



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

01/08/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases	Deaths	Deaths (%)	Recovered
209,653 (+ 955*)	9,148 (+7*)	4.4%	ca. 192,700**

*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 01/08/2020 12:00 AM)

- In the past few weeks, the number of districts that have not reported any COVID-19 cases over a period of 7 days has decreased clearly. In parallel, the COVID-19 incidence has risen in many federal states. This trend is concerning.
- The cumulative nationwide incidence over the past 7 days was **5,1** cases per 100,000 inhabitants and thus further increased slightly, albeit at a low level. A total of **79** districts transmitted zero cases over the past 7 days. Moreover, in **214** districts the 7-day-incidence is below 5.0/100,000 inhabitants.
- In total, **209,653** laboratory-confirmed COVID-19 cases and **9,148** deaths due to COVID-19 have been electronically reported to the RKI in Germany.
- In the Bavarian district of Dingolfing-Landau a COVID-19 related outbreak occurred with >150 cases among harvest workers of an agricultural company. The entire company with over 450 employees is under quarantine.
- Moreover, COVID-19-related outbreaks occur in various settings, including nursing homes and hospitals, facilities for asylum-seekers and refugees, as well as in context of religious or family events.

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

Epidemiological Situation in Germany

General current assessment

An increase in COVID-19 case numbers since last week occurred in many of the federal states.

Nationwide, there are many smaller case outbreaks in different administrative districts in various settings, such as larger family events, leisure activities, occupational settings, but also in community and health facilities. In addition, COVID-19 cases are increasingly being identified among people returning from travel abroad.

The number of new cases reported daily has been increasing since last week. This development is very concerning and will continue to be monitored very closely by the RKI. A further worsening of the situation must be avoided. This will only succeed if the entire population continues to be committed to decreasing transmission, e.g. by consistently observing rules of distance and hygiene - also in outdoor settings -, by airing indoor areas and, where necessary, wearing a community or face mask correctly.

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 **209,653 (+955)** laboratory-confirmed cases of COVID-19 have been electronically reported to and validated by the RKI (see Table 1). A total of **79** districts reported no cases in the past 7 days. In the past few weeks, the number of districts that have not submitted any COVID-19 cases over a period of 7 days has decreased continuously; on 12th July still, the number of districts reporting zero cases was 125.

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 (01/08/2020, 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	37,272	48	337	369	3.3	1,847	16.7
Bavaria	51,068	153	391	735	5.6	2,622	20.1
Berlin	9,274	82	247	290	7.7	223	5.9
Brandenburg	3,565	5	142	27	1.1	168	6.7
Bremen	1,781	7	261	39	5.7	56	8.2
Hamburg	5,405	19	294	90	4.9	261	14.2
Hesse	12,029	64	192	360	5.7	520	8.3
Mecklenburg-Western Pomerania	868	4	54	24	1.5	20	1.2
Lower Saxony	14,499	69	182	258	3.2	652	8.2
North Rhine-Westphalia	49,102	413	274	1.676	9.3	1,739	9.7
Rhineland-Palatinate	7,533	35	184	115	2.8	239	5.9
Saarland	2,874	12	290	23	2.3	174	17.6
Saxony	5,541	5	136	25	0.6	225	5.5
Saxony-Anhalt	2,022	7	92	37	1.7	64	2.9
Schleswig-Holstein	3,451	24	119	137	4.7	156	5.4
Thuringia	3,369	8	157	28	1.3	182	8.5
Total	209,653	955	252	4.233	5.1	9,148	11.0

As part of quality checks and data cleaning by the health authorities and regional offices, corrections to cases previously transmitted (e.g. detection of duplicate reports) can occasionally lead to negative values for the number of new cases.

*The number of cases is lower than the difference to the previous day, because only those cases notified by the health authorities within the last 7 days are taken into account.

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 65,053 cases (31%), thus their date of reporting is provided in Figure 2.

