



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

16/08/2020 - UPDATED STATUS FOR GERMANY

- ABBREVIATED WEEKEND EDITION -

Confirmed cases	Deaths	Deaths (%)	Recovered
223,453	9,231	4.1%	ca. 201,300**
(+ 625*)	(+ 0*)		

*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 16/08/2020 12:00 AM)

- In the past few weeks the COVID-19 incidence has risen markedly in many federal states and the number of districts reporting zero COVID-19 cases over a period of 7 days has decreased markedly. This trend is very concerning.
- The cumulative nationwide incidence over the past 7 days was **8.2** cases per 100,000 inhabitants and, thus, **at an increased level**. A total of only **27** districts transmitted zero cases over the past 7 days. In a further **180** districts the 7-day-incidence is below 5.0/100,000 inhabitants.
- In North-Rhine Westphalia, Berlin and Hesse the 7-day incidences are markedly and in **Hamburg** just above the national mean 7-day-incidence.
- In total, **223,453** laboratory-confirmed COVID-19 cases and 9,231 deaths associated with COVID-19 have been electronically reported to the RKI in Germany.
- Moreover, further COVID-19-related outbreaks are being reported in various settings, including nursing homes and hospitals, facilities for asylum-seekers and refugees, meat-processing plants and other occupational settings, educational settings and especially among travellers and in the context of religious events or events with family and friends.

Epidemiological Situation in Germany

General current assessment

The increase in the number of reported COVID-19 cases over the past weeks can be observed in many of the federal states. [In the past two days, the trend in Covid-19 case numbers has declined slightly due to the testing and reporting delay over the weekend.](#)

Nationwide, there are a lot of reports of many smaller outbreaks in a number of administrative districts in various settings, such as larger family events, leisure activities, educational and occupational settings, but also in community and health facilities. In addition, COVID-19 cases are increasingly being identified among travellers entering Germany. There is a risk that this multitude of events are going to accumulate to a substantial increase in the total number of cases.

The number of new cases reported daily has been increasing since calendar week 30. This development is very concerning and dynamics seem to increase. 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 physical distancing and hygiene - also in outdoor settings -, by airing indoor areas and, where indicated, wearing a community or face mask correctly as well as by avoiding mass gatherings – especially in indoor areas – and limiting close contacts to immediate family and friends.

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 [223,453 \(+625\)](#) laboratory-confirmed cases of COVID-19 have been electronically reported to and validated by the RKI (see Figure 1 and Table 1). A total of [27](#) districts reported no cases in the past 7 days. In the past few weeks, the number of districts not transmitting any COVID-19 cases over a period of 7 days decreased continuously, from a maximum of 125 districts on 12/07/2020.

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 (16/08/2020, 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	38,480	58	348	598	5.4	1,859	16.8
Bavaria	52,888	41	404	980	7.5	2,631	20.1
Berlin	10,238	42	273	522	13.9	224	6.0
Brandenburg	3,697	2	147	51	2.0	169	6.7
Bremen	1,841	6	270	38	5.6	56	8.2
Hamburg	5,878	28	319	166	9.0	264	14.3
Hesse	13,433	43	214	699	11.2	526	8.4
Mecklenburg-Western Pomerania	972	2	60	31	1.9	20	1.2
Lower Saxony	15,384	41	193	384	4.8	656	8.2
North Rhine-Westphalia	54,390	284	303	2,612	14.6	1,777	9.9
Rhineland-Palatinate	8,121	26	199	292	7.1	242	5.9
Saarland	3,000	14	303	69	7.0	174	17.6
Saxony	5,730	11	141	76	1.9	225	5.5
Saxony-Anhalt	2,123	9	96	58	2.6	64	2.9
Schleswig-Holstein	3,782	14	131	192	6.6	158	5.5
Thuringia	3,496	4	163	69	3.2	186	8.7
Total	223,453	625	269	6,837	8.2	9,231	11.1

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

Distribution of cases over time

The first COVID-19 cases in Germany were notified in January 2020. Figure 1 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 72,944 cases (33%), thus their date of reporting is provided.

