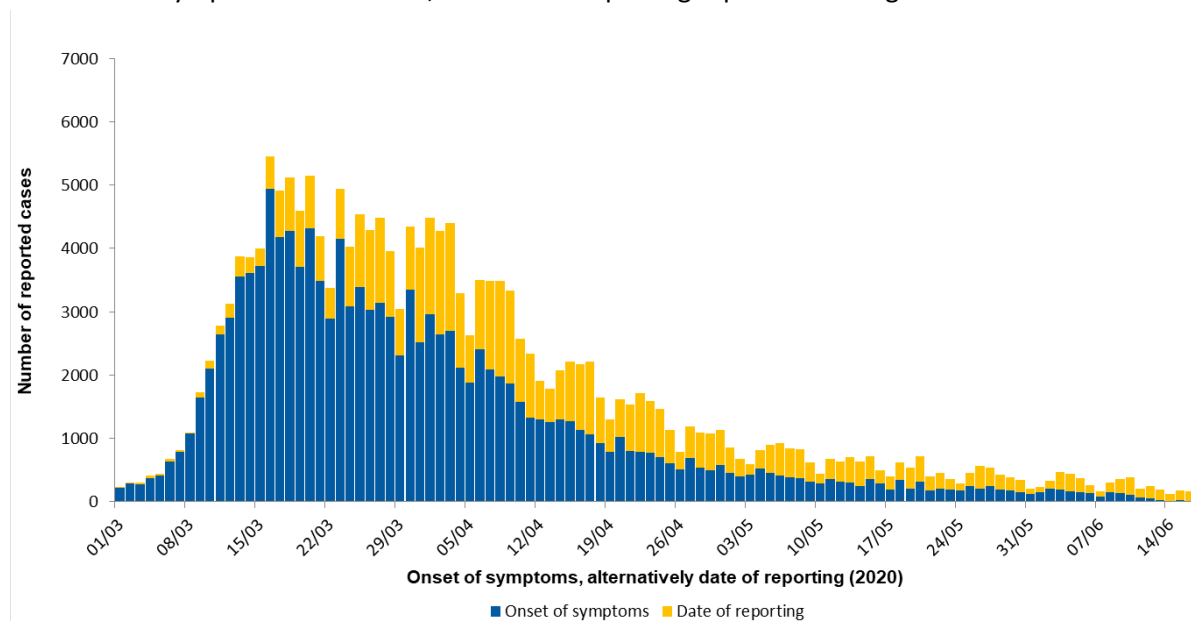


Figure 2: Number of COVID-19 cases in Germany electronically reported to the RKI by date of symptom onset or alternatively by date of reporting from 01/03/2020 (17/06/2020, 12:00 AM).

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

Demographic distribution of cases

Of all reported cases, 52% are female and 48% are male. Among notified cases with data on gender, **4,212** were children under 10 years of age (2.3%), **8,645** children and teenagers aged 10 to 19 years (4.6%), **81,112** persons aged 20 to 49 years (43%), **57,729** persons aged 50 to 69 years (31%), **29,733** persons aged 70 to 89 years (16%) and **5,287** persons aged 90 years and older (2.8%). The age is unknown in **90** notified cases. The mean age of cases is 49 years (median age 49 years). The highest incidences are seen in persons aged 90 years and older (Figure 3).

