



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

09/08/2020 - UPDATED STATUS FOR GERMANY

| Confirmed cases | Deaths | Deaths (%) | Recovered |
|----------------------------|-----------------------|-------------|----------------------|
| 215,891 (+ 555*) | 9,196 (+1*) | 4.3% | ca. 196,800** |

*Change compared to 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 09/08/2020 12:00 AM)

- In the past few weeks the COVID-19 incidence has risen 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 concerning.
- The cumulative nationwide incidence over the past 7 days was **6.3** cases per 100,000 inhabitants and thus further increased. A total of **55** districts transmitted zero cases over the past 7 days. In a further **213** districts the 7-day-incidence is below 5.0/100,000 inhabitants.
- In total, **215,891** laboratory-confirmed COVID-19 cases and **9,196** deaths due to COVID-19 have been electronically reported to the RKI in Germany.
- **In Nordrhein-Westfalia and Hamburg the 7-day incidences are high, with a markedly increasing trend. In Hesse and Berlin the 7-day incidences are also higher than the mean total 7-day incidence.**
- In the Bavarian district of Dingolfing-Landau a COVID-19 related outbreak occurred with **>400** cases among harvest workers of an agricultural company and among employees of a canning company.
- 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

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

and other occupational settings, educational settings, among travellers and in the context of religious or family events.

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.

Nationwide, there are 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.

The number of new cases reported daily has been increasing since calendar week 30. 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 physical distancing and hygiene - also in outdoor settings -, by airing indoor areas and, where indicated, 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 **215,891 (+555)** laboratory-confirmed cases of COVID-19 have been electronically reported to and validated by the RKI (see **Table 1**). A total of **52** 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 (09/08/2020, 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 | 37,767 | 18 | 341 | 316 | 2.9 | 1,858 | 16.8 |
| Bavaria | 51,803 | 9 | 396 | 632 | 4.8 | 2,626 | 20.1 |
| Berlin | 9,688 | 48 | 258 | 351 | 9.4 | 224 | 6.0 |
| Brandenburg | 3,626 | 4 | 144 | 50 | 2.0 | 169 | 6.7 |
| Bremen | 1,803 | 3 | 264 | 21 | 3.1 | 56 | 8.2 |
| Hamburg | 5,664 | 54 | 308 | 221 | 12.0 | 262 | 14.2 |
| Hesse | 12,703 | 101 | 203 | 572 | 9.1 | 525 | 8.4 |
| Mecklenburg-Western Pomerania | 936 | 6 | 58 | 56 | 3.5 | 20 | 1.2 |
| Lower Saxony | 14,943 | 32 | 187 | 341 | 4.3 | 654 | 8.2 |
| North Rhine-Westphalia | 51,561 | 231 | 288 | 2,180 | 12.2 | 1,759 | 9.8 |
| Rhineland-Palatinate | 7,771 | 23 | 190 | 220 | 5.4 | 239 | 5.9 |
| Saarland | 2,926 | 13 | 295 | 36 | 3.6 | 174 | 17.6 |
| Saxony* | 5,632 | 0 | 138 | 84 | 2.1 | 225 | 5.5 |
| Saxony-Anhalt* | 2,057 | 0 | 93 | 27 | 1.2 | 64 | 2.9 |
| Schleswig-Holstein | 3,586 | 8 | 124 | 115 | 4.0 | 158 | 5.5 |
| Thuringia | 3,425 | 5 | 160 | 49 | 2.3 | 183 | 8.5 |
| Total | 215,891 | 555 | 260 | 5,271 | 6.3 | 9,196 | 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.

*Saxony and Saxony-Anhalt did not transmit any cases yesterday

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 68,402 cases (32%), thus their date of reporting is provided in Figure 2.

