



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

31/10/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
518,753 (+19,059*)	10,452 (+103*)	92,250 (+5,035*)	110.9 cases/ 100,000 pop.
Proportion of deaths	Recovered	7-day incidence of people ≥ 60 years	No. of districts with 7- day incidence > 50
2.0%	ca. 351,200** (+5,500**)	71.6 cases/ 100,000 pop.	341 (+12*)

*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 31/10/2020, 12:00 AM)

- Currently, an accelerated increase of transmissions in the population in Germany can be observed. Therefore, the entire population is strongly encouraged to commit itself to infection prevention and control.
- The nationwide incidence over the past 7 days increased further to **110.9** cases per 100,000 population.
- Since the beginning of September, the proportion of cases in older age groups has been increasing again. The 7-day incidence of people ≥ 60 years is currently **71.6** cases/100.000 population.
- The 7-day incidence in **Bavaria, Berlin, Bremen, Hesse, and North Rhine-Westphalia** is higher than the national total 7-day incidence.
- **The number of districts with an increased 7-day incidence of >25 cases/ 100,000 inhabitants continues to rise. Only 7 districts have an incidence ≤25 cases/100,000 population. As of today, 155 districts have an incidence of >50-100 cases/100,000 population, 186 districts have an incidence of >100 cases/100,000 population and 19 districts have an incidence of >200 cases/100,000 population.**
- The nationwide increase is caused by increasingly diffuse transmission, with a large number of clusters in connection with private gatherings, celebrations or public events, but also in educational settings, and nursing and long-term care homes, as well as in occupational settings or related to religious events.
- The number of COVID-19 patients requiring intensive care has more than doubled in the past 2 weeks from **730** patients on **17/10/2020** to **1,944** patients on **31/10/2020**.
- In total, **518,753** laboratory-confirmed COVID-19 cases and **10,452** deaths associated with COVID-19 have been transmitted to the RKI in Germany.

Epidemiological Situation in Germany

In accordance with the international standards of WHO¹ and ECDC², RKI considers all laboratory confirmations of SARS-CoV-2, irrespective of the presence and severity of clinical symptoms, as COVID-19 cases. Thus, in the following report the term "COVID-19 cases" covers acute SARS-CoV-2 infections as well as cases of COVID-19 disease.

General current assessment

After a temporary stabilisation of case numbers at a higher level in late August and early September, there is currently an increase of transmission within the population in all federal states. The proportion of COVID-19 cases in older age groups is currently increasing. The reported R-values have been stable since the beginning of October, well above 1. Since the beginning of this week, a slight downward trend has been observed.

There are outbreaks in various districts throughout Germany, which are associated with different situations, including large celebrations in the family and circle of friends, in occupational settings, and in old people's and nursing homes. In addition, in many districts there is an increasingly diffuse spread of SARS-CoV-2, without traceable transmission chains.

It is therefore still necessary for the entire population to be committed to infection prevention and control, e.g. by consistently observing rules of distance and hygiene - also outdoors -, by ventilating indoor spaces and, where indicated, by wearing a community mask correctly. Crowds of people - especially indoors - should be avoided.

¹ World Health Organization, https://www.who.int/publications/i/item/WHO-2019-nCoV-Surveillance_Case_Definition-2020.1

² European Centre for Disease Prevention and Control, <https://www.ecdc.europa.eu/en/covid-19/surveillance/case-definition>

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 **518,753 (+19,059)** laboratory-confirmed cases of COVID-19 have been reported to and validated by the RKI (Table 1).