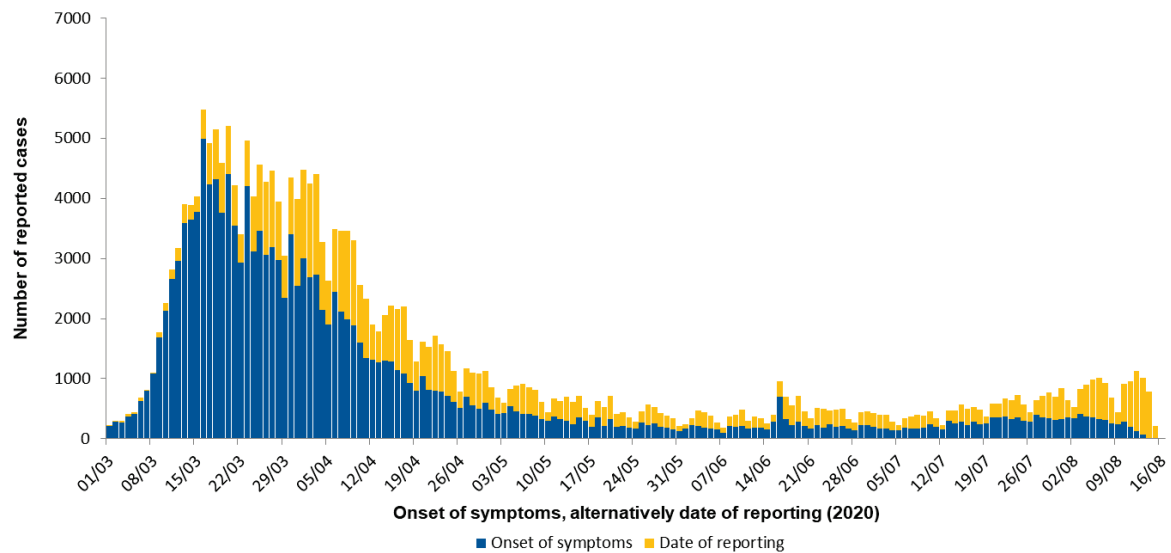


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or –if unknown- alternatively by date of reporting since 01/03/2020 (16/08/2020, 12:00 AM).

Clinical aspects

Approximately 201,300 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.

A total of 9,231 COVID-19-related deaths have been reported in Germany (4.1% of all confirmed cases). Of these, 5,151 (55%) are men and 4,112 (45%) are women (see Table 2), the gender is unknown in four cases. The median age of COVID-19 cases reported to have died was 82 years.

Table 2: Number of notified COVID-19 deaths by age group and gender electronically reported to RKI (Data available for 9,227 of notified deaths; 16/08/2020, 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	7	17	57	242	658	1,402	2,144	580	6
Female	1		3	6	22	88	235	677	1,937	1,099	44
Total	1	2	10	23	79	330	893	2,079	4,081	1,679	50

Occupation, accommodation or care in facilities

In accordance with the Protection Against Infection Act (Infektionsschutzgesetz, IfSG), 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 (222.134* cases, no data available for 55.901 cases; 16/08/2020, 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	3,750	2,685	665	3,000
	Occupation in facility	14,685	667	23	14,500
§ 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*	5,138	94	1	4,300
	Occupation in facility	3,130	158	7	3,000
§ 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	18,921	4,226	3,651	15,000
	Occupation in facility	10,393	450	39	10,200
§ 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	5,332	227	5	5,100
Neither cared for, accommodated in nor working in a facility		104,879	17,201	3,559	95,300

*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 IfSG) is largely due to outbreaks in meat processing plants.

Outbreaks

Seven districts reported an increased incidence of ≥ 25 cases in 7 days/100.000 inhabitants: the district of Dingolfing-Landau in Bavaria, the cities of Herne, Hagen, Duisburg and Wuppertal in Northrhine Westphalia, the cities of Berlin Mitte in Berlin and Offenbach in Hesse.

In the district of Dingolfing-Landau the incidence increased due to two outbreaks with together close to 500 COVID-19-cases, in two agricultural companies. Quarantine was ordered for all employees of both companies. No transmission into the local population has been detected thus far.

