



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

05/11/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
597,583 (+19,990*)	10,930 (+118*)	105,442 (+836*)	126,8 cases/ 100,000 pop
Proportion of deaths	Recovered	7-day incidence of people ≥ 60 years	No. of districts with 7- day incidence > 50
1.8%	ca. 391,600** (+10,200**)	83.8 cases/ 100,000 pop	359 (+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 05/11/2020, 12:00 AM)

- Currently, an 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 **126.8** 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 **83.8** cases/100.000 population.
- The 7-day incidence in Bremen, North Rhine-Westphalia, Berlin, Hesse, Saarland and Bavaria is higher than the national total 7-day incidence.
- **Almost all districts have a high 7-day incidence.** Only **10** districts have an incidence ≤25 cases/100,000 population. As of today, **125** districts have an incidence of >50-100 cases/100,000 population, **234** districts have an incidence of >100 cases/100,000 population and of these, **8** districts have an incidence of **>250 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 **increased** in the past 2 weeks from **1,030** patients on **22/10/2020** to **2,653** patients on **05/11/2020**.
- In total, **597,583** laboratory-confirmed COVID-19 cases and **10,930** 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 **597,583 (+19,990)** 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 (05/11/2020, 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	90,734	3,049	817	13,486	121.5	2,072	18.7
Bavaria	119,505	3,636	911	19,118	145.7	2,851	21.7
Berlin	35,971	1,148	980	5,959	162.4	272	7.4
Brandenburg	9,062	301	359	1,412	56.0	204	8.1
Bremen	6,365	257	934	1,478	217.0	80	11.7
Hamburg	15,132	388	819	1,844	99.8	296	16.0
Hesse	47,477	1,658	755	9,553	151.9	710	11.3
Mecklenburg-Western Pomerania	3,271	195	203	762	47.4	23	1.4
Lower Saxony	41,209	1,245	516	7,055	88.3	791	9.9
North Rhine-Westphalia	153,766	5,067	857	30,208	168.3	2,267	12.6
Rhineland-Palatinate	23,391	925	571	4,585	112.0	307	7.5
Saarland	7,564	251	766	1,455	147.4	195	19.8
Saxony	21,119	979	519	4,288	105.3	365	9.0
Saxony-Anhalt	5,897	315	269	1,144	52.1	88	4.0
Schleswig-Holstein	9,096	263	313	1,575	54.2	192	6.6
Thuringia	8,024	313	376	1,520	71.2	217	10.2
Total	597,583	19,990	719	105,442	126.8	10,930	13.1

*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 295,205 cases (49%) thus their date of reporting is provided in Figure 1.

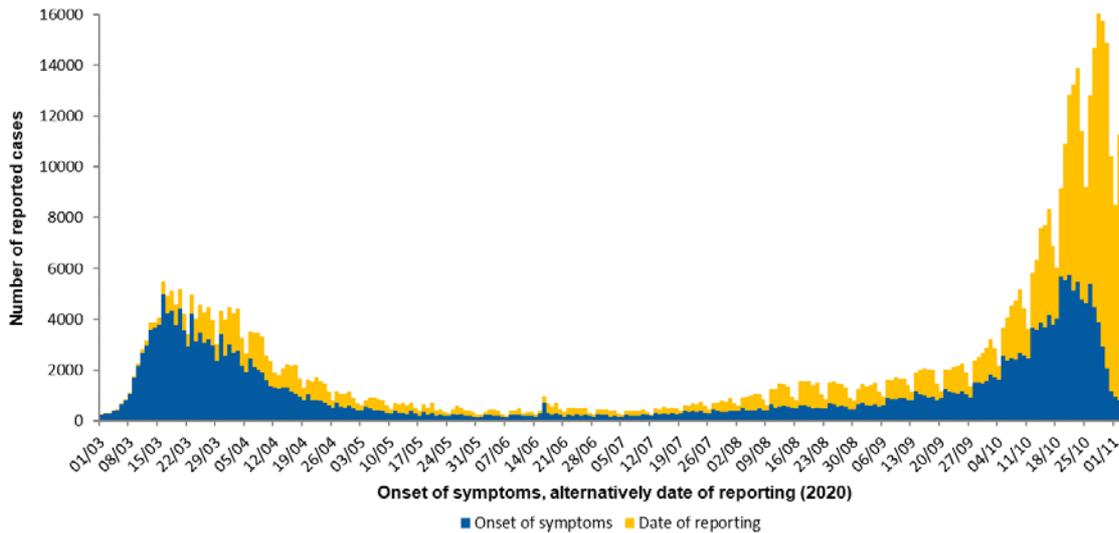


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (05/11/2020, 12:00 AM).