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 (31/10/2020, 12:00 AM). The number of new cases includes positive cases notified 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	80,233	2,756	723	11,830	106.6	2,022	18.2
Bavaria	104,764	2,690	798	15,553	118.5	2,804	21.4
Berlin	31,440	1,084	857	5,513	150.2	255	6.9
Brandenburg	7,831	363	311	1,233	48.9	193	7.7
Bremen	5,331	231	783	1,197	175.7	72	10.6
Hamburg	13,357	410	723	1,717	92.9	283	15.3
Hesse	40,998	1,905	652	9,493	151.0	646	10.3
Mecklenburg-Western Pomerania	2,782	166	173	690	42.9	23	1.4
Lower Saxony	35,942	1,714	450	6,098	76.3	748	9.4
North Rhine-Westphalia	132,479	5,032	738	26,306	146.6	2,155	12.0
Rhineland-Palatinate	20,103	995	491	3,955	96.6	285	7.0
Saarland	6,249	107	633	1,041	105.5	188	19.0
Saxony	17,196	703	422	3,766	92.5	317	7.8
Saxony-Anhalt	5,067	263	231	1,107	50.4	79	3.6
Schleswig-Holstein	8,028	312	276	1,456	50.1	175	6.0
Thuringia	6,953	328	326	1,295	60.7	207	9.7
Total	518,753	19,059	624	92,250	110.9	10,452	12.6

*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 for 244,432 cases (47 %), thus their date of reporting is provided in Figure 1.

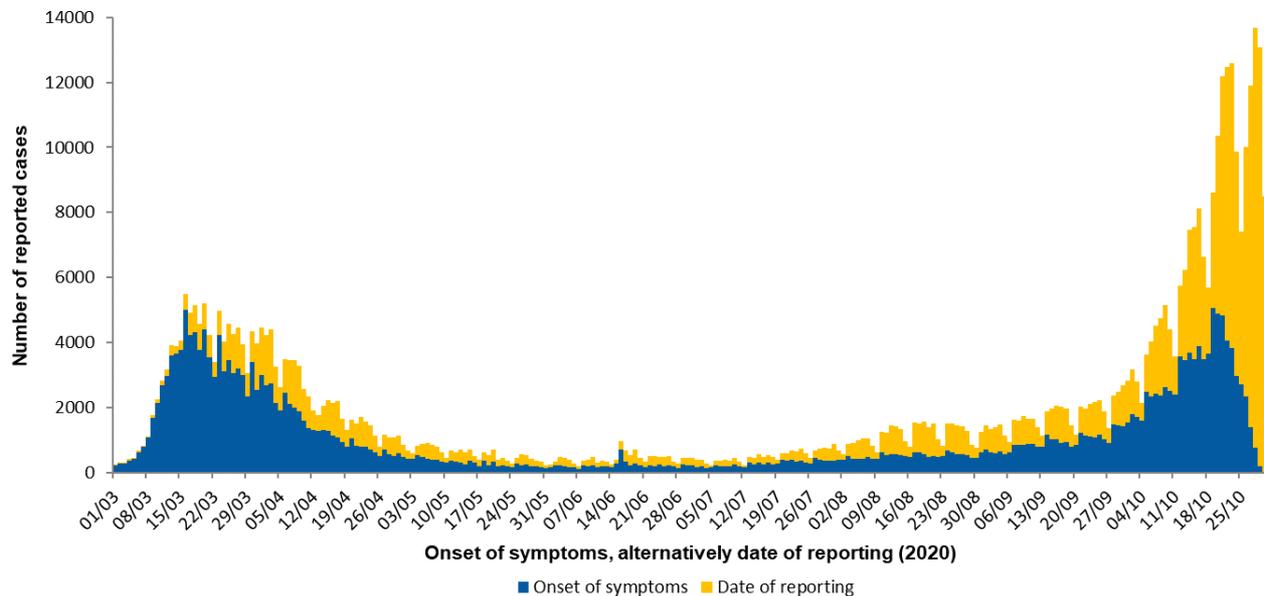


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (31/10/2020, 12:00 AM).

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 45% of cases, the numbers 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.

The number of COVID-19 cases was highest among persons cared for or employed in care facilities according to § 36 IfSG and among persons employed in medical facilities according to § 23 IfSG (Table 2). The number of deaths was particularly high among persons cared for in these facilities.

Among the cases reported as working in medical facilities (§ 23 IfSG), 73% were female and 27% male. Their median age was 40 years. The high number of cases among people cared for or working in various care facilities (§ 36 IfSG) is consistent with numerous reported outbreaks, especially in nursing homes. The high number of cases among persons working in the food sector (§ 42 IfSG) is largely due to outbreaks in meat processing plants.