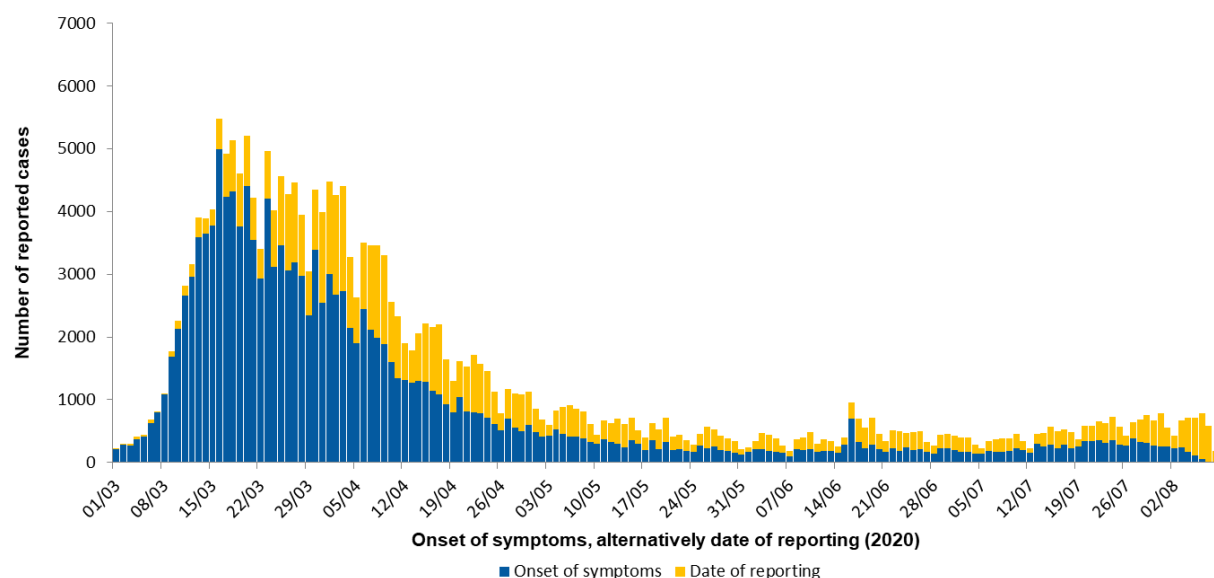


Figure 1: Number of Covid-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or –if unknown– alternatively by date of reporting from 01/03/2020 (09/08/2020, 12:00 AM).

Clinical aspects

Approximately **196,800** 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 **9,196** COVID-19-related deaths have been reported in Germany (4.3% of all confirmed cases). Of these, **5,092** (55%) are men and **4,100** (45%) are women (see Table 2), the gender was unknown in four cases.

Table 2: Number of notified COVID-19 deaths by age group and gender electronically reported to RKI (Data available for 9,191 of notified deaths; 09/08/2020, 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 | 0 | 2 | 7 | 17 | 57 | 241 | 656 | 1,393 | 2,135 | 578 | 6 |
| Female | 1 | 0 | 3 | 6 | 22 | 87 | 235 | 676 | 1,928 | 1,098 | 44 |
| Total | 1 | 2 | 10 | 23 | 79 | 328 | 891 | 2,069 | 4,063 | 1,676 | 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 3: Notified COVID-19-cases according to possible occupation, accommodation or care in facilities relevant for transmission of infectious diseases electronically reported to RKI (214,627* cases, no data available for 53,989 cases; 09/08/2020, 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 | 3,678 | 2,638 | 663 | 2,900 |
| | Occupation in facility | 14,548 | 663 | 23 | 14,400 |
| § 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* | 4,513 | 88 | 1 | 4,100 |
| | Occupation in facility | 3,015 | 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 | 18,787 | 4,206 | 3,640 | 14,900 |
| | Occupation in facility | 10,309 | 436 | 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 | 5,191 | 223 | 5 | 5,000 |
| Neither cared for, accommodated in nor working in a facility | | 100,597 | 16,937 | 3,537 | 92,900 |

*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

Three districts reported an increased incidence of >25 cases in 7 days/100.000 inhabitants: the district of Dingolfing-Landau in Bavaria, and the district of Dueren and the city of Duisburg in Northrhine-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 two outbreaks with >400 COVID-19-cases, one among harvest workers of an agricultural company and the other among employees in two of three locations of a canning company. Quarantine was ordered for all employees of both companies. The local population (3,300 inhabitants) has been offered voluntary testing.