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 50% 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 (597,583* cases, no data available for 295,621 cases; 05/11/2020, 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	5,554	3,619	786	4,000
	Occupation in facility	19,974	784	25	18,400
§ 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*	15,951	201	2	13,200
	Occupation in facility	7,720	257	8	6,500
§ 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	23,978	4,834	3,984	17,900
	Occupation in facility	13,491	526	45	12,400
§ 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	7,974	304	5	7,400
Neither cared for, accommodated in nor working in a facility		203,537	22,388	4,003	176,400

*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 (402 of 412). By now, 234 urban and rural districts have an incidence of over 100 cases/100,000 population, including 8 districts with an incidence of over 250 cases/100,000 population; additionally, 125 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
0.79	0.93
(95%-prediction interval: 0.65 – 0.96)	(95%-prediction interval: 0.85 – 1.03)

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.

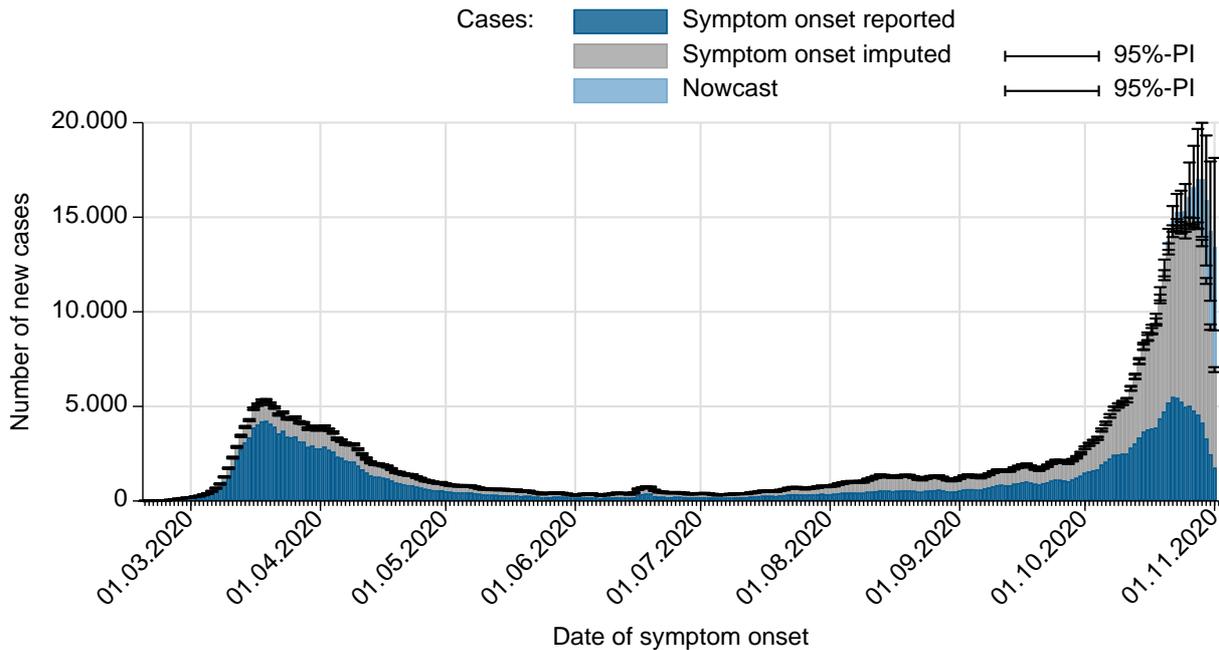


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 05/11/2020, 12 AM, taking into account cases up to 01/11/2020).

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 05/11/2020, a total of 1,286 hospitals or departments reported to the DIVI registry. Overall, 28,612 intensive care beds were registered, of which 21,718 (76%) are occupied, and 6,894 (24%) 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 (05/11/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	2,653		+107
- of these: with invasive mechanical ventilation	1,422	54%	+73
Discharged from ICU	22,280		+301
- of these: deaths	5,016	23%	+68

