Coronavirus Disease 2019

(COVID-19)

Daily Situation Report of the Robert Koch Institute

12/10/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	**Deaths**	**Confirmed cases**	**7-day incidence**
325,331	**9,621**	**22,832**	**27.5 cases/ 100,000**
(+2,467*)	(+6*)	(+1,305*)	**population**
Proportion of deaths	**Recovered**	**No. of districts reporting cases**	**No. of districts with 7-day incidence > 50**
3.0%	**ca. 276,900****	**410/412**	**32**
	(+2,100**)	(+1*)	(+2*)

*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 12/10/2020, 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 to 27.5 cases per 100,000 population.
- The 7-day incidence in Berlin and Bremen is considerably higher, in North Rhine-Westphalia and Hesse slightly higher than the national mean 7-day incidence.
- The districts Neukoelln and Mitte in Berlin exceeded a 7-day incidence of 100 cases/100,000 population. The 7-day incidence was 50 to 100 cases/100,000 population in 30 districts, in 103 additional districts it exceeded 25 cases/100,000 population.
- Since beginning of September the proportion of cases in older age groups has been increasing again.
- A large number of COVID-19-related outbreaks continue to be reported in various settings. Case clusters are being reported particularly in the context of religious or family events, in nursing homes and hospitals, facilities for asylum-seekers and refugees, community facilities, meat-processing plants, various occupational settings, and among travellers.
- In total, 325,331 laboratory-confirmed COVID-19 cases and 9,621 deaths associated with COVID-19 have been electronically transmitted to the RKI in Germany.

Epidemiological Situation in Germany

In accordance with the international standards of WHO[1] and ECDC[2], 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, further increase is currently observed in the population in some federal states. The proportion of COVID-19 cases in the older age groups is currently slightly increasing, while the proportion of cases among travel returnees is decreasing since calendar week 34. Since the end of September, an increase of the R-values, which are above one, can be 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 and religious settings, or, especially, in cases among younger people, outbreaks originating from travel returnees. The current development must be further carefully monitored.

Since calendar week 30, the proportion of deaths among COVID-19 cases has been consistently below 1% and is thus markedly lower than among cases in the spring, particularly in April. It is unlikely that the virus has changed to become less pathogenic. Rather, the low proportion of deaths can be explained as follows: On the one hand, recent infections have occurred mainly among young people, who rarely experience a severe course of disease. On the other hand there is also broader testing, which means more milder cases are identified. Additionally, as the number of cases increases, the true proportion of severe courses of disease and deaths only becomes apparent sometime after diagnosis. If the trend continues and elderly and vulnerable people are increasingly infected with SARS-CoV-2, an increase in hospitalisations and deaths is to be expected. Severe cases and deaths can mainly be prevented through decreased transmission of SARS-CoV-2.

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 if possible and celebrations should be limited to the closest circle of family and friends.

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[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*

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

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 325,331 (+2,467) laboratory-confirmed cases of COVID-19 have been electronically 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 (12/10/2020, 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	54,345	477	490	3,183	28.7	1,901	17.1
Bavaria	73,186	343	558	3,358	25.6	2,685	20.5
Berlin	18,075	247	493	2,278	62.1	234	6.4
Brandenburg	4,771	31	189	306	12.1	169	6.7
Bremen	3,080	22	452	463	68.0	61	9.0
Hamburg	8,963	51	485	534	28.9	277	15.0
Hesse	22,039	128	350	2,051	32.6	562	8.9
Mecklenburg-Western Pomerania*	1,373	0	85	84	5.2	20	1.2
Lower Saxony*	22,662	0	284	1,292	16.2	697	8.7
North Rhine-Westphalia	79,981	802	446	6,602	36.8	1,913	10.7
Rhineland-Palatinate	12,106	202	296	913	22.3	256	6.3
Saarland	3,703	30	375	259	26.2	177	17.9
Saxony	8,413	73	207	799	19.6	248	6.1
Saxony-Anhalt	2,932	29	134	176	8.0	68	3.1
Schleswig-Holstein	5,260	25	181	312	10.7	162	5.6
Thuringia	4,442	7	208	222	10.4	191	9.0
Total	325,331	2,467	391	22,832	27.5	9,621	11.6

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.
* No data were transmitted from Mecklenburg-Western Pomerania and Lower Saxony

