



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

08/07/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases

197,341
(+ 397*)

Deaths

9,036
(+ 12*)

Deaths (%)

4.6%

Recovered

ca. 183,100**

*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 Act (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 08/07/2020 12:00 AM)

- The cumulative nationwide incidence over the past 7 days was **2.8** cases per 100,000 inhabitants. A total of **123** districts transmitted zero cases.
- In total, **197,341** laboratory-confirmed COVID-19 cases and **9,036** deaths due to COVID-19 have been electronically reported to the RKI in Germany.
- COVID-19 outbreaks continue to be reported sporadically in nursing homes and hospitals as well as refugee facilities.
- Outbreaks of COVID-19 in meat processing plants have been reported in several federal states. In the district of Guetersloh in North Rhine-Westphalia, **the former outbreak related high 7-day incidence has decreased to less than 30 cases per 100,000 inhabitants.**

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 **197,341 (+397)** 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 **123** 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 (08/07/2020, 12:00 AM). The number of new cases covers positive cases, which have been sent to the local health department at the same day, but also at previous days.

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	35,890	28	324	168	1.5	1,837	16.6
Bavaria	48,953	101	374	452	3.5	2,607	19.9
Berlin	8,502	40	227	226	6.0	215	5.7
Brandenburg	3,476	8	138	31	1.2	168	6.7
Bremen	1,679	0	246	12	1.8	54	7.9
Hamburg	5,224	1	284	19	1.0	261	14.2
Hesse	11,012	27	176	190	3.0	512	8.2
Mecklenburg-Western Pomerania	805	0	50	1	0.1	20	1.2
Lower Saxony	13,748	17	172	146	1.8	639	8.0
North Rhine-Westphalia	44,306	148	247	930	5.2	1,696	9.5
Rhineland-Palatinate	7,100	6	174	64	1.6	235	5.8
Saarland	2,808	2	283	5	0.5	174	17.6
Saxony	5,465	6	134	13	0.3	224	5.5
Saxony-Anhalt	1,896	2	86	21	1.0	59	2.7
Schleswig-Holstein	3,194	5	110	34	1.2	153	5.3
Thuringia	3,283	6	153	27	1.3	182	8.5
Total	197,341	397	237	2,339	2.8	9,036	10.9