After the decrease in COVID-19 case numbers following the previously described outbreak among harvest workers in the district of Dueren in early August, the incidence has again increased. The local health authority attributes this to new cases among travellers entering Germany.

The increased incidence in the city of Duisburg can also be explained by cases among travellers.

Further COVID-19 outbreaks continue to be reported in nursing homes and hospitals, refugee facilities, meat-processing plants and other occupational settings, family events, educational settings, as well as religious communities. In Hamburg, cases have occurred among employees of a shipyard.

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.

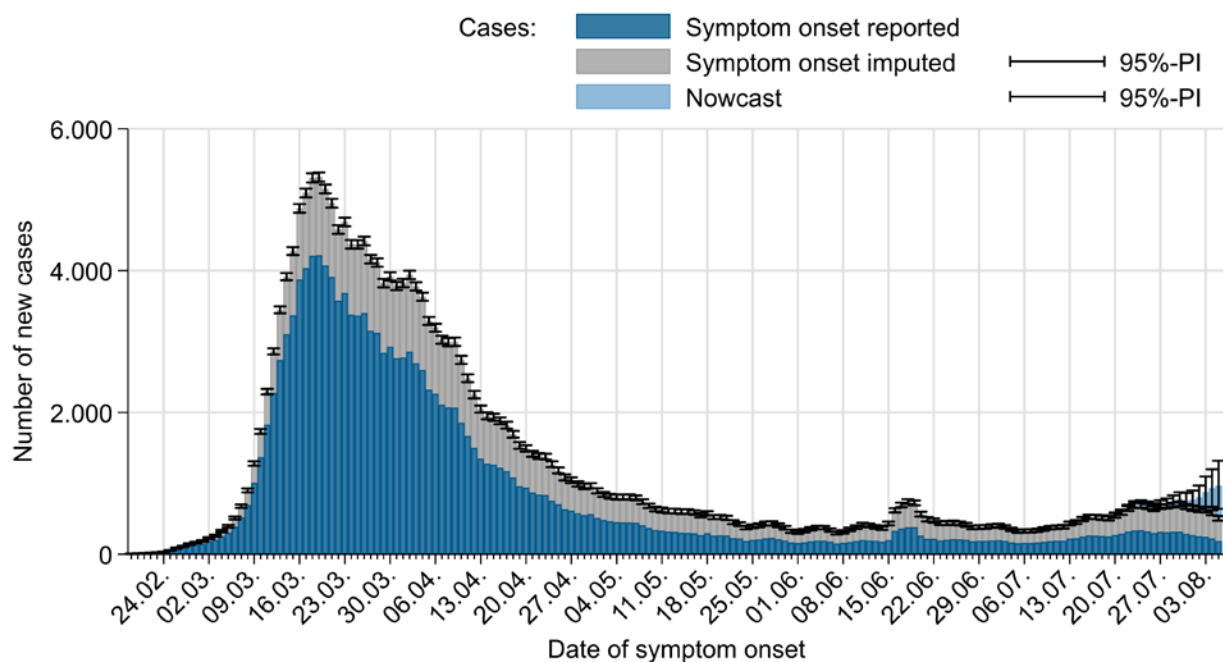


Figure 4: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 09/08/2020, 12 AM, taking into account cases up to 05/08/2020).

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 **1.26** (95%-prediction interval: **1.03 – 1.52**) and is based on electronically notified cases as of 09/08/2020, 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 **1.17** (95% prediction interval: **1.03 – 1.30**) and is based on electronically notified cases as of 09/08/2020, 12:00 AM.

The reported R values 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 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 (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)