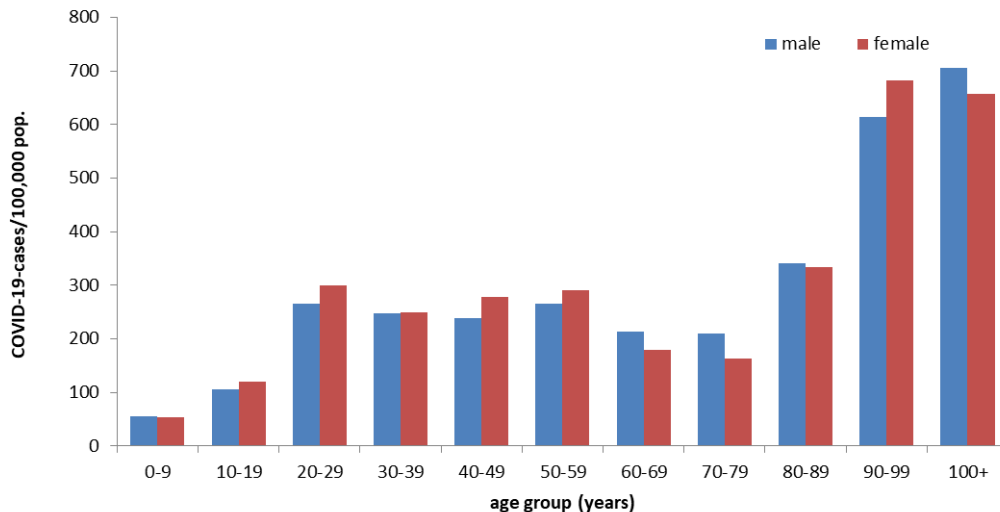


Figure 3: Electronically reported COVID-19 cases/100,000 population in Germany by age group and gender (n=186,782) for cases with information available (17/06/2020, 12:00 AM).

Clinical aspects

Information on symptoms is available for **160,350** (86%) of the notified cases. Common symptoms are cough (49%), fever (41%) and rhinorrhoea (21%). Pneumonia was reported in **4,865** cases (3.0%). Since calendar week 17, cases are reported to the RKI as a distinct COVID-19 surveillance category. Since then, ageusia and anosmia can also be entered as symptoms. At least one of these two symptoms was reported in **2,691** of **18,137** cases (15%).

Hospitalisation was reported for **28,561** (18%) of **161,906** COVID-19 cases with information on hospitalisation status.

Approximately **173,600** people have recovered from their COVID-19 infection. Since the exact date of recovery is unknown in most cases, an algorithm was developed to estimate the number of recovered cases.

In total, **8,830** COVID-19-related deaths have been reported in Germany (4.7% of all confirmed cases). Of these, **4,885** (55%) are men and **3,940** (45%) are women (see Table 2), the gender was unknown in five cases). The median age was 82 years. Of all deaths, **7,576** (86%) were in people aged 70 years or older, but only 19% of all cases were in this age group. So far, three deaths among COVID-19 cases under 20 years of age have been reported to the RKI. Pre-existing medical conditions were reported for all three.

Table 2: Number of notified COVID-19 deaths by age group and gender electronically reported to RKI (Data available for 8,825 of notified deaths; 17/06/2020, 12:00 AM)

Gender	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		2	6	17	49	227	618	1,333	2,071	556	6
Female	1		3	6	20	82	221	653	1,859	1,050	45
Total	1	2	9	23	69	309	839	1,986	3,930	1,606	51

Occupation, accommodation or care in facilities

In accordance with the Protection Against Infection Law, the RKI receives information on occupation, accommodation or care in a facility relevant for infection control for reported COVID-19 cases

Since information on occupation, accommodation or care in these facilities is missing in 26% of cases, the proportion of cases working, accommodated or cared for in these facilities reported here should be considered minimum values. Among the COVID-19 cases reported from the above mentioned facilities, the proportion of cases that actually acquired their infection in these facilities is unknown.

So far, **13,542** 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 reported as working in medical facilities, 73% were female and 27% male. The median age was 41 years, 20 persons died.

The low number of cases among persons who attend or work in facilities providing child care or education (Section 33 IfSG) reflects the low incidence in children observed thus far. The high number of cases among people cared for or working in various care facilities (Section 36 IfSG) is consistent with numerous reported outbreaks, especially in nursing homes.