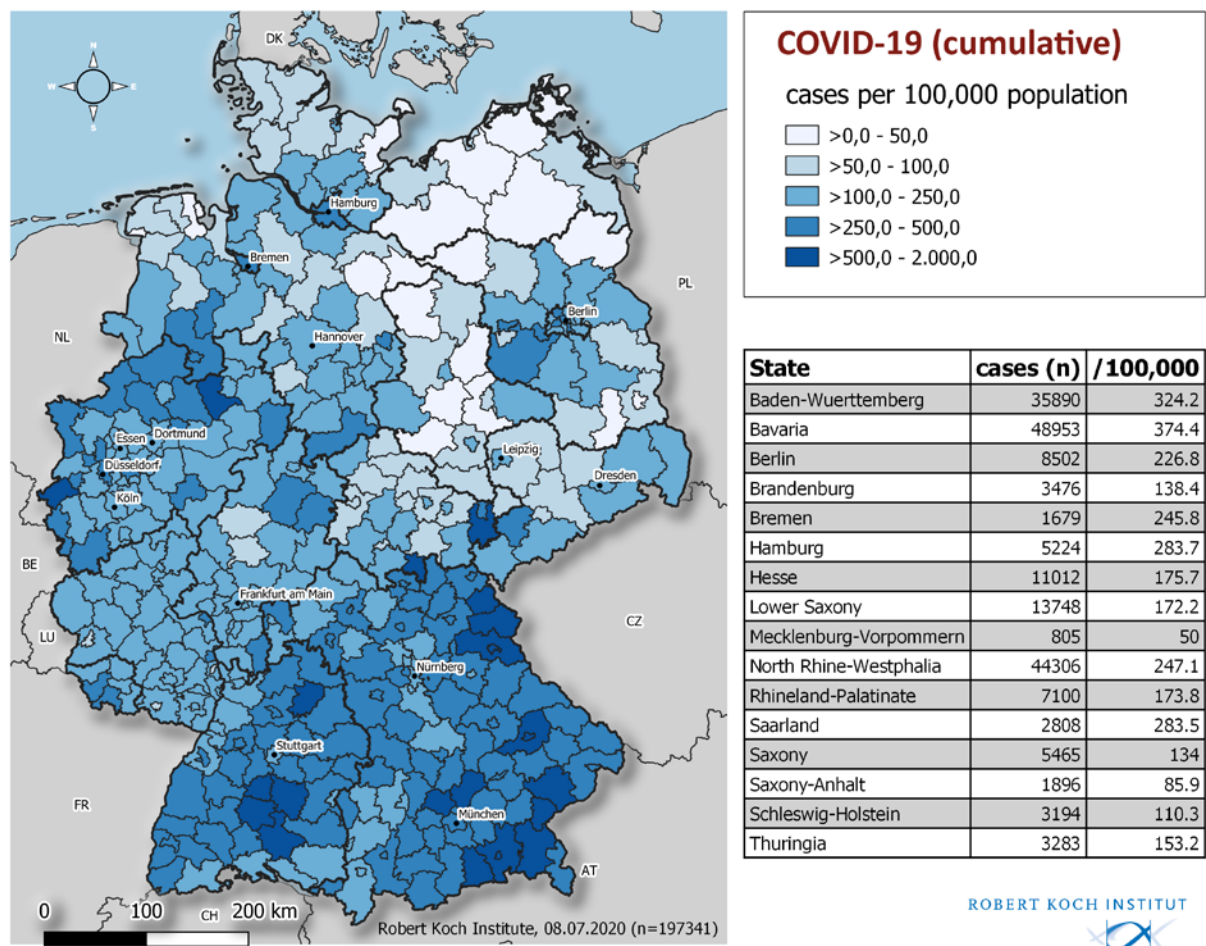


Figure 1: Number and cumulative incidence (per 100,000 population) of the 197,341 electronically reported COVID-19 cases in Germany by county and federal state (08/07/2020, 12:00 AM). Please see the COVID-19 dashboard (<https://corona.rki.de/>) for information on number of COVID-19 cases by county (local 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. Of these cases, the onset of symptoms is unknown in 59,248 cases (30%), thus their date of reporting is provided in Figure 2. The incidence of COVID-19 decreased from reporting week 26 to 27 in the majority of states. In states with increases, overall incidences remain low.