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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 127,178 cases (39%), thus their date of reporting is provided.
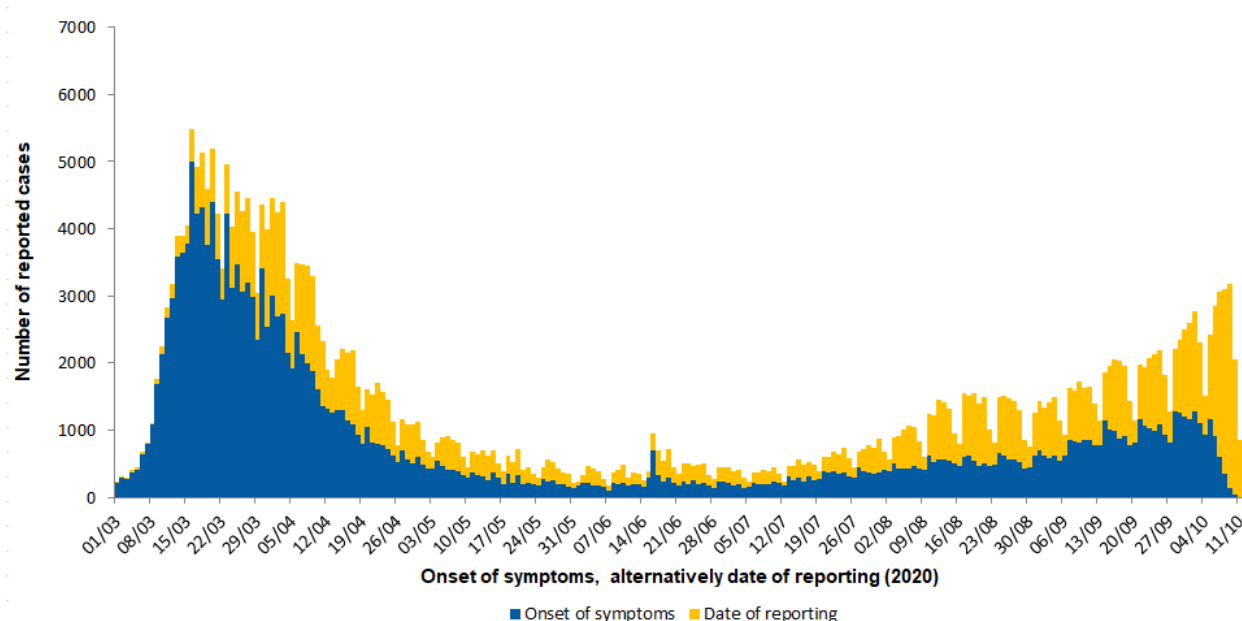

Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (12/10/2020, 12:00 AM).

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 29% 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.

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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 (322,867* cases, no data available for 93,045 cases; 12/10/2020, 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	4,482	3,045	711	3,500
	Occupation in facility	16,925	717	24	16,300
§ 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*	10,844	156	1	9,400
	Occupation in facility	5,216	211	8	4,600
§ 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	20,836	4,489	3,753	16,400
	Occupation in facility	11,552	489	41	11,200
§ 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	6,696	270	5	6,300
Neither cared for, accommodated in nor working in a facility		153,269	19,761	3,739	139,000

*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 135 districts, including 2 city districts in Berlin (Neukoelln, Mitte) with an incidence of over 100 cases/100,000 population and 30 districts with a 7-day incidences of >50 cases/100,000 population. The dashboard (https://corona.rki.de/) shows all affected districts

Currently, in most districts it is mostly a diffuse situation with increased frequency of COVID-10 cases in connection with private celebrations with family and friends. In several affected districts larger outbreaks are the cause of the sharp increase in case numbers. However, many smaller outbreaks in nursing homes, hospitals, facilities for asylum seekers and refugees, community facilities, schools and kindergarten, various occupational settings and in connection with religious events, continue to contribute to the increase in incidence.

The increased incidence in the districts of Berlin is due to more diffuse transmission. Stricter distancing rules and opening restrictions for restaurants, bars and shops are applied since 10/10/2020.

Among the 32 districts with more than 50 cases/100,000 inhabitants, the increase in incidence in the following districts can be attributed mainly to a single outbreak:

In the district of Cloppenburg 89 cases are related to an outbreak among workers of a slaughterhouse.

In the district of Esslingen, a cargo centre has developed as a hotspot for the spread of SARS-CoV-2 in addition to a diffuse situation of infection.

In the city Hamm, more than 200 corona infections are associated with a wedding.

In the Wesermarsch district, the increase in incidence is directly related to the incidence of infections at the childcare facilities and schools in Lemwerder.

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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.