Table 3: Notified COVID-19-cases according to possible occupation, accommodation or care in facilities relevant for transmission of infectious diseases electronically reported to RKI (186,181* cases, no data available for 48,540 cases; 17/06/2020, 12:00 AM)

Facility according to		Total	Hospitalised	Deaths	Recovered (estimate)
§ 23 IfSG (e.g. hospitals, outpatient clinics and practices, dialysis clinics or outpatient nursing services)	Cared for / accommodated in facility	3,197	2,287	605	2,500
	Occupation in facility	13,542	627	20	13,400
§ 33 IfSG (e.g. day care facilities, kindergartens, facilities for after school care, schools or other educational facilities, children's homes, holiday camps)	Cared for / accommodated in facility*	2,683	62	1	2,500
	Occupation in facility	2,623	134	8	2,600
§ 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)	Cared for / accommodated in facility	17,375	3,975	3,455	13,400
	Occupation in facility	9,691	414	48	9,500
§ 42 IfSG (e.g. kitchens in the catering trade, in inns, restaurants, canteens, cafés, or other establishments with or for communal catering)	Occupation in facility	2,703	166	4	2,500
Neither cared for, accommodated in nor working in a facility		85,827	15,418	3,370	80,800

*for care according to § 33 IfSG only cases under 18 years of age are taken into account, as other information may be assumed to be incorrect.
IfSG: Protection Against Infection Law

Outbreaks

A high 7-day incidence rate was observed in four districts, primarily due to localised outbreaks: The districts of Aichach-Friedberg (Bavaria), Greiz (Thuringia), Guetersloh (North-Rhine-Westphalia) and Verden (Lower Saxony).

In the district of Aichach-Friedberg the 7-day incidence is slowly decreasing, after an outbreak was reported among seasonal harvest workers. Tracing and testing of contacts as well as implementation of hygiene and quarantine measures were rapidly implemented. Harvest activities were temporarily suspended.

Once again there were major outbreaks in retirement- and nursing homes. In the districts of Greiz and Verden residents and nursing staff have been tested positive for SARS-CoV-2.

The increase in the 7-day incidence in the district Guetersloh is due to two outbreaks in the meat processing sector. Such outbreaks have also occurred in other federal states, some of which have led to production closures.

Further outbreaks were reported among members of religious communities, eg. from Berlin, Hesse and Mecklenburg-Western Pomerania.

Estimation of the reproduction number (R)

The presented case numbers do not fully reflect the temporal progression of incident COVID-19-cases, since the time intervals between actual onset of illness and diagnosis, reporting, as well as data transmission to the RKI vary greatly. Therefore, a nowcasting approach is applied to model the true temporal progression of COVID-19 cases according to illness onset. Figure 4 shows the result of this analysis.

