



# Coronavirus Disease 2019 (COVID-19)

## Daily Situation Report of the Robert Koch Institute

19/11/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases		7-day incidence (7-di)		DIVI -Intensive care register
Total <sup>1</sup>	Active cases <sup>2</sup>	Total population	No. of districts with 7-di > 50/100,000 pop	Cases currently in ICU
+22,609 (855,916)	+6,200 [279,800]	139 cases/ 100,000 EW	+0 [375]	+ 27 [3,588]
Recovered <sup>3</sup>	Deaths	People ≥ 60 years	No. of districts with 7-di > 100/100,000 pop	Ended treatment; thereof deceased [%]
+16,212 (ca. 562,700)	+251 (13,370)	105 cases/ 100,000 EW	-2 [264]	+ 435 25%

Numbers in () brackets show cumulative values, numbers in [] brackets show current values.

<sup>1</sup> The difference to previous day relates to data entry at RKI; due to delay of data transmission former cases may be included.

<sup>2</sup> Active cases were calculated from the number of transmitted cases minus deaths and the estimated number of recovered cases.

<sup>3</sup> The algorithm for estimation of recovered cases considers information about disease onset and hospitalization but not for late effects because such data were not recorded regularly.

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 19/11/2020, 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 is 139 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 is currently 105 cases/100,000 population.
- The 7-day incidence in Bavaria, Berlin, Bremen, Hesse, North Rhine-Westphalia and Saxony is higher than the national total 7-day incidence.
- Almost all districts have a high 7-day incidence. Only 7 districts have an incidence of ≤ 25 cases/100,000 population. In comparison, 264 districts have an incidence of >100 cases/100,000 population and of these, 19 districts have an incidence of >250 cases/100,000 population.
- The high nationwide number of cases is caused by increasingly diffuse transmission, with numerous clusters in households, but also in community institutions, nursing and long-term care homes, as well as in occupational settings or related to religious events. For a large proportion of cases the transmission setting remains unclear.
- Since mid of October, the number of COVID-19 patients requiring intensive care has strongly increased, from 655 patients on October 15<sup>th</sup> to 3,588 patients on 19/11/2020.
- On 19/11/2020, 22,609 new laboratory-confirmed COVID-19 cases and 251 new deaths associated with COVID-19 have been transmitted to the RKI in Germany.

# Epidemiological Situation in Germany

In accordance with the international standards of WHO<sup>1</sup> and ECDC<sup>2</sup>, 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 been fluctuating and is currently around 1. This means that, on average, each person infected with SARS-CoV-2 infects another person. As the number of infected persons is currently very high in Germany, this means that there is still a high number of new cases every day.

There are outbreaks in various districts throughout Germany, which are associated with different situations, including households 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.

Currently, however, the number of illnesses among older people is on the rise again. As they more often have a severe course due to COVID-19, the number of serious cases and deaths is also increasing. These can be avoided if we prevent the spread of the SARS-CoV-2 virus with the help of infection control measures.

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.

<sup>1</sup> World Health Organization, [https://www.who.int/publications/i/item/WHO-2019-nCoV-Surveillance\\_Case\\_Definition-2020.1](https://www.who.int/publications/i/item/WHO-2019-nCoV-Surveillance_Case_Definition-2020.1)

<sup>2</sup> 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 **855,916 (+22,609)** 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 (19/11/2020, 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	123,941	3,071	1,117	14,666	132	2,369	21.3
Bavaria	168,358	4,070	1,283	21,933	167	3,314	25.3
Berlin	52,068	1,457	1,419	7,647	208	401	10.9
Brandenburg	13,947	430	553	1,910	76	262	10.4
Bremen	8,749	302	1,284	1,153	169	103	15.1
Hamburg	21,076	246	1,141	1,692	92	318	17.2
Hesse	70,200	2,130	1,116	10,217	162	961	15.3
Mecklenburg-Western Pomerania	4,787	167	298	747	46	47	2.9
Lower Saxony	58,346	1,422	730	6,842	86	951	11.9
North Rhine-Westphalia	216,809	5,429	1,208	29,892	167	2,819	15.7
Rhineland-Palatinate	35,065	921	857	5,519	135	391	9.6
Saarland	10,627	103	1,077	1,131	115	231	23.4
Saxony	38,769	1,878	952	7,257	178	582	14.3
Saxony-Anhalt	8,944	275	408	1,375	63	113	5.1
Schleswig-Holstein	12,124	207	418	1,360	47	229	7.9
Thuringia	12,106	501	567	2,191	103	279	13.1
<b>Total</b>	<b>855,916</b>	<b>22,609</b>	<b>1,029</b>	<b>115,532</b>	<b>139</b>	<b>13,370</b>	<b>16.1</b>

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 452,491 cases (53%) thus their date of reporting is provided in Figure 1.