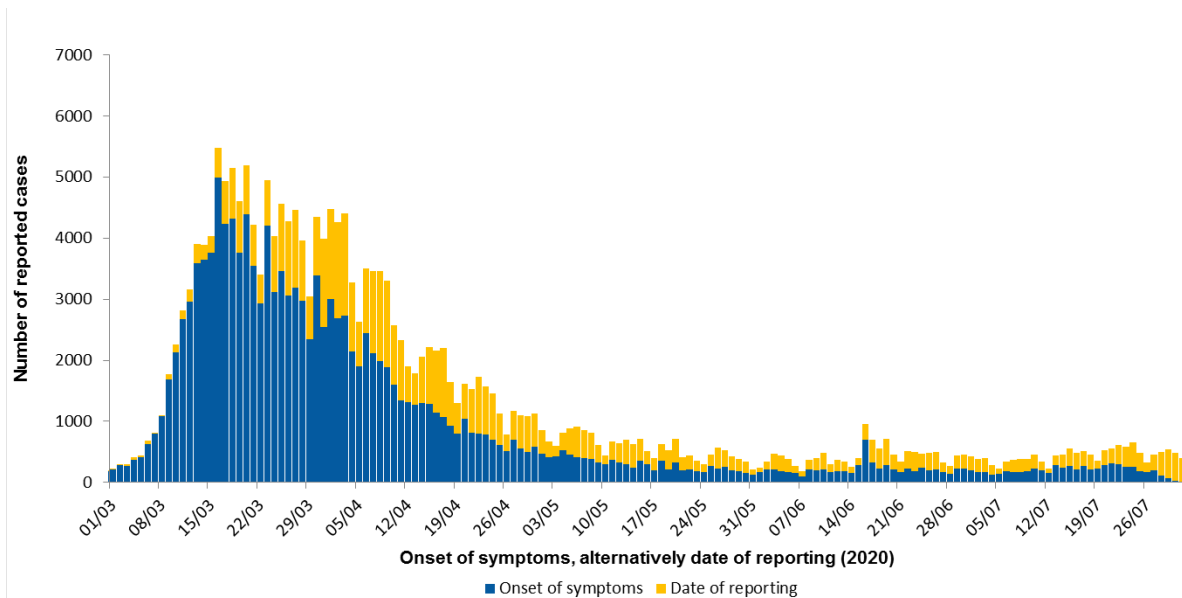


Figure 1: Number of Covid-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or –if unknown- alternatively by date of reporting from 01/03/2020 (01/08/2020, 12:00 AM).

Clinical aspects

Approximately 192,700 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, 9,148 COVID-19-related deaths have been reported in Germany (4.4% of all confirmed cases). 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 1: Number of notified COVID-19 deaths by age group and gender electronically reported to RKI (Data available for 9,143 of notified deaths; 01/08/2020, 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	57	240	650	1,386	2,120	574	6
Female	1		3	6	22	87	235	672	1,922	1,093	44
Total	1	2	9	23	79	327	885	2,058	4,042	1,667	50

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 2: Notified COVID-19-cases according to possible occupation, accommodation or care in facilities relevant for transmission of infectious diseases electronically reported to RKI (208,437* cases, no data available for 52,098 cases; 01/08/2020, 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	3,607	2,592	656	2,800
	Occupation in facility	14,412	658	23	14,200
§ 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*	4,205	84	1	3,800
	Occupation in facility	2,929	155	7	2,900
§ 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	18,597	4,187	3,622	14,800
	Occupation in facility	10,221	432	40	10,100
§ 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	5,084	220	5	4,900
Neither cared for, accommodated in nor working in a facility		97,284	16,671	3,503	90,500

*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

Four districts reported an increased incidence of >25 cases in 7 days/100.000 inhabitants: the districts of Dingolfing-Landau in Bavaria, [district Offenbach in Hesse](#), the district Dithmarschen in Schleswig-Holstein and [district Herne in North Rhine-Westphalia](#).

A high 7-day incidence with more than 100 cases per 100,000 inhabitants was observed in the district of Dingolfing-Landau. The increase is due to an outbreak among harvest workers of an agricultural company. Among more than 450 employees, >150 SARS-CoV-2-infections were identified. Quarantine was ordered for the entire company. The local population (3,300 inhabitants) has been offered voluntary testing.

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

Further COVID-19 outbreaks continue to be reported in nursing homes and hospitals, refugee facilities, family events, child-day care 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.