*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 44, 2020, the rate of ARI (“ARI rate”) remained stable. The ARI rate has been below the level of the previous years since week 36, 2020. 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 44, 2020, the overall number of patients visits due to acute respiratory infections (ARI rate) increased. The ARI rate increased in most of the age groups, but remained stable in children aged below 5 years. Overall, the number of patients visits due to ARI was higher than in previous seasons at this time of the year. Within the viral surveillance of the AGI, respiratory viruses were detected in 21 of 41 sentinel samples (51%) in week 44, 2020. Among those, rhinovirus was identified in 19 samples (46%) and SARS-CoV-2 was found in 2 samples (5%). No influenza virus was detected. 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 43, 2020, the total number of SARI cases increased sharply. The number of SARI cases in the age groups above 35 years were at a markedly higher level than in previous years, but remained below the usual level for children aged 0 to 14 years. Of all reported SARI cases in week 43, 2020, 32% were diagnosed with COVID-19 (ICD-10 code U07.1!) (See Figure 6). The proportion of COVID-19 infections among SARI cases has increased since week 40, 2020. In week 43, 2020 it has again reached the high level of weeks 14 and 15, 2020. The proportion of COVID-19 infections among SARI cases in week 43, 2020, by age groups can be found in Figure 7. This proportion was highest in the age groups 15 to 34 years and 35 to 59 years (41% and 46%, resp.). 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.

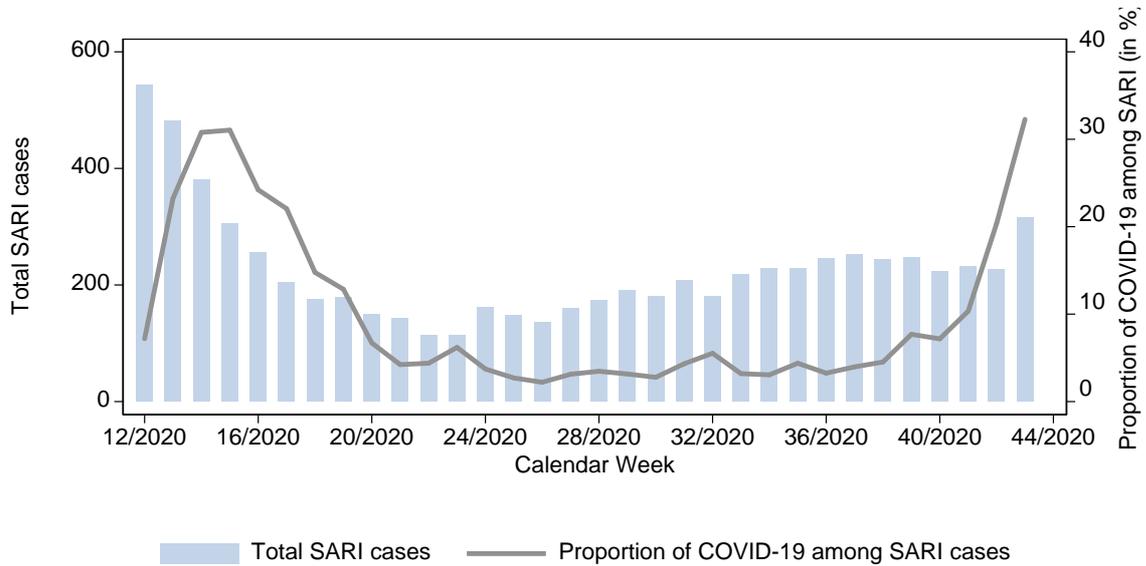


Figure 3: Weekly number of SARI cases (ICD-10 codes J09-J22) and proportion of cases with a diagnosis of COVID-19 (ICD-10 code U07.1!) among SARI cases with duration of hospitalisation of up to one week and with date of admission in weeks 12 to 43, 2020, from 71 sentinel hospitals

