ROBERT KOCH INSTITUT

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

25/09/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)	
Confirmed cases	**Deaths**
280,223 (+ 2,153*)	**9,443** (+ 15*)
Proportion of deaths	**Recovered**
3.4 %	**ca. 248,500**** (+ 1,600**)

Previous 7 days	
Confirmed cases	**7-day incidence**
10,819 (-163*)	**13.0 cases/ 100,000 population**
No. of districts reporting cases	**No. of districts with 7-day incidence > 50**
401/412 (-2*)	**3** (+1*)

**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.
Further data is available in the COVID 19 dashboard: https://corona.rki.de

– Changes since the last report are marked blue in the text –

Summary (as of 25/09/2020, 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. Therefore, the situation must still be carefully monitored.
- The cumulative nationwide incidence over the past 7 days was 13.0 cases per 100,000 inhabitants. The 7-day incidence exceeded 50 cases/100,000 inhabitants in 3 districts: the cities of Hamm and Remscheid and the district of Dingolfing-Landau. A total of 11 districts transmitted zero cases over the past 7 days.
- The 7-day incidence in Bavaria, Berlin and Hamburg is considerably higher, in North Rhine-Westphalia noticeably higher, and in Bremen slightly higher than the national mean 7-day incidence.
- In total, 280,223 laboratory-confirmed COVID-19 cases and 9,443 deaths associated with COVID-19 have been electronically reported to the RKI in Germany.
- A large number of COVID-19-related outbreaks continue to be reported in various settings. Case clusters occur particularly in nursing homes and hospitals, facilities for asylum-seekers and refugees, community facilities, various occupational settings, in the context of religious or family events and among travellers.

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, 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 is currently below 1.

There are outbreaks in various districts throughout Germany, which are associated with different situations, including large celebrations in the family and circle of friends or, especially in cases among younger people, outbreaks originating from travel returnees.

The current development must be further carefully monitored.

The proportion of deaths among COVID-19 cases reported since calendar week no. 30 lies below 1%. The proportion has decreased in comparison to the situation in spring. It is unlikely that the virus has changed and is now less pathogenic. There may be different reasons for the low proportion of deaths. On the one hand infections occur mainly among young people, who rarely experience a severe course of disease and die. On the other hand there is also broader testing, which means more mild cases are identified. Additionally, as the number of cases increases, the proportion of severe courses of disease and deaths only becomes apparent some time after diagnosis. If the trend continues and more elderly and vulnerable people get infected, an increase in hospitalisations and deaths is to be expected.

It is therefore still necessary for the entire population to be committed to infection control, e.g. by consistently observing rules of distance and hygiene - also outdoors -, by ventilating indoor spaces and, where necessary, 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*

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 280,223 (+2,153) laboratory-confirmed cases of COVID-19 have been electronically reported to and validated by the RKI (Table 1). A total of 11 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 (25/09/2020, 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	48,135	252	435	1,387	12.5	1,876	16.9
Bavaria	66,557	365	509	2,294	17.5	2,657	20.3
Berlin	13,811	238	368	943	25.2	228	6.1
Brandenburg	4,178	28	166	102	4.1	169	6.7
Bremen	2,280	18	334	105	15.4	59	8.6
Hamburg	7,431	62	404	317	17.2	269	14.6
Hesse	18,221	186	291	790	12.6	548	8.7
Mecklenburg-Western Pomerania	1,144	8	71	49	3.0	20	1.2
Lower Saxony	19,443	128	244	761	9.5	681	8.5
North Rhine-Westphalia	67,278	598	375	2,900	16.2	1,861	10.4
Rhineland-Palatinate	10,381	99	254	364	8.9	251	6.1
Saarland*	3,270	8	330	49	4.9	176	17.8
Saxony	6,942	55	170	293	7.2	230	5.6
Saxony-Anhalt	2,525	28	114	104	4.7	67	3.0
Schleswig-Holstein	4,603	63	159	237	8.2	161	5.6
Thuringia	4,024	17	188	124	5.8	190	8.9
Total	**280,223**	**2,153**	**337**	**10,819**	**13.0**	**9,443**	**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.

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

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 103,229 cases (37%), thus their date of reporting is provided.