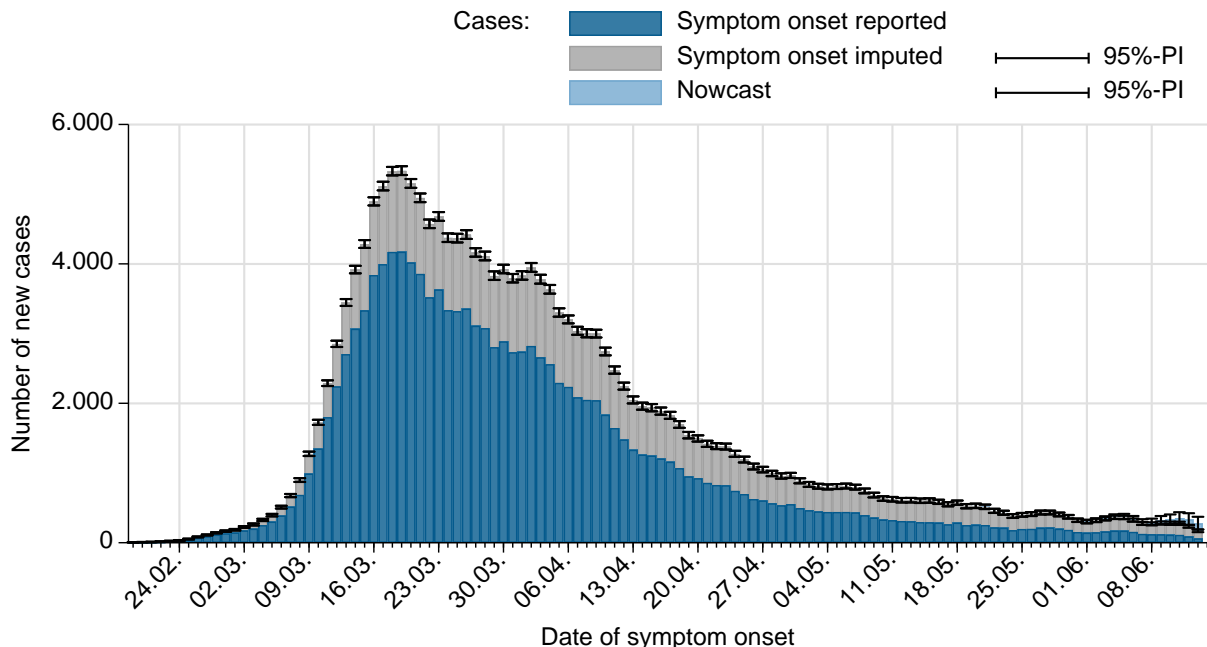


Figure 4: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 17/06/2020, 12 AM, taking into account cases up to 13/06/2020).

The reproduction number, R, is defined as the mean number of people infected by one infected person. R can only be estimated based on statistical analyses such as nowcasting and not directly extracted from the notification system.

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

The sensitive R-value reported can be estimated by using a 4-day moving average of the number of new cases estimated by nowcasting. This 4-day value reflects the infection situation about one to two weeks ago. This value reacts sensitively to short-term changes in case numbers, such as those caused by individual outbreaks. This can lead to relatively large fluctuations, especially if the total number of new cases is small. The current estimate of the 4-day-R-value is **0.86** (95%-prediction interval: **0.73 – 1.02**) and is based on electronically notified cases as of 17/06/2020, 12:00 AM.

Similarly, the 7-day R-value is estimated by using a moving 7-day average of the nowcasting curve. This compensates for fluctuations more effectively, as this value represents a slightly later course of infection of about one to a little over two weeks ago. The 7-day R-value is estimated at **0.89** (95%-prediction interval: **0.83– 0.96**) and is based on electronically notified cases as of 17/06/2020, 12:00 AM. In light of the still low daily case numbers, both R-values should be interpreted with caution and in their course over several days.

Sample calculations as well as an excel sheet presenting both R-values with daily updates can be found under www.rki.de/covid-19-nowcasting. A detailed methodological explanation of the more stable 7day R-value is also available there. More general information and sample calculations for both R-values can also be found in our FAQs (<http://www.rki.de/covid-19-faq>).

A detailed description of the methodology is available at https://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2020/17/Art_02.html (Epid. Bull. 17 | 2020 from 23/04/2020)

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 intensive care capacity as well as the number of COVID-19 cases treated in participating hospitals (<https://www.intensivregister.de/#/intensivregister>). 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, all hospitals with intensive care beds are required to report.

As of 17/06/2020, a total of **1,274** hospitals or departments reported to the DIVI registry. Overall, **31,711** intensive care beds were registered, of which **20,713 (65%)** are occupied, and **10,998 beds (35%)** are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 4.

Table 4: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (17/06/2020/17/06/2020, 12:15 AM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	406		-13
- of these: mechanically ventilated	252	62%	-6
Discharged from ICU	14,388		+17
- of these: deaths	3,659	25%	+2

*The interpretation of these numbers must take into account the slightly changing number of reporting hospitals (with large differences in their number of beds) from day to day. This can explain the observed decrease in the cumulative number of discharged patients and deaths on some days compared to the previous day.

