



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

01/10/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
291,722 (+2,503*)	9,500 (+12*)	12,393 (+328*)	14.9 cases/ 100,000 population
Proportion of deaths	Recovered	No. of districts reporting cases	No. of districts with 7- day incidence > 50
3.3 %	ca. 257,900** (+1,900**)	404/412 (+0*)	4 (+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 01/10/2020, 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. Therefore, the situation must still be carefully monitored.
- The cumulative nationwide incidence over the past 7 days was **14.9** cases per 100,000 inhabitants. The 7-day incidence exceeded 50 cases/100,000 inhabitants in **4** districts: the cities of Hamm and Remscheid, **the district of Berlin Mitte and Rhön-Grabfeld**. In a further **38** districts, it exceeded 25 cases/100,000 inhabitants. A total of 8 districts transmitted zero cases over the past 7 days.
- The 7-day incidence in Berlin, Bremen, Hamburg, **and North Rhine-Westphalia** was **considerably** higher, in Bavaria and Hesse slightly higher than the national mean 7-day incidence.
- In total, **291,722** laboratory-confirmed COVID-19 cases and **9,500** 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 4-day R-value has been predominantly greater than 1 since the second week 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 some time 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 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 **291,722 (+2,503)** laboratory-confirmed cases of COVID-19 have been electronically reported to and validated by the RKI (Table 1). A total of 8 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 (01/10/2020, 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	49,707	286	449	1,576	14.2	1,886	17.0
Bavaria	68,482	486	524	2,087	16.0	2,663	20.4
Berlin	14,788	288	395	1,103	29.4	228	6.1
Brandenburg	4,300	42	171	131	5.2	169	6.7
Bremen	2,471	36	362	213	31.2	59	8.6
Hamburg	7,896	59	429	410	22.3	271	14.7
Hesse	19,089	144	305	1,015	16.2	551	8.8
Mecklenburg-Western Pomerania	1,195	15	74	54	3.4	20	1.2
Lower Saxony	20,290	128	254	810	10.1	685	8.6
North Rhine-Westphalia	70,580	758	394	3,696	20.6	1,880	10.5
Rhineland-Palatinate	10,740	42	263	422	10.3	255	6.2
Saarland*	3,315	18	335	47	4.7	177	17.9
Saxony	7,288	86	179	327	8.0	235	5.8
Saxony-Anhalt	2,654	35	120	138	6.2	68	3.1
Schleswig-Holstein	4,821	49	166	268	9.3	162	5.6
Thuringia	4,106	31	192	96	4.5	191	8.9
Total	291,722	2,503	351	12,393	14.9	9,500	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 108,890 cases (37%), thus their date of reporting is provided.

