



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

15/10/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
341,223 (+6,638*)	9,710 (+33*)	28,327 (+2,164*)	34.1 cases/ 100,000 population
Proportion of deaths	Recovered	No. of districts reporting cases	No. of districts with 7- day incidence > 50
2.8%	ca. 284,600** (+2,700**)	412/412 (+0*)	60 (+13*)

*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 15/10/2020, 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 **34.1** cases per 100,000 population.
- In comparison, the 7-day incidence in Berlin and Bremen is considerably higher, in Hesse, North Rhine-Westphalia and Saarland moderately higher and in Baden-Wuerttemberg slightly higher than the national mean 7-day incidence.
- The districts Berlin – Neukoelln, Bitburg-Pruem, **Sankt Wendel** and Berlin – Mitte exceeded a 7-day incidence of 100 cases/100,000 population. The 7-day incidence was 50 to 100 cases/100,000 population in **56** districts, in **125** additional districts it exceeded 25 cases/100,000 population.
- Since the beginning of September the proportion of cases in older age groups has been increasing again.
- A number of COVID-19-related outbreaks continue to be reported in various settings. Case clusters are being reported particularly in the context of family events, and in nursing homes.
- In total, **341,223** laboratory-confirmed COVID-19 cases and **9,710** deaths associated with COVID-19 have been electronically transmitted to the RKI in Germany.
- The RKI has published recommendations on test criteria and prevention measures at schools during the COVID-19 pandemic.
- The National Testing Strategy was updated and includes targeted antigen testing and extension of testing to further population groups.

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 **nearly all** federal states. The proportion of COVID-19 cases in the older age groups is currently considerably 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 settings, **and in nursing homes**.

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. **As elderly and vulnerable people are increasingly infected with SARS-CoV-2, hospitalisations and deaths are increasing**. 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.

The National Testing Strategy was updated on the basis of an ordinance on testing for SARS-CoV-2 which will enter into force on 15 October 2020. The overall objective of the National Testing Strategy remains the care for symptomatic COVID-19 cases, the protection of vulnerable groups and the prevention of the spread of the coronavirus SARS-CoV-2. The update includes the targeted use of antigen testing and the extension of testing to more population groups.

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 **341,223 (+6,638)** 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 (15/10/2020, 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	56,488	849	509	3,838	34.6	1,919	17.3
Bavaria	75,535	1,076	576	4,193	31.9	2,700	20.6
Berlin	19,537	504	532	2,612	71.2	237	6.5
Brandenburg	5,098	101	202	473	18.8	172	6.8
Bremen	3,274	108	481	469	68.8	62	9.1
Hamburg	9,288	135	503	563	30.5	278	15.0
Hesse	23,481	662	373	2,620	41.7	569	9.0
Mecklenburg-Western Pomerania	1,532	60	95	194	12.1	20	1.2
Lower Saxony	24,009	449	300	1,838	23.0	706	8.8
North Rhine-Westphalia	84,161	1,805	469	8,085	45.0	1,931	10.8
Rhineland-Palatinate	12,647	237	309	1,065	26.0	260	6.4
Saarland	3,960	93	401	425	43.1	177	17.9
Saxony	9,122	380	224	1,072	26.3	252	6.2
Saxony-Anhalt	2,999	33	137	168	7.7	68	3.1
Schleswig-Holstein	5,456	65	188	365	12.6	163	5.6
Thuringia	4,636	81	217	347	16.3	196	9.2
Total	341,223	6,638	410	28,327	34.1	9,710	11.7

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 135,457 cases (40%), thus their date of reporting is provided.