Surveys on SARS-CoV-2 laboratory tests in Germany

In order to assess the SARS-CoV-2 test numbers, data from university hospitals, research institutions as well as clinical and outpatient laboratories throughout Germany are merged weekly at the RKI. These are transmitted via an internet-based RKI test laboratory survey, via the network for respiratory viruses (RespVir), via the laboratory-based SARS-CoV-2 Surveillance established at the RKI (an extension of the Antibiotic Resistance Surveillance (ARS)) and via the enquiry of a professional association of laboratory medicine.

Since the beginning of testing in Germany up to and including week 24/2020, 5,029,696 laboratory tests have been recorded to date, 220,534 of which have tested positive for SARS-CoV-2.

Up to and including week 24, 227 laboratories have registered for the RKI test laboratory survey or in one of the other transmitting networks and communicate mainly on a weekly basis. Since laboratories can register the tests of the previous calendar weeks at a later date, it is possible that the numbers determined will increase subsequently. It should be noted that the number of tests is not the same as the number of persons tested, as the data may include multiple tests of patients (see Table 5).

Table 5: Number of SARS-CoV-2-laboratory tests in Germany (as of 16/06/2020)

Weeks 2020	Number tests	Tested positiv	Proportion positive (%)	Number of reporting laboratories
Up until week 11	124,716	3,892	3,1	90
week 11	127,457	7,582	5,9	114
week 12	348,619	23,820	6,8	152
week 13	361,515	31,414	8,7	151
week 14	408,348	36,885	9,0	154
week 15	380,197	30,791	8,1	164
week 16	331,902	22,082	6,7	168
week 17	363,890	18,083	5,0	178
week 18	326,788	12,608	3,9	175
week 19	403,875	10,755	2,7	182
week 20	432,666	7,233	1,7	183
Week 21	353,467	5,218	1,5	179
Week 22	405,269	4,310	1,1	178
Week 23	340,986	3,208	0,9	176
Week 24	320,001	2,653	0,8	168
total	5,029,696	220,534		

Risk Assessment by the RKI

General assessment

At the global and the national level, the situation is very dynamic and must be taken seriously. The number of newly reported cases is currently decreasing. The RKI currently assesses the risk to the health of the German population overall as **high** and as **very high** for risk groups. This assessment may change at short notice based on new insights.

Infection risk

The risk of infection depends heavily on the regional spread, living conditions and also on individual behaviour.

Disease severity

In most cases, the disease is mild. The probability of progression towards serious disease increases with increasing age and underlying illnesses.

Burden on health system

The burden on the health care system depends on the geographical distribution of cases, health care capacity and initiation of containment measures (isolation, quarantine, physical distancing etc.). The burden is currently low in many regions, but may be high in some locations.

Measures taken by Germany

- Corona-Warn-App
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/WarnApp/Warn_App.html
- Regulations for persons entering Germany in connection with the novel coronavirus SARS-CoV-2 (15.06.2020) https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/BMG_Merkblatt_Reisende_Tab.html
- From 15 June, borders will open within Europe, making travel possible again – provided the COVID-19 activity in destination countries permits this (12/06/2020) <https://www.auswaertiges-amt.de/de/ReiseUndSicherheit/covid-19/2296762>
- Information on additional regulations at the regional level regarding control measures such as physical distancing or quarantine regulations for persons entering from other countries can be accessed here: <https://www.bundesregierung.de/breg-de/themen/coronavirus/corona-bundeslaender-1745198> (in German)
- (Non-medical) face masks must be worn on public transport and in shops in all federal states.
- Data on current disease activity can be found in the daily situation reports and on the RKI dashboard:
<https://corona.rki.de/>
- A distance of 1.5 metres to other individuals must be maintained in public spaces:
<https://www.bundesregierung.de/breg-de/themen/coronavirus/besprechung-der-bundeskanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248> (in German)