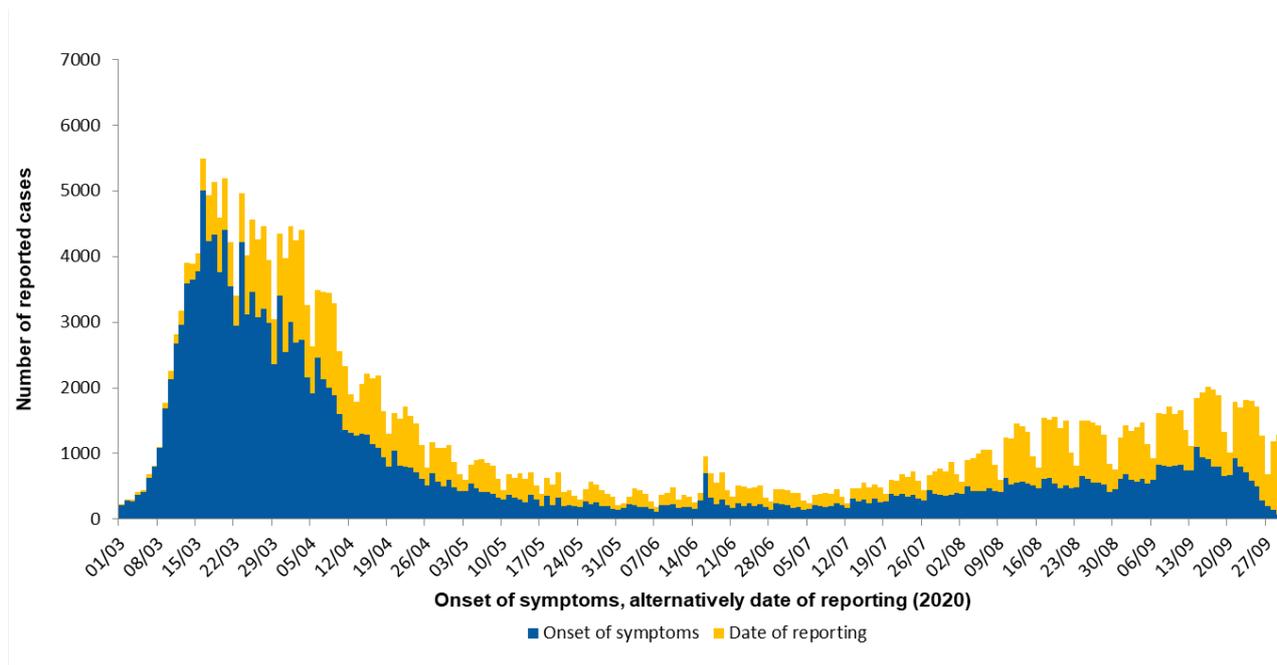


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (01/10/2020, 12:00 AM).

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.

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 (289,651* cases, no data available for 75,702 cases; 01/10/2020, 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	4,278	2,960	698	3,400
	Occupation in facility	16,308	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*	9,389	138	1	8,200
	Occupation in facility	4,579	200	8	4,100
§ 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	20,246	4,429	3,717	16,100
	Occupation in facility	11,228	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	6,309	264	5	6,000
Neither cared for, accommodated in nor working in a facility		141,612	19,082	3,687	129,000

*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.

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.

Outbreaks

An increased incidence of >25 cases in 7 days/100,000 population was reported from 42 districts, including the cities of Hamm, Remscheid, Berlin Mitte and the district Rhön-Grabfeld 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>).

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).

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.

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
0.90	1.05
(95%-prediction interval: 0.74 – 1.06)	(95%-prediction interval: 0.95– 1.14)

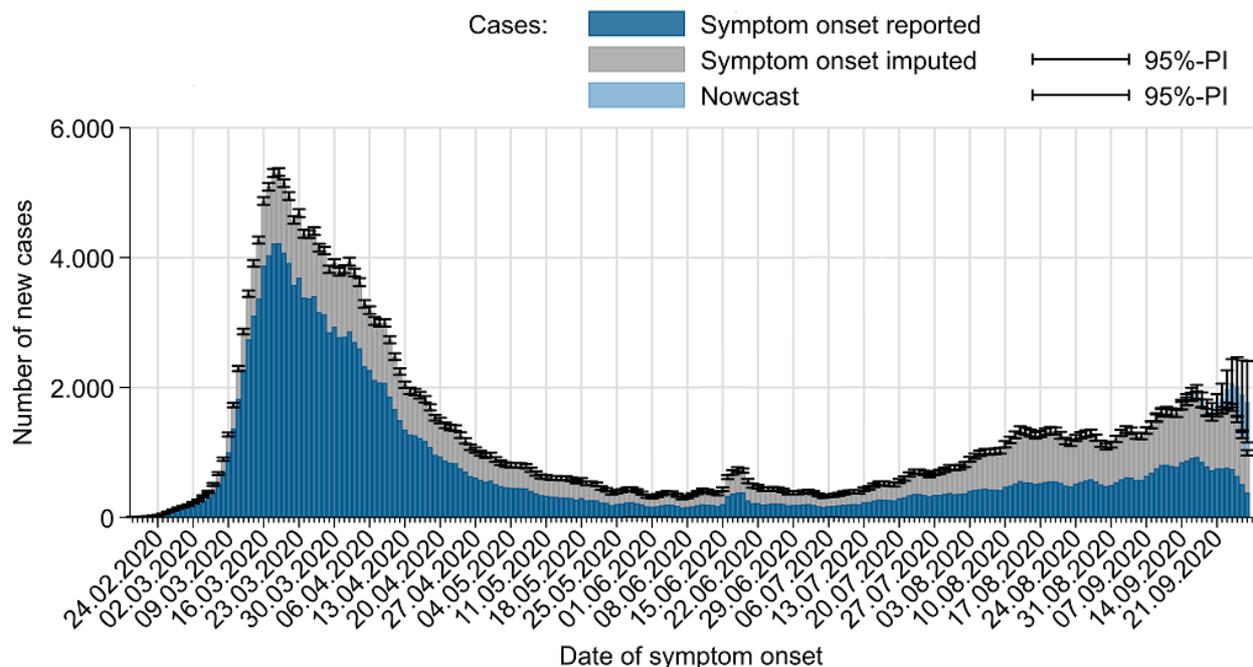


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 01/10/2020, 12 AM, taking into account cases up to 27/09/2020).