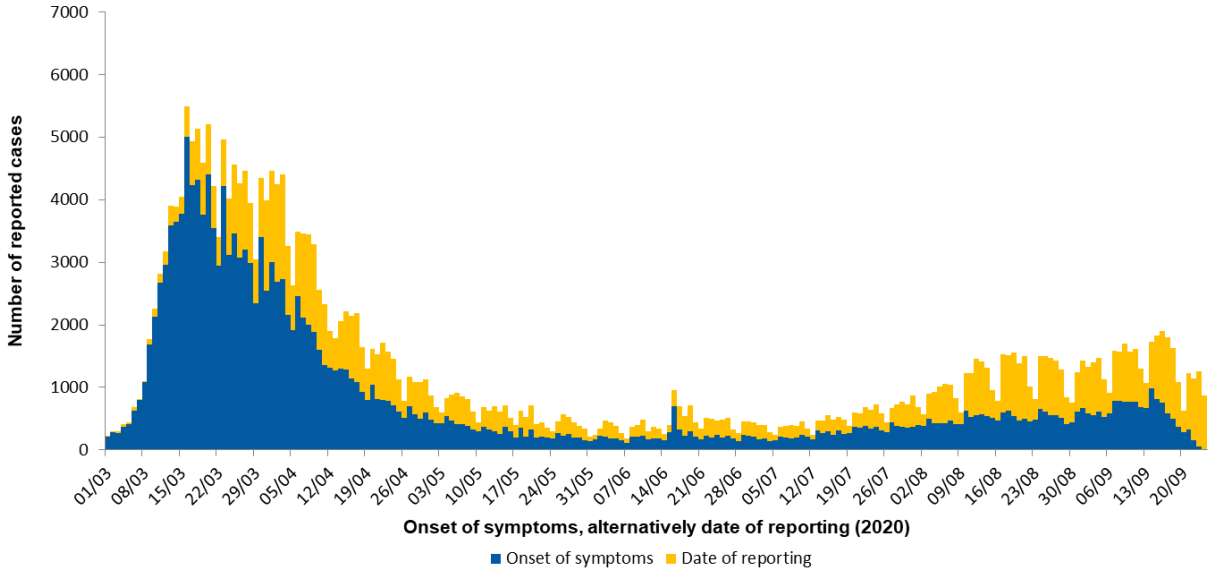

Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (25/09/2020, 12:00 AM).

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 (Tabelle 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), 77% were female and 23% male. Their median age was 44 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.

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

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 (278,281* cases, no data available for 71,956 cases; 25/09/2020, 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	4,180	2,919	695	3,300
	Occupation in facility	16,024	700	23	15,600
§ 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*	8,623	133	1	7,500
	Occupation in facility	4,299	192	8	3,900
§ 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	19,990	4,395	3,698	15,900
	Occupation in facility	11,072	476	40	10,800
§ 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	6,134	257	5	5,900
Neither cared for, accommodated in nor working in a facility		136,003	18,731	3,662	123,900

*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.

Outbreaks

In 27 districts an increased incidence of >25 cases in 7 days/100,000 population was reported, including the cities of Hamm and Remscheid and the district of Dingolfing-Landau, with 7-day incidences of > 50 cases/100,000 population.

The increased incidence in the city of Hamm is largely due to 150 cases in connection with a wedding. More than 300 identified guests are quarantined and required to be tested. Stricter distancing measures have been implemented in Hamm (https://www.hamm.de/aktuelles/weitere-corona-massnahmen-beschlossen).

The increased incidence in Dingolfing-Landau is mainly explained by a COVID-19 outbreak at an industrial concern and associated logistic partners. Mass testing was implemented; >30 cases have been diagnosed thus far.

The 7-day incidence in the city of Remscheid strongly increased to over 50 cases/100,000 inhabitants today. Here, cases were mainly found among contact persons of confirmed cases and can be attributed mostly to families that have returned from holidays: Several schools and nurseries are affected. Increased measures (e. g. broad quarantine) have been implemented (https://remscheid.de/corona#chapter14638010000014353O-1015_sp_main_iterate_1_0).

