



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

04/11/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
577,593 (+17,214*)	10,812 (+151*)	104,606 (+1,333*)	125,8 cases/ 100,000 pop
Proportion of deaths	Recovered	7-day incidence of people ≥ 60 years	No. of districts with 7- day incidence > 50
1.9%	ca. 381,400** (+9,900**)	82.4 cases/ 100,000 pop	359 (-6*)

*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 04/11/2020, 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 **125.8** 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 has further increased to currently **82.4** cases/100.000 population.
- The 7-day incidence in Bavaria, Berlin, Bremen, Hesse, North Rhine-Westphalia and Saarland is higher than the national total 7-day incidence.
- **Almost all districts have a high 7-day incidence.** Only 7 districts have an incidence ≤25 cases/100,000 population. As of today, **130** districts have an incidence of >50-100 cases/100,000 population, **229** districts have an incidence of >100 cases/100,000 population and of these, 32 districts have an incidence of >200 cases/100,000 population.
- The nationwide increase is caused by increasingly diffuse transmission, with numerous clusters in connection with private gatherings, celebrations or public events, but also in community institutions, 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 almost tripled in the past 2 weeks from **943** patients on **21/10/2020** to **2,546** patients on **04/11/2020**.
- In total, **577,593** laboratory-confirmed COVID-19 cases and **10,812** 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 were stable well above 1 since the beginning of October. Over the past few days the R-value has decreased and today is approximately 1. This means that each person infected with SARS-CoV-2 will infect on average one other person. As the number of infected persons is currently high in Germany, this means that the daily number of newly infected persons will remain high.

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 **577,593 (+17,214)** 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 (04/11/2020, 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	87,685	2,243	790	13,079	117.8	2,056	18.5
Bavaria	115,869	3,568	883	18,602	141.7	2,843	21.7
Berlin	34,823	1,513	949	6,104	166.3	265	7.2
Brandenburg	8,761	70	347	1,422	56.4	203	8.0
Bremen	6,108	207	897	1,428	209.6	78	11.5
Hamburg	14,744	456	798	1,851	100.2	294	15.9
Hesse	45,819	1,221	729	9,781	155.5	699	11.1
Mecklenburg-Western Pomerania	3,076	159	191	696	43.3	23	1.4
Lower Saxony	39,964	1,102	500	7,128	89.2	782	9.8
North Rhine-Westphalia	148,699	4,562	829	30,030	167.3	2,236	12.5
Rhineland-Palatinate	22,466	679	549	4,367	106.7	301	7.4
Saarland	7,313	85	741	1,428	144.7	194	19.7
Saxony	20,140	651	495	4,567	112.2	350	8.6
Saxony-Anhalt	5,582	159	254	1,111	50.6	86	3.9
Schleswig-Holstein	8,833	233	304	1,581	54.4	190	6.5
Thuringia	7,711	306	361	1,431	67.1	212	9.9
Total	577,593	17,214	695	104,606	125.8	10,812	13.0

*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 283,000 cases (49%) thus their date of reporting is provided in Figure 1.