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 01/10/2020, a total of 1,285 hospitals or departments reported to the DIVI registry. Overall, 30,538 intensive care beds were registered, of which 21,832 (71%) are occupied, and 8,706 (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 (01/10/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	362		7
- of these: mechanically ventilated	193	53%	-2
Discharged from ICU	17,605		27
- of these: deaths	4,197	24%	-8

*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.

Information from additional RKI based surveillance systems for acute respiratory illnesses

GrippeWeb ("FluWeb") is a web interface at RKI for monitoring the activity of acute respiratory illness (ARI), utilizing information from the population. In week 39, 2020, the rate of ARI ("ARI rate") remained stable. Further information can be found under <https://grippeweb.rki.de/>.

The Influenza Working Group (AGI) monitors ARI through a sentinel network of physicians in private practices. In week 39, 2020, the overall number of patient visits due to acute respiratory infections decreased slightly in all age groups. Overall, it remained at a similar level to that of previous seasons at this time of the year. Within the viral surveillance of the AGI, virus was detected in 25 of 39 sentinel samples (64%) in week 39, 2020, including 24 samples with rhinovirus and one sample with SARS-COV-2 virus. Further information can be found under <https://influenza.rki.de/>.

A third, ICD-10 code based system monitors severe acute respiratory illness (SARI) in hospitalized patients (ICD-10 codes J09 to J22: primary diagnoses influenza, pneumonia or other acute infections of the lower respiratory tract). In week 38, 2020, the total number of SARI cases remained stable compared to week 37. Of all reported SARI cases in week 37, 2020, 5% were diagnosed with COVID-19 (ICD-10 code U07.1!) (see Figure 3). Please note that due to data availability only patients with an ICD-10 Code for SARI as the main diagnosis and hospitalisation duration of up to one week were included in this analysis.

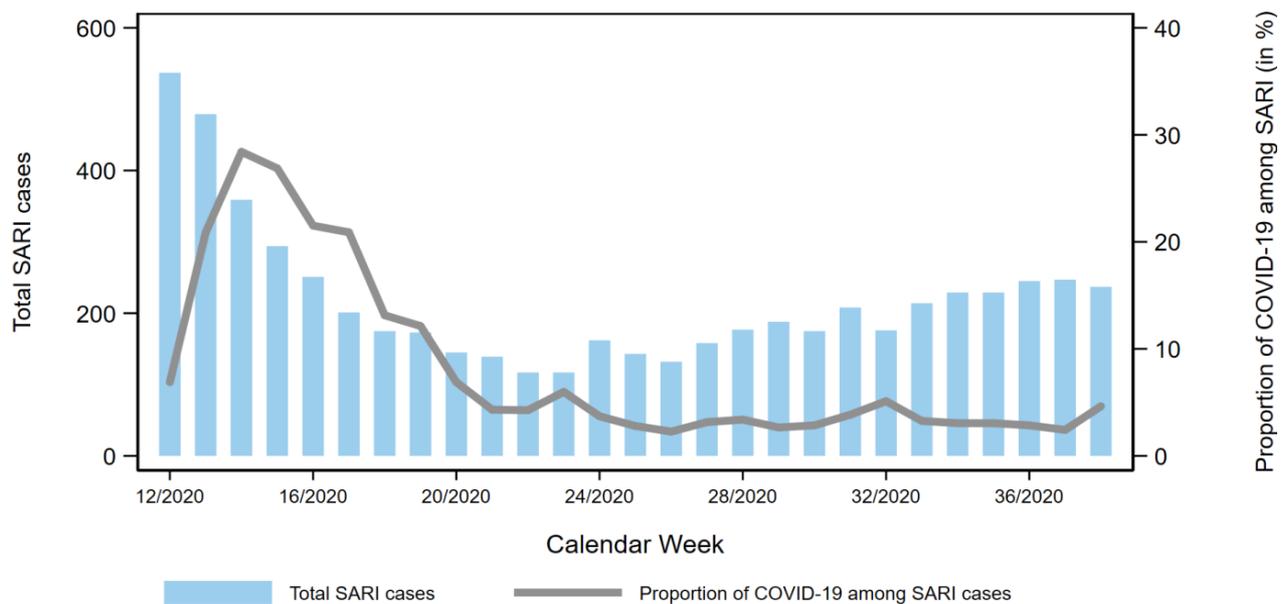


Figure 3: Weekly number of SARI cases (ICD-10 codes J09-J22) and proportion of cases with a diagnosis of COVID-19 (ICD-10 code U07.1!) among SARI cases with duration of hospitalisation of up to one week and with date of admission in weeks 12 to 38, 2020, from 69 sentinel hospitals

Data on emergency department utilisation

Data on emergency department utilisation

In collaboration with the National Emergency Department Register AKTIN (<https://www.aktin.org/en/>), the RKI analysed emergency department utilisation and prepared a weekly situation report: <https://www.rki.de/EN/Content/Institute/DepartmentsUnits/InfDiseaseEpidem/Div32/sumo/sumo.html>.