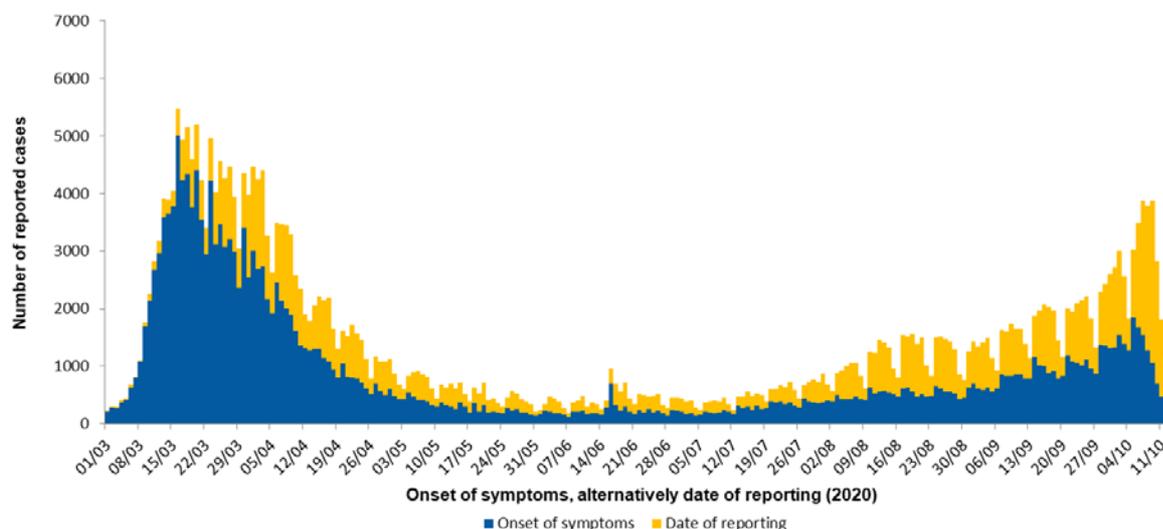


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (15/10/2020, 12:00 AM).

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 30% 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 (338,648* cases, no data available for 102,498 cases; 15/10/2020, 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	4,542	3,076	721	3,600
	Occupation in facility	17,191	725	24	16,500
§ 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*	11,340	158	1	9,900
	Occupation in facility	5,476	217	8	4,800
§ 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	21,114	4,511	3,769	16,600
	Occupation in facility	11,707	494	42	11,300
§ 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	6,877	270	5	6,400
Neither cared for, accommodated in nor working in a facility		157,903	20,053	3,771	142,300

*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 **185** districts, including 2 city districts in Berlin (Neukoelln, Mitte), the district of **Sankt Wendel (Saarland)** and the district of Bitburg-Pruem (Rhineland-Westfalia) with an incidence of over 100 cases/100,000 population and **56** additional 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.

In the district of Bitburg-Pruem, too, private birthday parties have contributed significantly to the spread of the infections.

Among the **56** other 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 **169** 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.

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
1.08 (95%-prediction interval: 0.89 – 1.31)	1.22 (95%-prediction interval: 1.11 – 1.35)

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 every day of the week is used to determine the value.