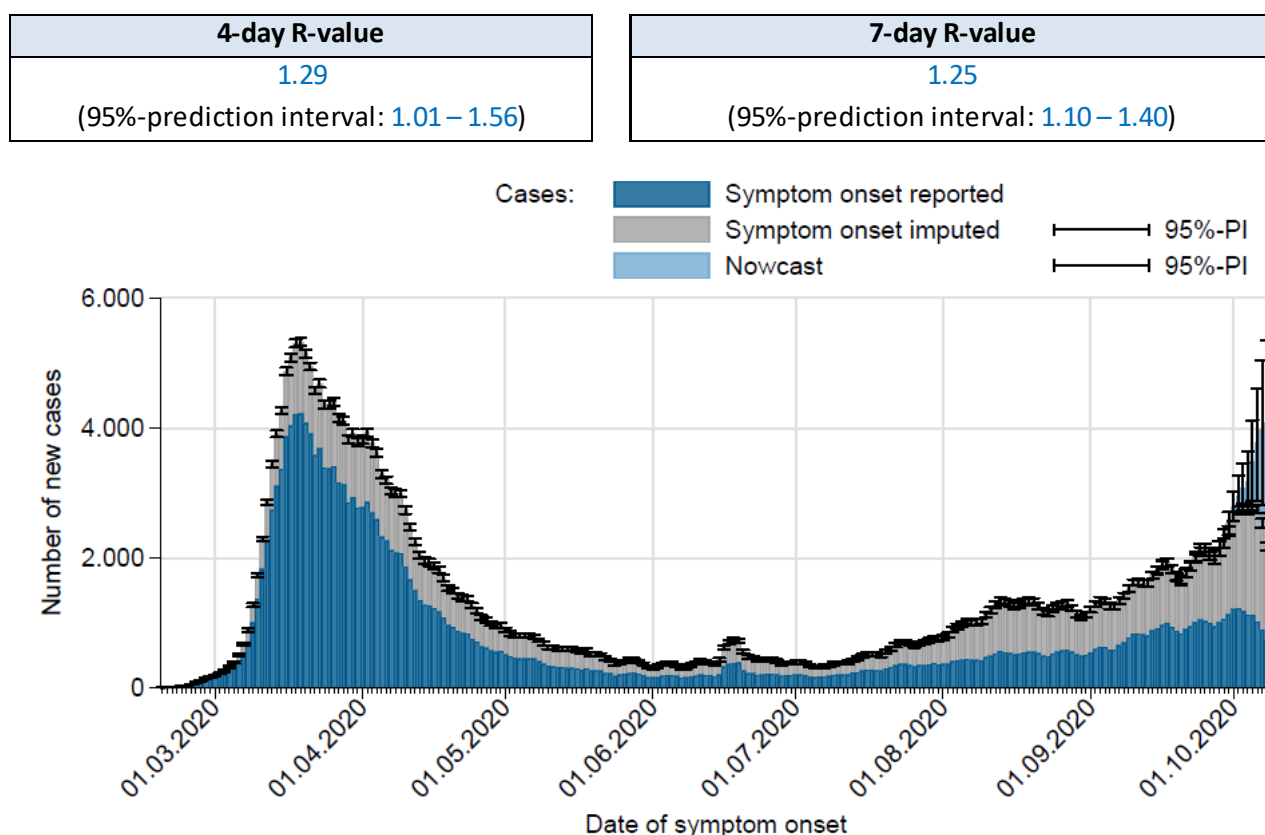| 4-day R-value	7-day R-value
1.29	1.25
(95%-prediction interval: 1.01 – 1.56)	(95%-prediction interval: 1.10 – 1.40)

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 12/10/2020, 12 AM, taking into account cases up to 07/10/2020).

The reported R values have been predominantly higher than 1 since the beginning of September. Since the end of September, an increase of the R-values can be 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)

As of 12/10/2020, a total of 1,278 hospitals or departments reported to the DIVI registry. Overall, 30,242 intensive care beds were registered, of which 20,906 (69%) are occupied, and 9,336 (31%) are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 3. The

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number of people receiving intensive care increased slightly since end of September, this increase accelerated slightly within the last days.

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

	Number of patients	Percentage	Change to previous day*
Currently in ICU	590		45
- of these: invasive mechanically ventilated	286	48%	11
Discharged from ICU	18,202		3
- of these: deaths	4,295	24%	-11

*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 07/10/2020. The current version can be found here: Risk assessment for COVID-19 (in German)

Measures taken in Germany

- 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 https://www.bundesgesundheitsministerium.de/coronavirus/chronik-coronavirus.html
  (in German)

- Information from the Ministry of Health for travellers entering Germany: Frequently asked questions
  and answers https://www.bundesgesundheitsministerium.de/coronavirus-infos-reisende/faq-tests-einreisende.html *(in German)*

- Corona-Warn-App
  https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/WarnApp/Warn_App.html *(in German)*

- Regulations for persons entering Germany in connection with the novel coronavirus SARS-CoV-2
  (15/09/2020) https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/BMG_Merkblatt_Reisende_Tab.html *(in German)*

- 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)*

- Data on current disease activity can be found on the RKI dashboard: https://corona.rki.de/

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- 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)*

- (Non-medical) face masks must be worn on public transport and in shops in all federal states.

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