Table 2: Notified COVID-19-cases according to possible occupation, accommodation or care in facilities relevant for transmission of infectious diseases according to the Protection Against Infection Act (IfSG), reported to RKI (515,296* cases, no data available for 233,704 cases; 31/10/2020, 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	5,229	3,431	761	3,900
	Occupation in facility	19,168	762	24	17,700
§ 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*	14,628	194	1	12,300
	Occupation in facility	7,123	245	8	6,000
§ 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	23,153	4,735	3,904	17,500
	Occupation in facility	12,935	517	44	12,000
§ 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	7,704	296	5	7,100
Neither cared for, accommodated in nor working in a facility		191,652	21,774	3,922	165,200

*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. Due to changes in data registration, not all data entries for cases ascertained in the most recent version of the surveillance software could be taken into account. This will be corrected in the coming days.

Outbreaks

An increased incidence of >25 cases in 7 days/100,000 population was reported for **405** districts, including **186** urban and rural districts with an incidence of over 100 cases/100,000 population and **155** districts with a 7-day incidence of >50 -100 cases/100,000 population. The dashboard (<https://corona.rki.de>) shows all affected districts.

The nationwide increase is caused by increasingly diffuse transmission, with a large number of clusters in connection with private gatherings, celebrations or public events, but also in educational settings, and nursing and long-term care homes, as well as in occupational settings or related to religious events.

In most districts, transmission is diffuse, with numerous outbreaks related to celebrations with family and friends, but also increasingly occurring in educational settings and retirement and nursing homes. In a few districts, larger outbreaks have been the cause for marked increases in COVID-19 cases. Numerous smaller outbreaks also continue to be reported in hospitals and facilities for asylum seekers and refugees, community facilities, various occupational settings and in the context of religious gatherings, all contributing to the increasing incidence.

Estimation of the reproduction number (R)

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 (Figure 2) and not directly extracted from the notification system.

4-day R-value	7-day R-value
1.11	1.19
(95%-prediction interval: (0.89 - 1.33))	(95%-prediction interval: 1.06 – 1.32)

Delays in reporting of case numbers at weekend days can lead to cyclical fluctuations of the 4-day R-value. The 7-day R-value is less affected because all week days are used to determine the value.