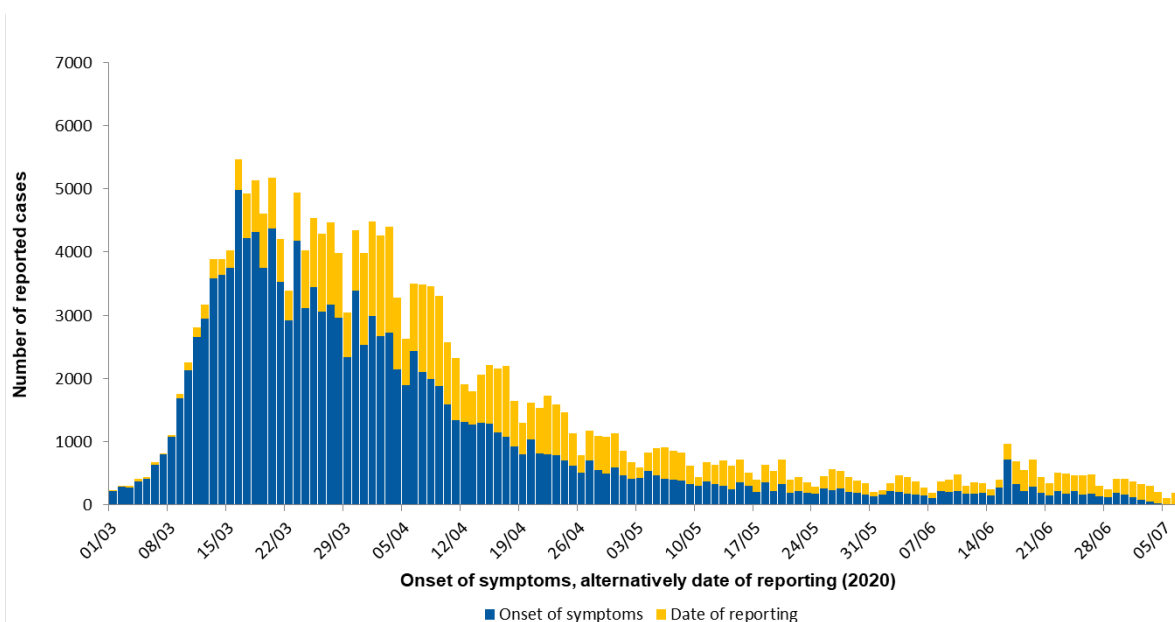


Figure 2: Number of COVID-19 cases in Germany electronically reported to the RKI by date of symptom onset or –if unknown– alternatively by date of reporting from 01/03/2020 (08/07/2020, 12:00 AM).

Demographic distribution of cases

Of all reported cases, 52% are female and 48% are male. Among all those notified cases, for which data on gender was reported, 5,109 were children under 10 years of age (2.6%), 9,646 children and teenagers aged 10 to 19 years (4.9%), 86,822 persons aged 20 to 49 years (44%), 59,658 persons aged 50 to 69 years (30%), 30,316 persons aged 70 to 89 years (15%) and 5,370 persons aged 90 years and older (2.7%). The age and/or gender is unknown in 420 notified cases. The mean age of cases is 48 years (median age 49 years). The highest incidences are seen in persons aged 90 years and older (Figure 3).

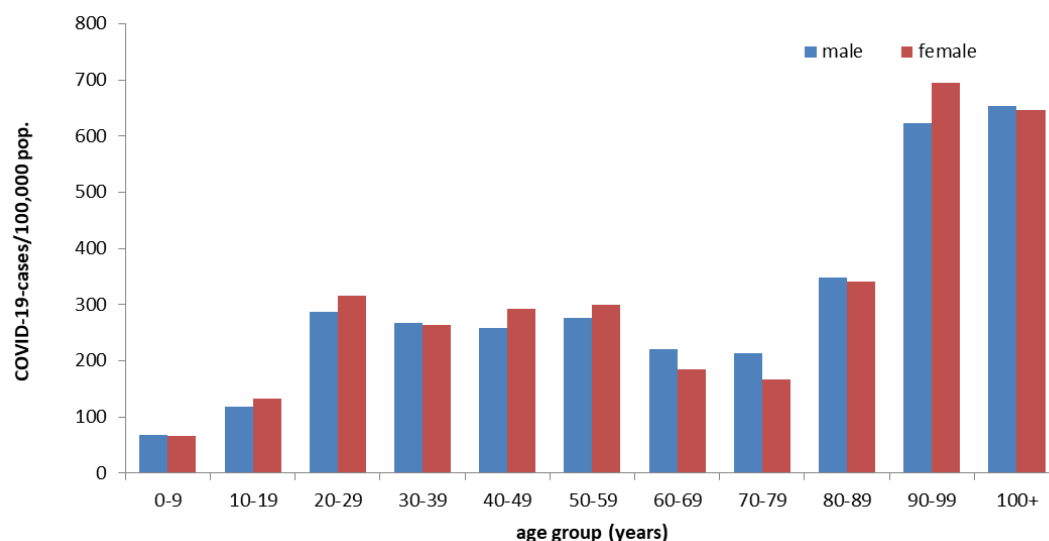


Figure 3: Electronically reported COVID-19 cases/100,000 population in Germany by age group and gender (n=196,915) for cases with information available (08/07/2020,12:00 AM).