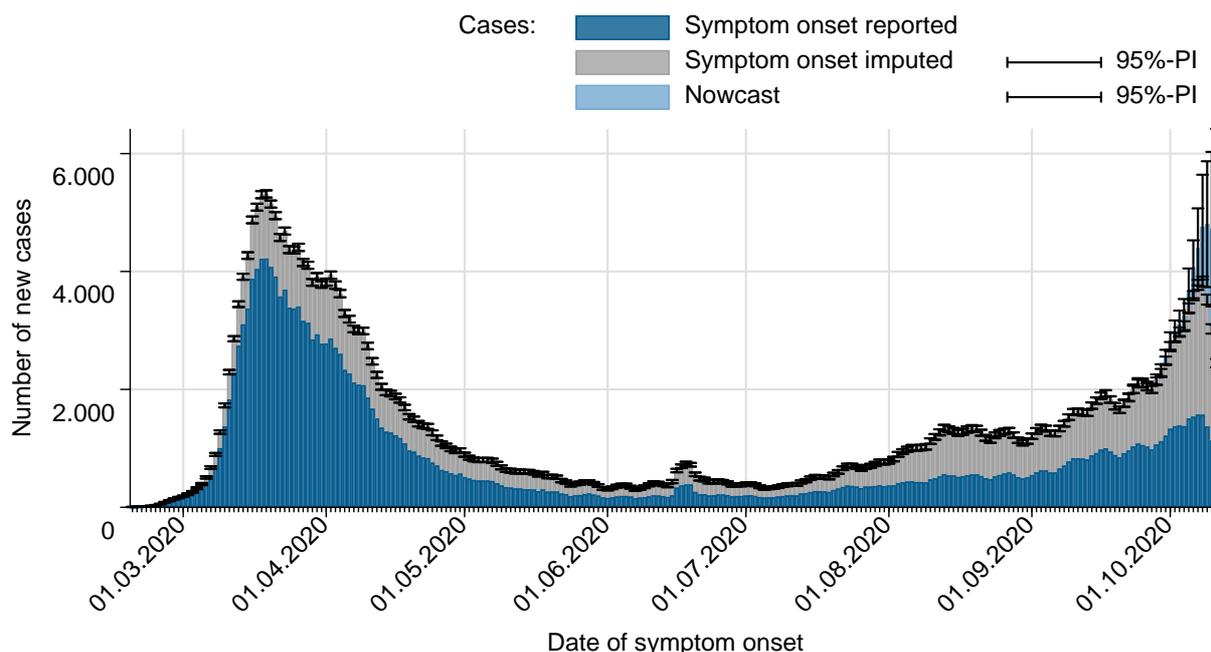


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 15/10/2020, 12 AM, taking into account cases up to 11/10/2020).

Since the end of September, an increase of the R-values, which are above one, 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 15/10/2020, a total of **1,282** hospitals or departments reported to the DIVI registry. Overall, **30,233** intensive care beds were registered, of which **21,514** (71%) are occupied, and **8,719** (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 (15/10/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	655		53
- of these: invasive mechanically ventilated	329	50%	6
Discharged from ICU	18,502		121
- of these: deaths	4,341	23%	22

*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.

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 **41**, 2020, the rate of ARI ("ARI rate") **remained relatively 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 **41**, 2020, the overall number of patient visits due to acute respiratory infections increased. The number of patient visits due to ARI decreased in children aged 5 to 14 years, but increased in all other 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 **28** of **49** sentinel samples (**57%**) in week **41**, 2020, including **25** samples with rhinovirus. SARS-CoV-2 virus was detected in **three** of **47** analyzed samples. 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 **40**, 2020, the total number of SARI cases **slightly decreased** compared to week **39**. Of all reported SARI cases in week **40**, 2020, **7%** 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.