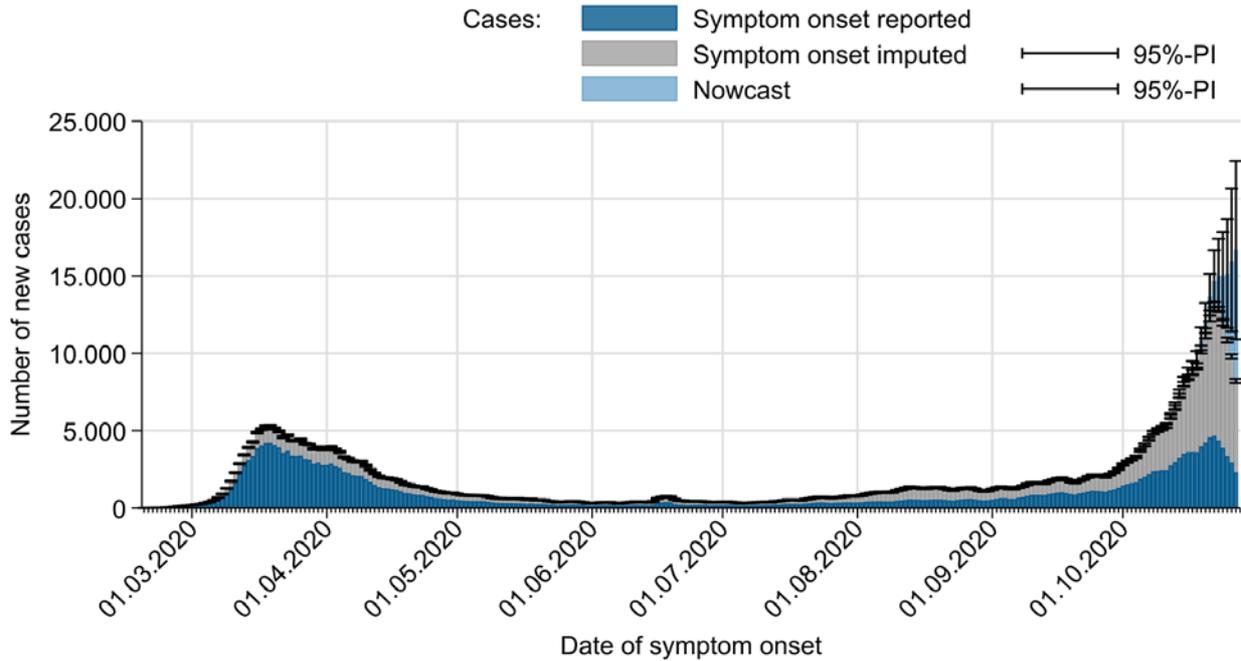


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 31/10/2020, 12 AM, taking into account cases up to 27/10/2020).

Since the start of October, the R-values have been well above 1. Since the beginning of this week, a slight downward trend has been observed.

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 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

The German Interdisciplinary Association for Intensive and Emergency Medicine (DIVI) has in collaboration with RKI established a registry to document the number of available intensive care beds as well as the number of COVID-19 cases treated in participating hospitals on a daily basis. Since 16/04/2020, all hospitals with intensive care beds are required to report (<https://www.intensivregister.de/#/intensivregister>).

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

As of 31/10/2020, a total of **1,282** hospitals or departments reported to the DIVI registry. Overall, **28,970** intensive care beds were registered, of which **21,286** (73%) are occupied, and **7,684** (27%) are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 3.

Table 3: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (31/10/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	1,944		105
- of these: with invasive mechanical ventilation	1,004	52 %	85
Discharged from ICU	20,875		129
- of these: deaths	4,704	23 %	42

*The interpretation of these numbers must take into account the number of reporting hospitals and therefore the number of reported patients may change from day to day. On certain days, this can explain an occasionally important decrease or increase in the cumulative number of discharged patients or deaths compared with the day before.

Risk Assessment by the RKI

In view of the recent further increase in case numbers, the risk assessment of the RKI was adapted to the epidemiologic situation on 26/10/2020. The current version can be found here:

<https://www.rki.de/EN/Content/infections/epidemiology/outbreaks/COVID-19/Risk-assessment.html>

Measures taken in Germany

- National Testing Strategy – who will be tested for SARS-CoV-2 in Germany (14/10/2020) *(in German)*
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Teststrategie/Nat-Teststrat.html
- SARS-CoV-2 test criteria for schools during the COVID 19 pandemic (12/10/2020) *(in German)*
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Teststrategie/Testkriterien-Schulen.pdf
- Preventive measures in schools during the COVID 19 pandemic (12/10/2020) *(in German)*
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Praevention-Schulen.pdf
- Selected and regularly updated information on COVID-19 in English
<https://www.rki.de/EN/Content/infections/epidemiology/outbreaks/COVID-19/COVID19.html>
- Information on the designation of international risk areas
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikogebiete_neu.html
- The ministry of health has published a record of all measures implemented in Germany since 27/01/2020 *(in German)*
<https://www.bundesgesundheitsministerium.de/coronavirus/chronik-coronavirus.html>
- Information from the Ministry of Health for travellers 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/EN/Content/infections/epidemiology/outbreaks/COVID-19/CWA/CWA.html>
- Orders concerning travel after the determination of an epidemic situation of national significance by the German Bundestag (29/09/2020)

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: *(in German)*
<https://www.bundesregierung.de/breg-de/themen/coronavirus/corona-bundeslaender-1745198>
- Data on current disease activity can be found on the RKI dashboard:
<https://corona.rki.de/>
- A distance of 1.5 metres to other individuals must be maintained in public spaces: *(in German)*
<https://www.bundesregierung.de/breg-de/themen/coronavirus/besprechung-der-bundeskanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248>
- (Non-medical) face masks must be worn on public transport and in shops in all federal states.