Clinical aspects

Information on symptoms is available for 168,563 (85%) of the notified cases. Common symptoms are cough (48%), fever (41%) and rhinorrhoea (21%). Pneumonia was reported in 5,089 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 3,727 of 25,164 cases (15%).

Hospitalisation was reported for 29,554 (17%) of 172,009 COVID-19 cases with information on hospitalisation status.

Approximately 183,100 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 this number.

In total, 9,036 COVID-19-related deaths have been reported in Germany (4.6% of all confirmed cases). Of these, 4,995 (55%) are men and 4,036 (45%) are women (see Table 2), the gender was unknown in five cases). The median age was 82 years. Of all deaths, 7,736 (86%) were in people aged 70 years or older, but only 18% 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 9,031 of notified deaths; 08/07/2020, 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	53	235	639	1,370	2,101	565	7
Female	1		3	6	22	85	229	666	1,901	1,079	44
Total	1	2	9	23	75	320	868	2.036	4,002	1,644	51

Occupation, accommodation or care in facilities

In accordance with the Protection Against Infection Act, 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 25% 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.

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 (196,199* cases, no data available for 49,093 cases; 08/07/2020, 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	3,433	2,464	634	2,700
	Occupation in facility	13,964	638	20	13,800
§ 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*	3,423	73	1	3,100
	Occupation in facility	2,774	147	7	2,700
§ 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	18,090	4,097	3,568	14,200
	Occupation in facility	9,978	423	43	9,900
§ 42 IfSG (e.g. meat processing plants or kitchens in the catering trade, in inns, restaurants, canteens, cafés, or other establishments with or for communal catering)	Occupation in facility	4,635	194	5	4,300
Neither cared for, accommodated in nor working in a facility		90,809	16,004	3,445	85,500

*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

The number of COVID-19 cases was highest among Persons cared for or employed in medical and other care facilities according to §23 and §36 IfSG (Table 3). The number of deaths was particularly high among persons cared for in these facilities. Among the cases reported as working in medical facilities, 73% were female and 27% male. Their median age was 41 years.

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. 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 increase in the number of cases among persons working in the food sector (§42) is largely due to outbreaks in meat processing plants.

Outbreaks

A high 7-day incidence with more than 25 cases per 100,000 inhabitants was observed in [one](#) district, the district of Guetersloh (North Rhine-Westphalia).

The high 7-day incidence in the district Guetersloh is due to an outbreak in a meat processing plant. Increased case numbers in neighboring districts are linked to this outbreak, as employees of the meat processing company are residents of these districts. More than 1,500 employees were tested positive for SARS-CoV-2. The affected plant remains temporarily closed and all employees are in quarantine together with their household members. The first employees were discharged from quarantine 14 days after being tested positive for SARS-CoV-2 and 48 hours after resolution of symptoms.

In the district of Dingolfing-Landau, a COVID-19 outbreak occurred among residents and staff in a shared accommodation for asylum seekers.

In the district of Gernersheim, an increase in COVID-19 cases was observed in connection with a religious community.

A few COVID-19 outbreaks continue to be reported in nursing homes and hospitals, refugee facilities as well as religious communities.

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.

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.