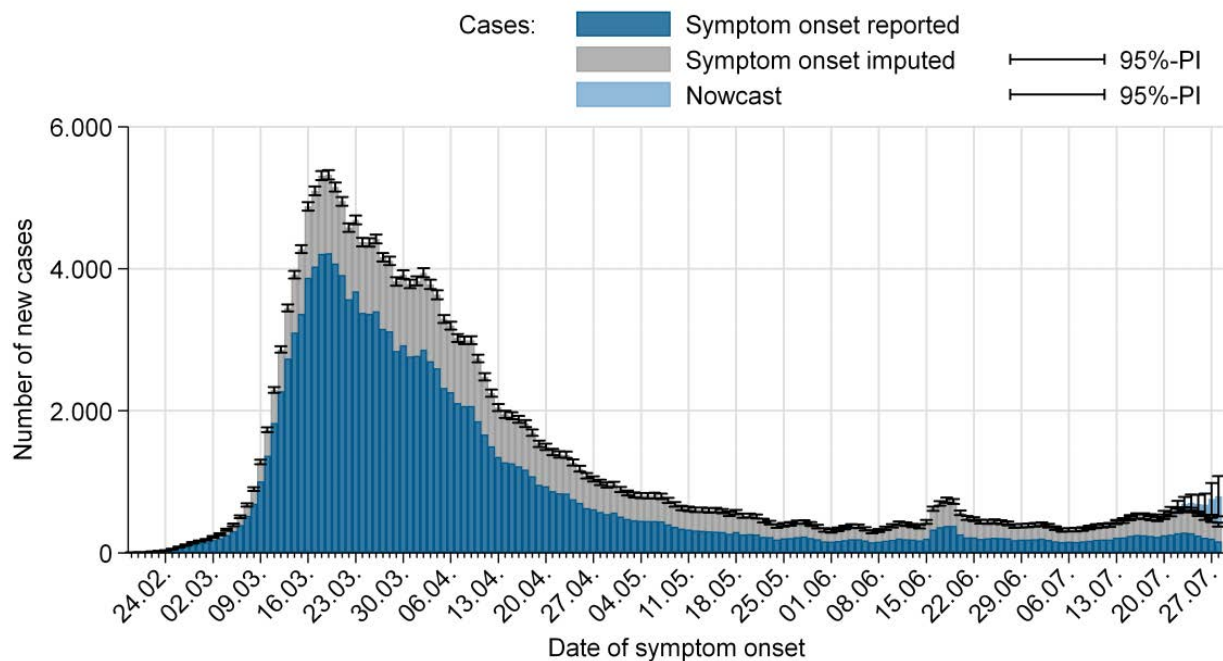


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 01/08/2020, 12 AM, taking into account cases up to 28/07/2020).

A sensitive 4-day- 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 affected persons, leading to therapid detection of many additional COVID-19 cases. This can lead to relatively large fluctuations in the estimated R -value, especially if the total number of new cases is small.

The current estimate of the 4-day R -value is **1.13** (95%-prediction interval: : **0.93 – 1.41**) and is based on electronically notified cases as of 01/08/2020, 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 **1.20** (95% prediction interval: **1.07 – 1.34**) and is based on electronically notified cases as of 01/08/2020, 12:00 AM.

The reported 7-day R value has been around 1 or slightly above since mid-July 2020. This is due to a larger number of small outbreaks, but also case numbers in Germany overall, which have increased steadily in recent weeks since the relaxation of the measures.

See also the RKI's statement on high case numbers of 24/07/2020

https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Gestiegene_Fallzahlen.html

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)

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 cases continues to increase worldwide. The number of newly reported cases declined from mid-March until early July. Since then, case numbers have been steadily increasing. Some districts are transmitting very few or no cases to the RKI. However, individual outbreaks are increasingly occurring again, which can reach considerable proportions. Vaccines and anti-viral therapeutics are currently not available. 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

SARS-CoV-2 can be transmitted easily from person to person. The risk of infection depends heavily on the regional spread, living conditions and also on individual behaviour (physical distancing, hygiene measures and community masks).

Disease severity

In most cases, the disease is mild. The probability of progression towards serious disease increases with increasing age and underlying illnesses. Individual long-term consequences cannot be estimated yet.

Burden on health system

The burden on the health care system depends largely on the geographical distribution of cases, health care capacity and initiation of containment measures (isolation, quarantine, physical distancing etc.). In large parts of Germany it is currently low, but it can rapidly increase locally and affect the public health system in particular as well as medical care facilities.

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

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- 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)