



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

02/10/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
294,395 (+2,673*)	9,508 (+8*)	12,687 (+294*)	15.3 cases/ 100,000 population
Proportion of deaths	Recovered	No. of districts reporting cases	No. of districts with 7- day incidence > 50
3.2 %	ca. 259,500** (+1,700**)	407/412 (+3*)	4 (+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 02/10/2020, 12:00 AM)

- After a temporary stabilisation of case numbers at a higher level, a further increase in reported COVID-19 cases is currently evident in the population of Germany. **It is therefore still necessary for the entire population to commit itself to infection prevention and control.**
- The nationwide incidence over the past 7 days was **15.3** cases per 100,000 inhabitants. The 7-day incidence exceeded 50 cases/100,000 inhabitants in **4** districts: the city of Hamm, the districts of Berlin Mitte and Rhön-Grabfeld, and the city of Remscheid. In a further **43** districts, it exceeded 25 cases/100,000 inhabitants.
- The 7-day incidence in Berlin and Bremen is **considerably** higher, in Hamburg and North Rhine-Westphalia **moderately higher**, and in Bavaria and Hesse slightly higher than the national mean 7-day incidence.
- In total, **294,395** laboratory-confirmed COVID-19 cases and **9,508** deaths associated with COVID-19 have been electronically transmitted to the RKI in Germany.
- 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, various occupational settings, and among travellers.

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, 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. The R-value has been predominantly slightly greater than 1 since the beginning of September.

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 only 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.

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 **294,395 (+2,673)** laboratory-confirmed cases of COVID-19 have been electronically reported to and validated by the RKI (Table 1). A total of **5** districts reported no cases in the past 7 days; however on 16/06/2020 a total of 139 districts reported zero cases.

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 (02/10/2020, 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	50,105	398	453	1,666	15.1	1,887	17.0
Bavaria	68,853	371	527	2,061	15.8	2,664	20.4
Berlin	15,032	244	401	1,119	29.9	229	6.1
Brandenburg	4,326	26	172	120	4.8	169	6.7
Bremen	2,511	40	368	231	33.8	59	8.6
Hamburg	7,984	88	434	407	22.1	271	14.7
Hesse	19,324	235	308	1,042	16.6	551	8.8
Mecklenburg-Western Pomerania	1,203	8	75	58	3.6	20	1.2
Lower Saxony	20,491	201	257	828	10.4	689	8.6
North Rhine-Westphalia	71,357	777	398	3,867	21.6	1,879	10.5
Rhineland-Palatinate	10,863	123	266	452	11.1	255	6.2
Saarland*	3,338	23	337	64	6.5	177	17.9
Saxony	7,349	61	180	286	7.0	237	5.8
Saxony-Anhalt	2,677	23	121	146	6.6	68	3.1
Schleswig-Holstein	4,848	27	167	238	8.2	162	5.6
Thuringia	4,134	28	193	102	4.8	191	8.9
Total	294,395	2,673	354	12,687	15.3	9,508	11.4

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 110,305 cases (37%), thus their date of reporting is provided.