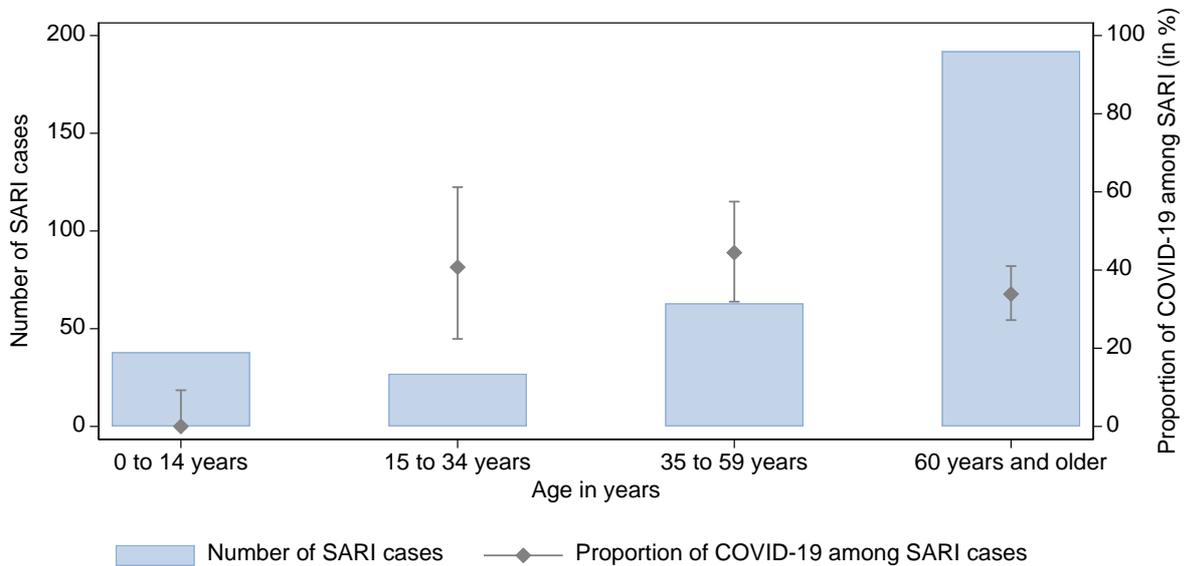


Figure 4: Number of SARI cases (ICD-10 codes J09-J22) and proportion of cases (including 95% confidence interval) with a diagnosis of COVID-19 (ICD-10 code U07.1!) among SARI cases by age groups; data from 71 sentinel hospitals, only cases with duration of hospitalisation of up to one week and with date of admission in week 43, 2020

Data on emergency department utilisation

In collaboration with the National Emergency Department Register AKTIN (<https://www.aktin.org/en/>), the RKI analyses emergency department utilisation, and prepares weekly situation report:

<https://www.rki.de/EN/Content/Institute/DepartmentsUnits/InfDiseaseEpidem/Div32/sumo/sumo.html>.

Within the emergency department situation report of the 4 November 2020, data from 8 emergency departments have been included from 01 January 2019 up to and including 1 November 2020. In week 44 2020, 4,824 admissions were recorded, a -2.5% change compared to last week, and a -14.1% average change compared to the mean of last year (Figure 5).

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

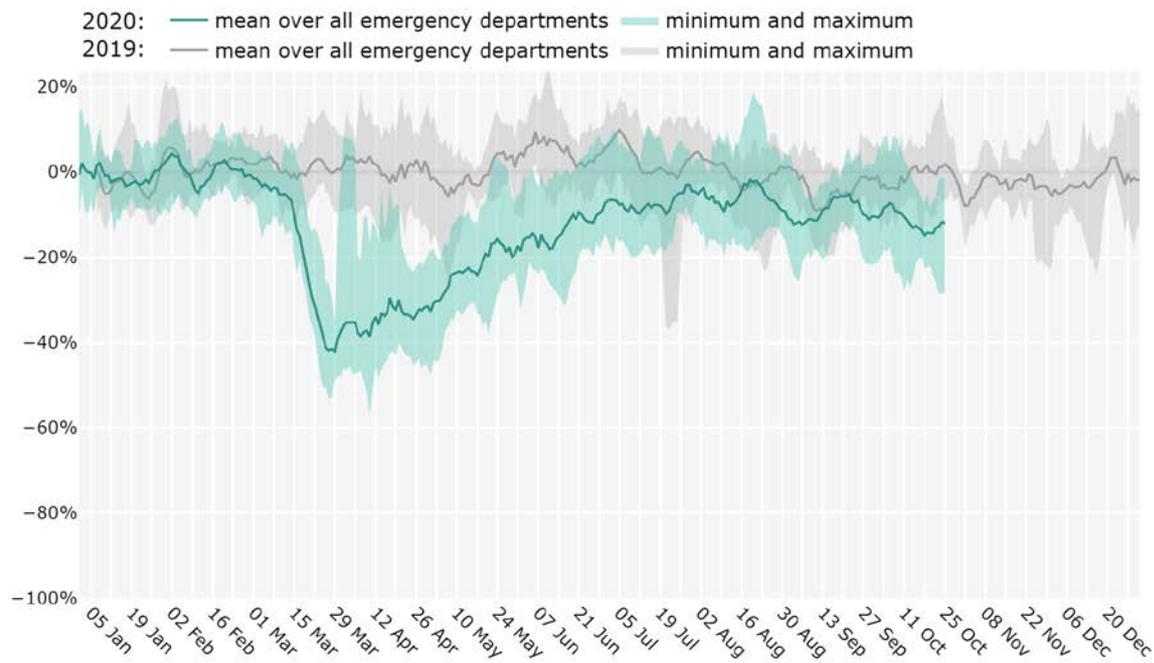


Figure 3: Relative deviation of admissions in each emergency department compared to its mean in 2019, from January 2019 to November 2020 (as of 01 November 2020), averaged over all emergency departments

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>

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

- 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.