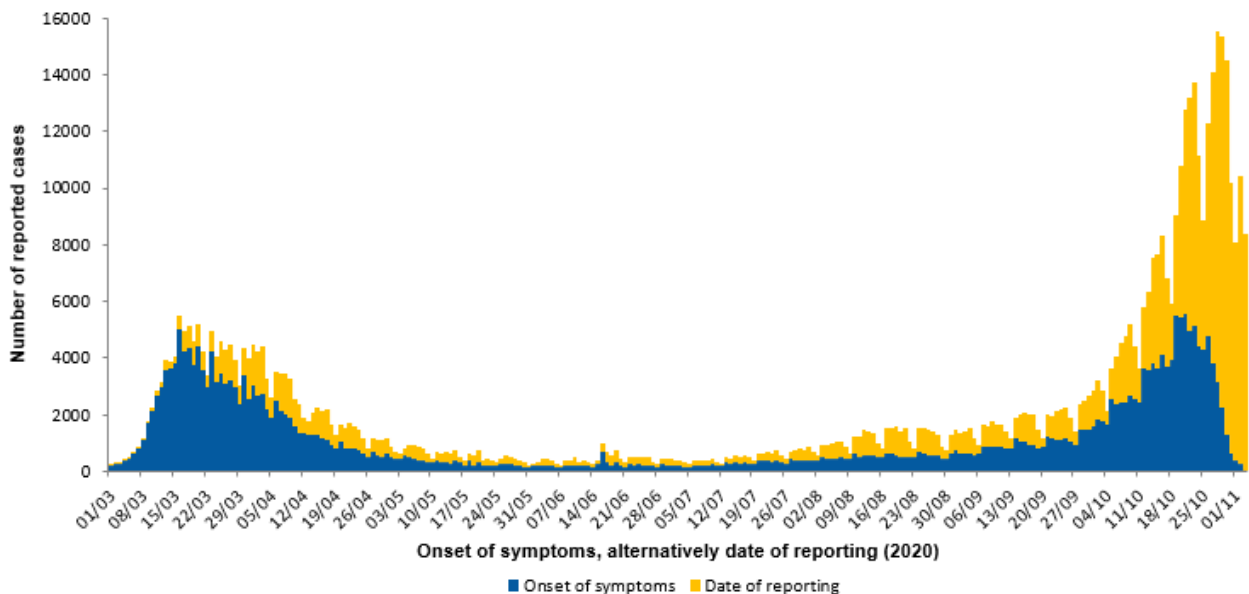


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (04/11/2020, 12:00 AM).

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 49% 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, among persons employed in medical facilities according to § 23 IfSG and among persons cared for in educational facilities according to § 33 IfSG (Table 2). The number of deaths was particularly high among persons cared for in facilities according to §§ 23 and 36.

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 (573,876* cases, no data available for 280,336 cases; 04/11/2020, 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	5,463	3,577	782	4,000
	Occupation in facility	19,733	778	24	18,200
§ 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*	15,615	198	2	13,000
	Occupation in facility	7,551	253	8	6,400
§ 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	23,792	4,802	3,965	17,800
	Occupation in facility	13,349	524	45	12,300
§ 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	7,879	300	5	7,300
Neither cared for, accommodated in nor working in a facility		200,158	22,174	3,986	173,800

*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 almost every district (405 of 412). By now, 229 urban and rural districts have an incidence of over 100 cases/100,000 population, including 32 districts with an incidence of over 200 cases/100,000 population; additionally, 130 districts have a 7-day incidence of >50 -100 cases/100,000 population. The dashboard (<https://corona.rki.de>) shows all affected districts.

In most districts the transmission is diffuse most of the times, with several cases clustering in the context of celebrations with family and friends, but increasingly as well in community facilities and retirement and nursing homes. On some occasions, specific large outbreaks have been the cause for large increases in the affected districts. At the same time, many small outbreaks in hospitals, facilities for asylum seekers and refugees, various occupational settings and in the context of religious gatherings continue to contribute to the increase of 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
0.81	0.92
(95%-prediction interval: 0.66 – 0.95)	(95%-prediction interval: 0.84 – 1.00)

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.