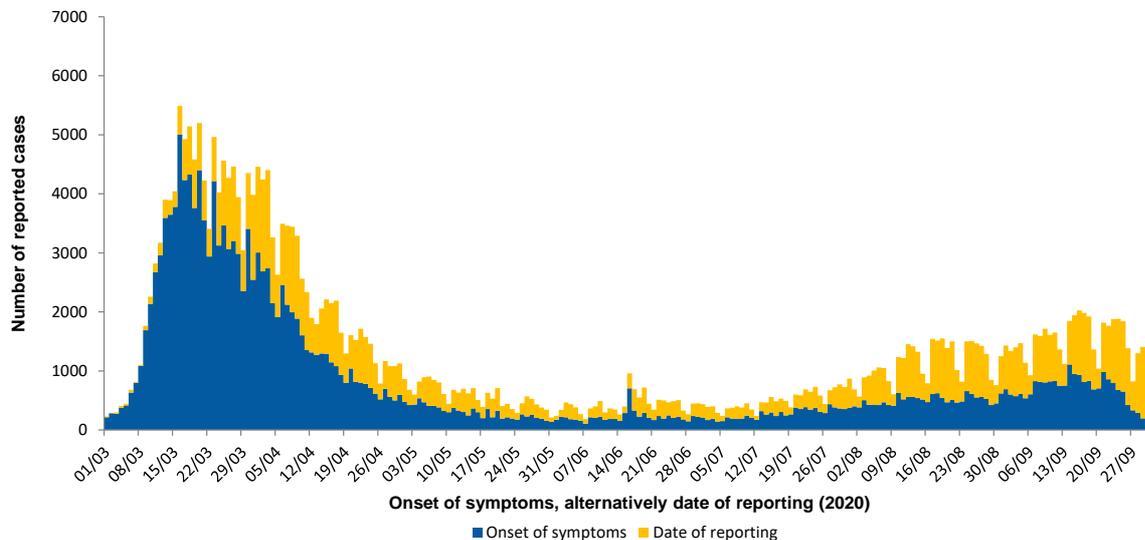


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (02/10/2020, 12:00 AM).

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 26% 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 (292,300* cases, no data available for 76,841 cases; 02/10/2020, 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	4,297	2,967	700	3,400
	Occupation in facility	16,368	704	23	15,900
§ 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*	9,523	138	1	8,300
	Occupation in facility	4,632	200	8	4,200
§ 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	20,301	4,432	3,718	16,100
	Occupation in facility	11,278	479	41	11,000
§ 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	6,353	264	5	6,000
Neither cared for, accommodated in nor working in a facility		142,707	19,138	3,690	129,900

*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. 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 from 47 districts, including the city of Hamm, the districts of Berlin Mitte and Rhön-Grabfeld, and the city of Remscheid with 7-day incidences of >50 cases/100,000 population.

The increased incidence in the city of Hamm is largely due to about 200 cases in connection with a wedding. More than 300 identified guests were tested and are under quarantine (<https://www.hamm.de/corona>). Stricter distancing measures have been implemented in Hamm (<https://www.hamm.de/aktuelles/weitere-corona-massnahmen-beschlossen>).

The outbreak in Berlin Mitte is attributable to a number of causes, such as the spread among young and international travellers and party guests, who contract the infection during travel or at parties and subsequently infect household members and family.

In the district Rhön-Grabfeld cases can be partially attributed to an outbreak in a nursing/retirement home. Quarantine and isolation measures have been implemented.

In the city of Remscheid the high incidence is primarily due to smaller outbreaks in day care centres and schools with spread to outside contacts. Stricter control measures have been implemented (https://remscheid.de/corona#chapter146380100000143530-1015_sp_main_iterate_1_0).

Currently, COVID-19 cases are predominantly due to transmission at family and other private events. The proportion of travel returnees among the cases is decreasing. The number of COVID-19-related outbreaks reported in nursing homes, hospitals, facilities for asylum seekers and refugees, community facilities, various occupational settings and in connection with religious events has increased.

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
0.97	1.08
(95%-prediction interval: 0.79 – 1.16)	(95%-prediction interval: 0.97– 1.20)