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

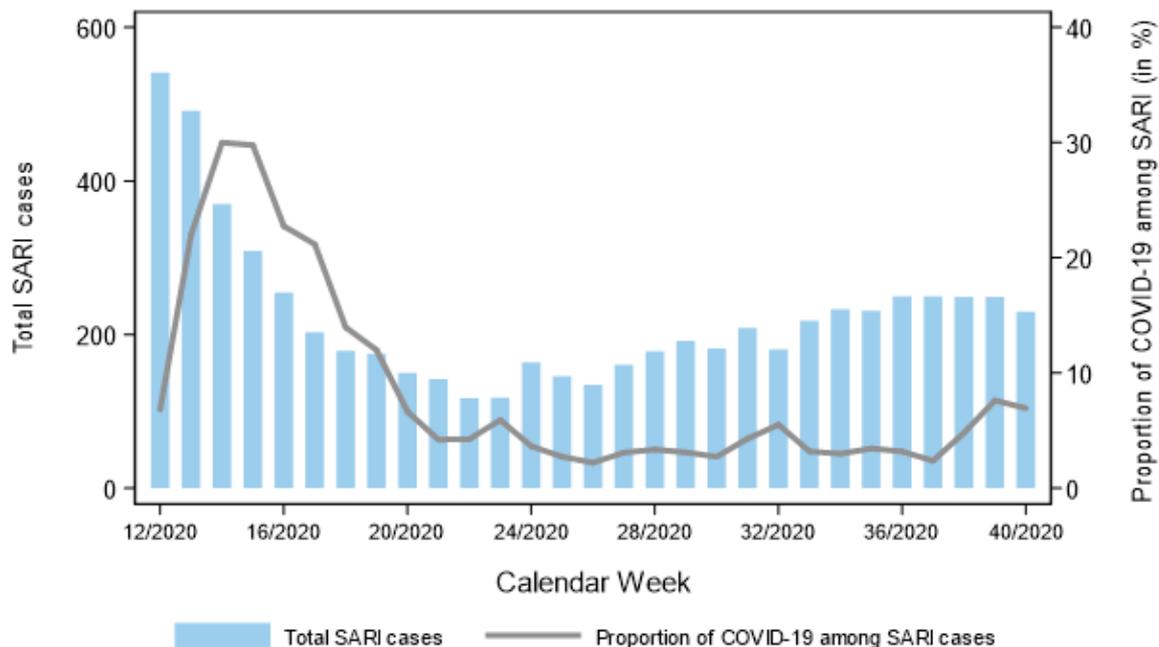


Figure 3: Weekly number of SARI cases (ICD-10 codes J09-J22) and proportion of cases with a diagnosis of COVID-19 (ICD-10 code U07.1!) among SARI cases with duration of hospitalisation of up to one week and with date of admission in weeks 12 to 40, 2020, from 71 sentinel hospitals

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 11 October 2020, data from 8 emergency departments have been taken into account. Between 1 November 2019 and 1 March 2020, an average of 5,691 emergency department admissions per week was recorded. From the middle to the end of March 2020, a 42% decrease in the number of admissions was observed, to 3,307 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 41 2020, 5,042 admissions were recorded. Therefore, the number of admissions is currently 11% below the average of November 2019 to February 2020 (see Figure 4).

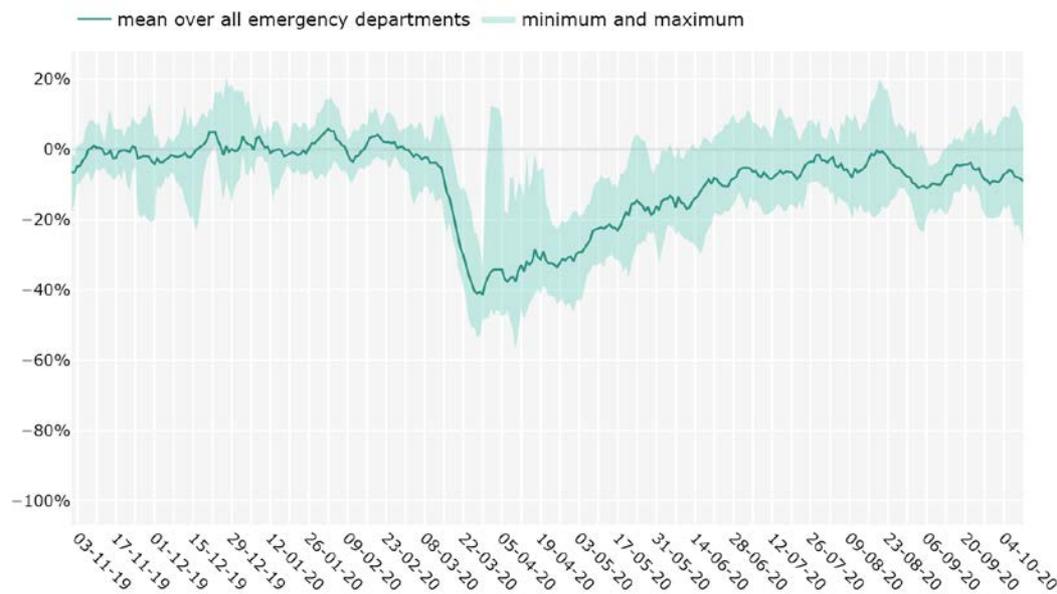


Figure 4: Number of emergency department attendances in Germany, from November 2019 to October 2020; 7-day moving average of 8 emergency departments; relative deviation to the reference period 1 November 2019 – 1 March 2020 (as of 15 October 2020)

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 07/10/2020. 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)
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Teststrategie/Nat-Teststrat.html
(in German)
- SARS-CoV-2 test criteria for schools during the COVID 19 pandemic (12/10/2020)
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Teststrategie/Testkriterien-Schulen.pdf?__blob=publicationFile (in German)
- Preventive measures in schools during the COVID 19 pandemic (12/10/2020)
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Praevention-Schulen.pdf?__blob=publicationFile (in German)
- 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-bundestkanzlerin-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.