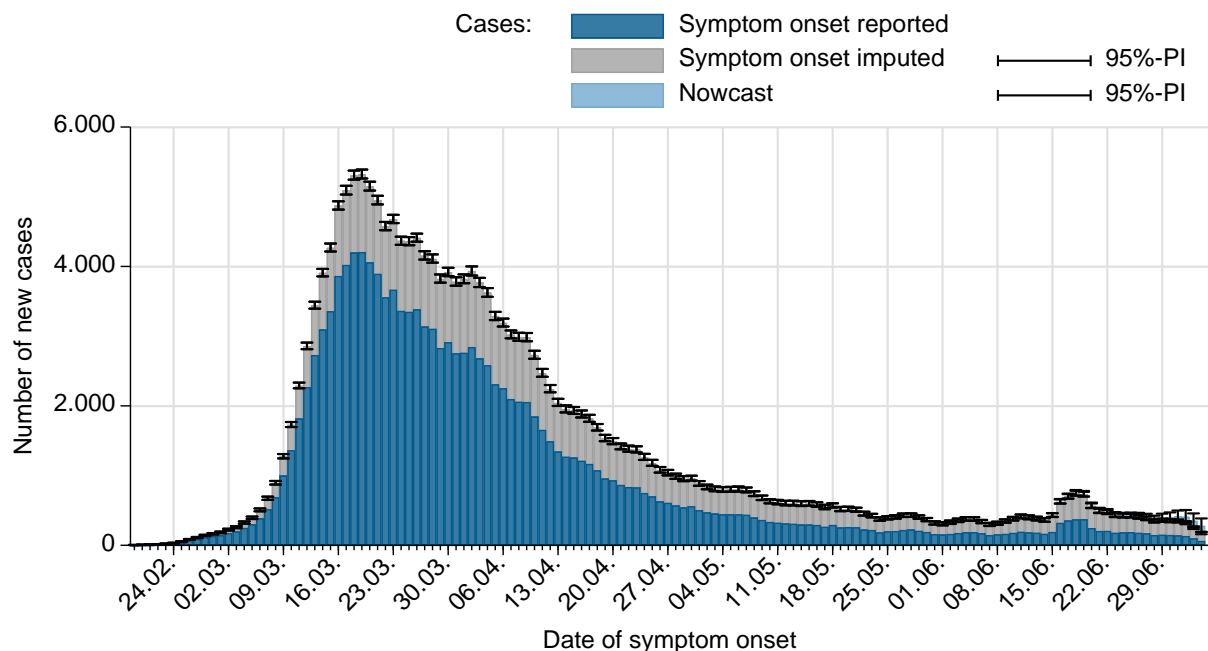


Figure 4: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 08/07/2020, 12 AM, taking into account cases up to 04/07/2020).

A sensitive R -value 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. Furthermore, outbreak dynamics may be influenced widespread testing performed among possibly exposed persons, leading to therapid detection of large numbers of additional COVID-19 cases. This can lead to relatively large fluctuations in the estimated R -value, especially if – as is currently the case in Germany - the total number of new cases is small. The current estimate of the 4-day R -value is **0.70** (95%-prediction interval: **0.58 – 0.84**) and is based on electronically notified cases as of 08/07/2020, 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 **0.83** (95% prediction interval: **0.77 – 0.91**) and is based on electronically notified cases as of 08/07/2020, 12:00 AM.

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 07/07/2020, a total of **1,271** hospitals or departments reported to the DIVI registry. Overall, **32,379** intensive care beds were registered, of which **20,081 (65%)** are occupied, and **11,298 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 (08/07/2020, 12:15 AM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	292		-6
- of these: mechanically ventilated	141	48%	-3
Discharged from ICU	14,954		-48
- of these: deaths	3,741	25%	-25

*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 26/2020, 6,376,054 laboratory tests have been recorded to date, 232,261 of which have tested positive for SARS-CoV-2 (see Table 5).

Table 5: Number of SARS-CoV-2-laboratory tests in Germany (as of 07/07/2020)

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	325,430	2,713	0.8	170
week 25	382,397	5,072	1.3	172
week 26	456,041	3,574	0.8	176
week 27	494,146	2,931	0.6	142
total	6,376,054	232,261		

Up to and including week 27, 228 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.

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 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
- 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-bundestkanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248> (in German)