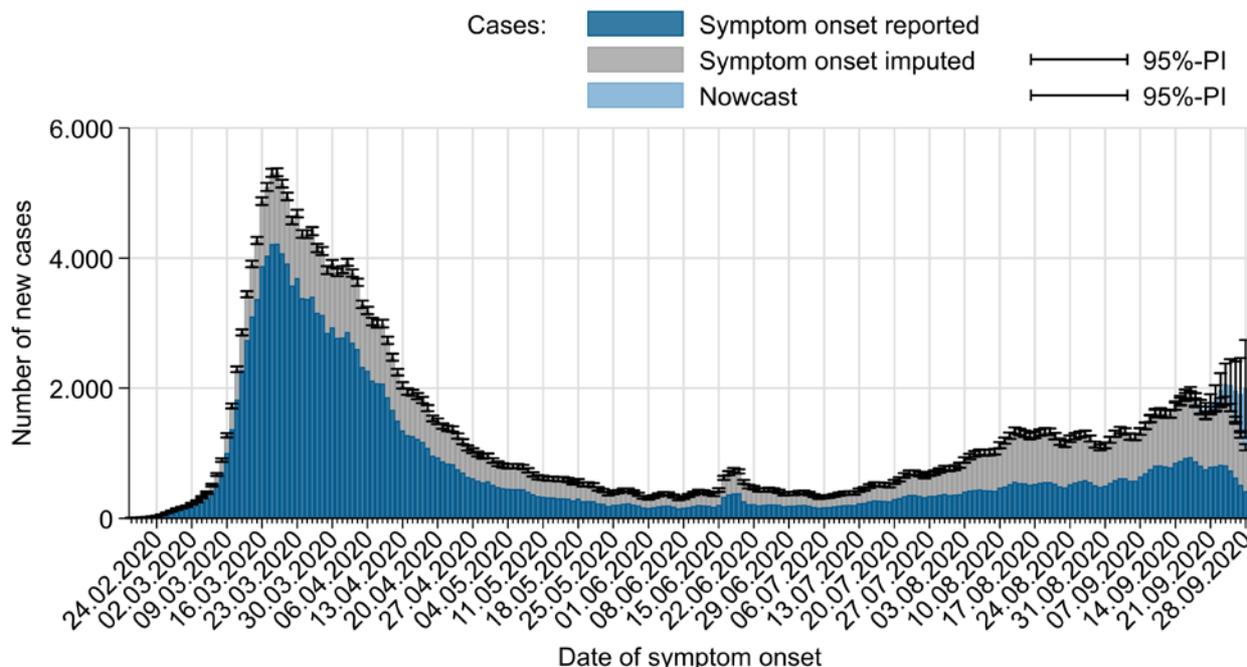


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 02/10/2020, 12 AM, taking into account cases up to 28/09/2020).

The reported R values have been predominantly greater than 1 since the second week in September. Although the 4-day R-value is below 1 today, this development must continue to be monitored closely.

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 02/10/2020, a total of **1,285** hospitals or departments reported to the DIVI registry. Overall, **30,482** intensive care beds were registered, of which **21,801** (72%) are occupied, and **8,681** (28%) 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 (02/10/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	373		11
- of these: mechanically ventilated	199	53%	6
Discharged from ICU	17,657		52
- of these: deaths	4,201	24%	4

*The interpretation of these numbers must take into account that 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.

Mortality Monitoring

A total of 24 European countries provide the European EuroMOMO project (European monitoring of excess mortality for public health action) with official mortality statistics on a weekly basis which allows the detection and measuring of excess deaths related to e.g. seasonal influenza and pandemics (<https://www.euromomo.eu/>). In Germany, two regional systems that allow the transmission of data have been established so far (since 2007 in Berlin and Hesse). The establishment of a nationwide monitoring system is planned from 2021 onwards.

An increase in all-cause mortality was observed in conjunction with the COVID-19 pandemic primarily in April 2020. Excess mortality was observed primarily in persons 65 years of age and older, but also among those 15 to 64-years of age. Excess mortality was highest in Belgium, France, Italy, the Netherlands, Spain, Sweden, Switzerland and the UK. All-cause mortality for the countries in the EuroMOMO network has now largely returned to expected levels even if in some countries there seems to be a small excess mortality.

Weekly mortality statistics are also recorded on the website of the Federal Statistical Office, albeit with a certain time lag. A special evaluation of excess mortality is normally updated weekly every two weeks. <https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/Tabellen/sonderauswertung-sterbefaelle.html> (in German).

Looking at the development by months, in March 2020 there was no noticeable increase in the number of deaths compared to March of the previous year. In April, however, all-cause mortality was significantly above the average of previous years; but decreased to expected levels since the beginning of May. In calendar week **36**, 2020 (**31/08 – 06/09/2020**), **16,308** people deceased (-32 compared to week **35**).

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 18/09/2020. The current version can be found here: [Risk assessment for COVID-19](#)

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/>
- 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.