The increased incidence in the affected districts is mainly due to transmission during 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
0.91	1.01
(95%-prediction interval: 0.71 – 1.16)	(95%-prediction interval: 0.89 – 1.15)

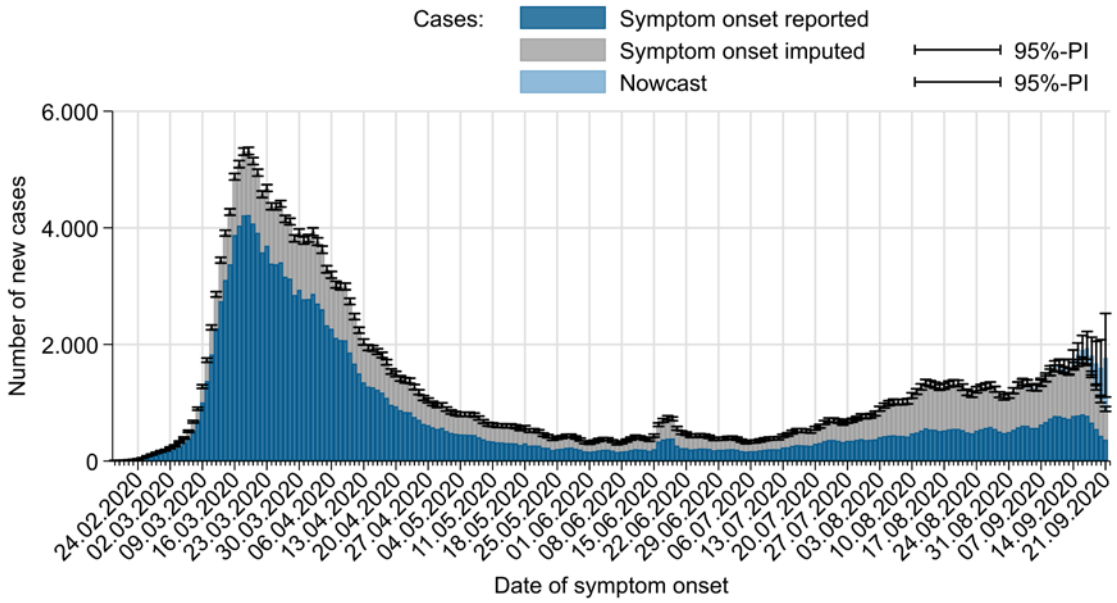

Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 25/09/2020, 12 AM, taking into account cases up to 21/09/2020).

The reported R values were above 1 since mid-July 2020, but were mainly under 1 since the 22/09/2020. Nonetheless, the trend must be monitored carefully.

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 25/09/2020, a total of 1,286 hospitals or departments reported to the DIVI registry. Overall, 30,578 intensive care beds were registered, of which 22,001 (72%) are occupied, and 8,577 (28%) 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 (25/09/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	304		8
- of these: mechanically ventilated	164	54%	-2
Discharged from ICU	17,368		59
- of these: deaths	4,148	24%	9

*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.

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 35, 2020 (24/08 – 30/08/2020), 16,167 people deceased (-1,079 compared to week 34).

Risk Assessment by the RKI

General assessment

At the global and the national level, the situation is dynamic and must be taken seriously. This is a dynamic and serious situation worldwide and in Germany. The number of cases continues to increase worldwide. The number of newly reported cases in Germany declined from about mid-March to the beginning of July, since then the number of cases has increased markedly. Many of these cases were associated with travellers. Since calendar week 35 transmissions within Germany can be observed to a larger extent. Large and small outbreaks continue to occur throughout Germany, particularly in connection with celebrations with family and friends and at group events. There are still no approved vaccines and the treatment of severe disease courses is complex and lengthy.

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

The Robert Koch Institute still estimates the risk to the health of the German population to be high, and very high for risk groups. This assessment may change in the short term due to new findings.

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). Here, contacts in risk situations (such as long face-to-face contact) play a special role. Aerosol emission increases sharply when speaking loudly, singing or laughing. In indoor rooms, this significantly increases the risk of transmission, even if a distance of more than 1.5 m is maintained. If the minimum distance of 1.5 m without covering the mouth and nose is not maintained, e.g. when groups of people sit at a table or in large gatherings, there is also an increased risk of transmission outdoors.

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. The individual risk cannot be derived from epidemiological/statistical data. Thus, even without known previous illnesses and in young people, the course of the disease can be severe or even life-threatening. Long-term consequences, even after slight progressions, cannot yet be assessed.

Burden on health system

The burden on the health care system depends largely on the geographical distribution of cases, the main population groups affected, the 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

- 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)*

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

- 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.

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