As of 27 September 2020, data from 9 emergency departments have been taken into account. Between 1 November 2019 and 1 March 2020, an average of 6,356 emergency department admissions per week was recorded. From the middle to the end of March 2020, a 40% decrease in the number of admissions was observed, to 3,697 admissions in week 13, 2020. Similar declines were evident in comparable surveillance systems in the USA, England and Wales. In parallel to the decrease in daily admissions, public measures were taken to contain the COVID-19 pandemic in Germany. Subsequently, an increase in admissions has been observed. **In week 39 2020, 5,679 admissions were recorded. Therefore, the number of admissions is currently 10% below the average of November 2019 to February 2020 (see Figure 4).**

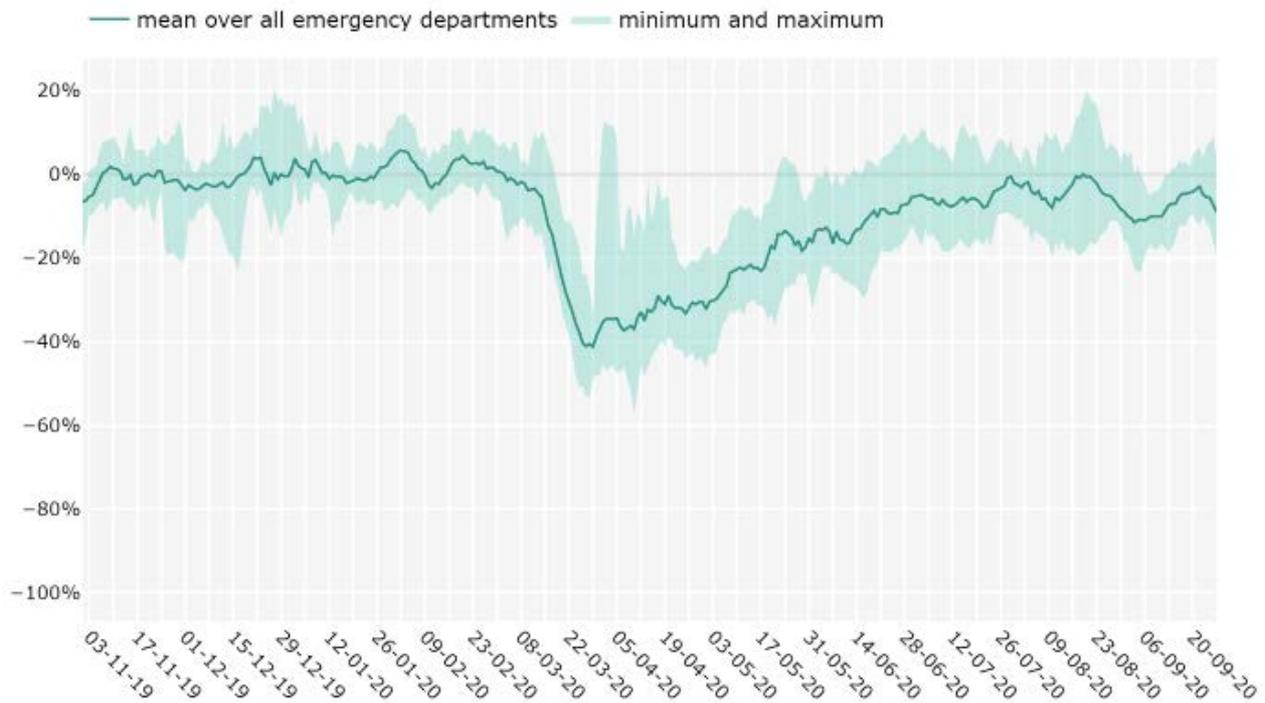


Figure 4: Number of emergency department attendances in Germany, from November 2019 to September 2020; 7-day moving average of 9 emergency departments; relative deviation to the reference period 1 November 2019 – 1 March 2020 (as of 27 September 2020)

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)

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

- 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.