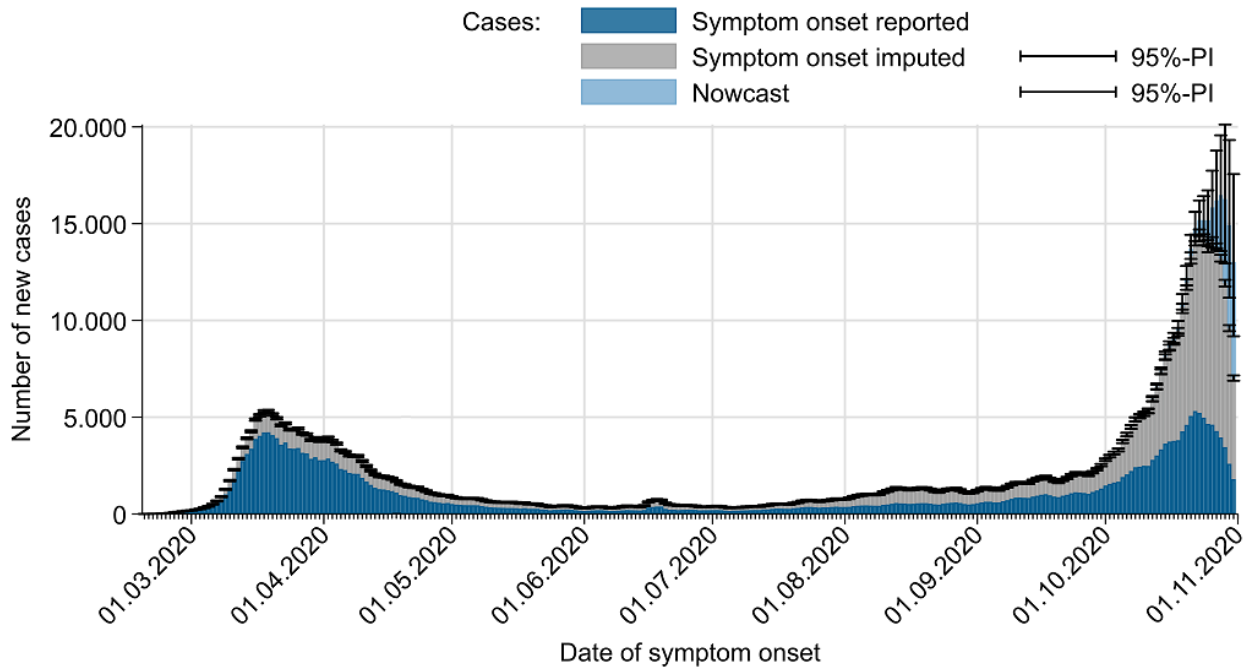


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 04/11/2020, 12 AM, taking into account cases up to 31/10/2020).

The reported R-values have been stable well above 1 in October. Over the past days the R-value has decreased slightly and is approximately 1 today.

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 04/11/2020, a total of 1,286 hospitals or departments reported to the DIVI registry. Overall, 28,763 intensive care beds were registered, of which 21,695 (75%) are occupied, and 7,068 (25%) are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 3.

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

Table 3: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (04/11/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	2,546		+158
- of these: with invasive mechanical ventilation	1,349	53%	+93
Discharged from ICU	21,979		+320
- of these: deaths	4,948	23%	+61

*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.

Surveys on SARS-CoV-2 laboratory tests in Germany

To assess the SARS-CoV-2 test numbers, data from university hospitals, research institutions as well as clinical and outpatient laboratories throughout Germany are merged weekly at the RKI. These data are ascertained on a voluntary basis and are transmitted to RKI via an internet-based RKI test laboratory survey, via the network for respiratory viruses (RespVir), via the laboratory-based SARS-CoV-2 Surveillance established at the RKI (an extension of the Antibiotic Resistance Surveillance (ARS)) and via the enquiry of a professional association of laboratory medicine.

Since the beginning of testing in Germany up to and including week 44/2020, 23,393,311 laboratory tests have been recorded to date, 611,248 of which have tested positive for SARS-CoV-2.

Up to and including week 44, 253 laboratories have registered for the RKI test laboratory survey or in one of the other transmitting networks and transmit data upon reminder largely on a weekly basis. Since laboratories can register and correct the tests of the previous calendar weeks at a later date, it is possible that the ascertained numbers can increase retrospectively. It should be noted that the number of tests is not the same as the number of persons tested, as the data may include multiple tests of individual patients (Table 4 with data for the last 10 weeks – complete data since beginning of testing are available at www.rki.de/covid-19-testzahlen (in German)).

Table 4: Number of SARS-CoV-2-laboratory tests in Germany (as of 03/11/2020)

Calendar week 2020	Number of tests	Tested positiv	Proportion positive (%)	Number of reporting laboratories
Up to & including week 34	11,212,945	273,650		
35	1,120,883	8,323	0.74	191
36	1,072,316	8,294	0.77	192
37	1,164,932	10,046	0.86	194
38	1,146,565	13,261	1.16	203
39	1,155,995	14,094	1.22	189
40	1,101,413	18,290	1.66	191
41	1,188,338	29,567	2.49	191
42	1,261,398	44,733	3.55	198
43	1,401,443	77,168	5.51	197
44	1,567,083	113,822	7.26	191
Total	23,393,311	611,248		

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

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.