In the cities of Herne, Hagen, Duisburg, Wuppertal, Berlin Mitte and Offenbach cases detected among travellers entering Germany as well as family clusters play an important role in the observed high 7-day incidence.

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, educational settings, meat-processing plants and other occupational settings, in the context of family events and religious communities as well as among travellers.

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 2 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.

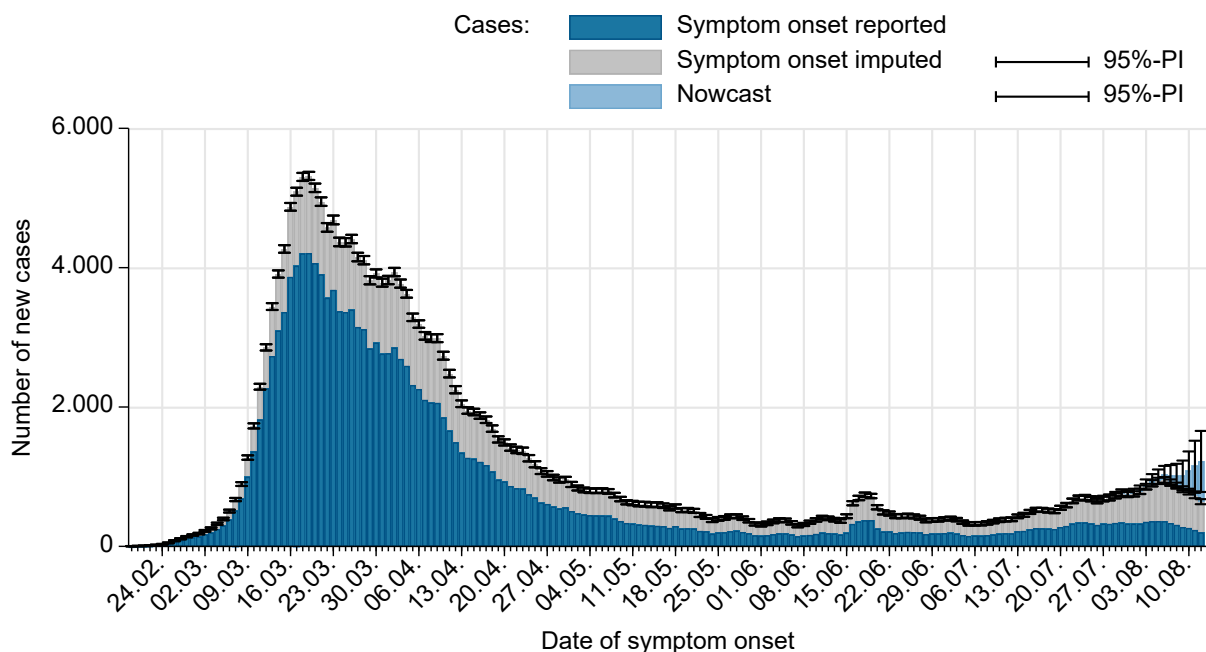


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 16/08/2020, 12 AM, taking into account cases up to 12/08/2020).

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 **1.21** (95%-prediction interval: **0.97 – 1.44**) and is based on electronically notified cases as of 16/08/2020, 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 **1.13** (95% prediction interval: **1.00 – 1.26**) and is based on electronically notified cases as of 16/08/2020, 12:00 AM.

The reported R values has been around 1 or slightly above since mid-July 2020. This is associated with a larger number of outbreaks, but also with case numbers in Germany overall, which have increased steadily in recent weeks since the relaxation of the measures and due to an increased number of travel returnees.

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 in Germany

- The ministry of health has published a record of all measures implemented in Germany since 27/01/2020
<https://www.bundesgesundheitsministerium.de/coronavirus/chronik-coronavirus.html> (in German)

- Information from the Ministry of Health for travelers entering Germany: Frequently asked questions and answers (in German) <https://www.bundesgesundheitsministerium.de/coronavirus-infos-reisende/faq-tests-einreisende.html>
- 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 (07.08.2020) 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-bundeskanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248> (in German)