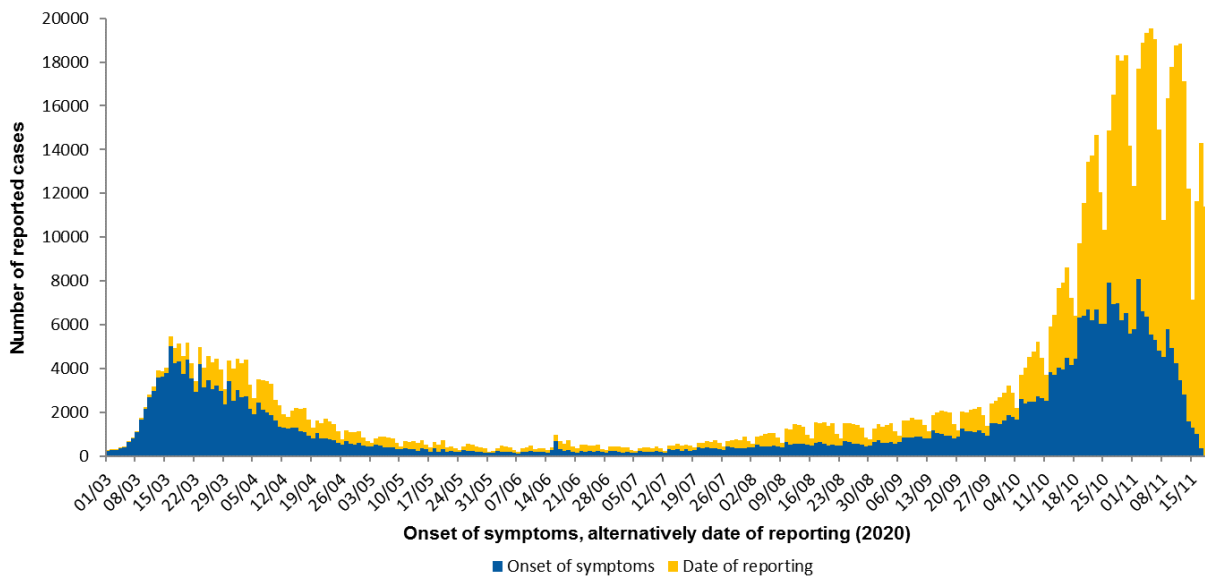


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (19/11/2020, 12:00 AM).

## 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 many 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.

[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.](#)

As of 18/11/2020, the number and proportion of persons  $\geq 60$  years old are reported in each category of Table 2.

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 (n=117,357 cases; 19/11/2020, 12:00 AM).

Einrichtung gemäß		Total	≥60 years Number Proportion	Hospitalised	Deaths	Recovered (Estimate)
§ 23 IfSG (e.g. hospitals, outpatient clinics and practices, dialysis clinics or outpatient nursing services)	Cared for / accommodated in facility	7,492	4,920 66%	4,810	957	5,100
	Occupation in facility	25,203	1,985 8%	923	25	22,500
§ 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*	24,766	—	281	3	20,100
	Occupation in facility	11,568	879 8%	320	9	9,800
§ 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	31,213	21,556 69%	5,865	4,579	21,900
	Occupation in facility	17,115	1,938 11%	601	49	15,000

\*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 the variables, no notifications according to §42 are listed in Table 5.

### Outbreaks

An increased incidence of >25 cases in 7 days/100,000 population was reported for almost every district (405 of 412). There are 19 districts in the group of the highest incidence of >250 to 500 cases/100,000 in the last 7 days. The dashboard (<https://corona.rki.de>) shows all affected districts.

In most districts the transmission is diffuse, with several cases clustering in households. Many small outbreaks in retirement and nursing homes, in hospitals and facilities for asylum seekers and refugees, and community facilities, kindergartens and schools, 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, The estimation of the R-value is based on the so-called nowcasting (Figure 2), a statistical procedure that shows the development of the number of cases after the onset of the disease and also forecasts it for the last few days, This forecast is subject to uncertainty, which is also reflected in the prediction intervals given for the R-value, After other case reports have been received at the RKI, the R-value is adjusted for the past days and, if necessary, corrected upwards or downwards, In recent weeks, values reported at the beginning of a week were typically corrected slightly upwards, They had thus slightly underestimated the real COVID-19 events in Germany, values estimated towards the end of a week were more stable, The currently estimated course of the R-value is shown in Figure 3,

4-day R-value
0.88
(95%-prediction interval: 0.74 – 1.06)

7-day R-value
0.99
(95%- Prädiktionsintervall: 0.91 – 1.06)

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,

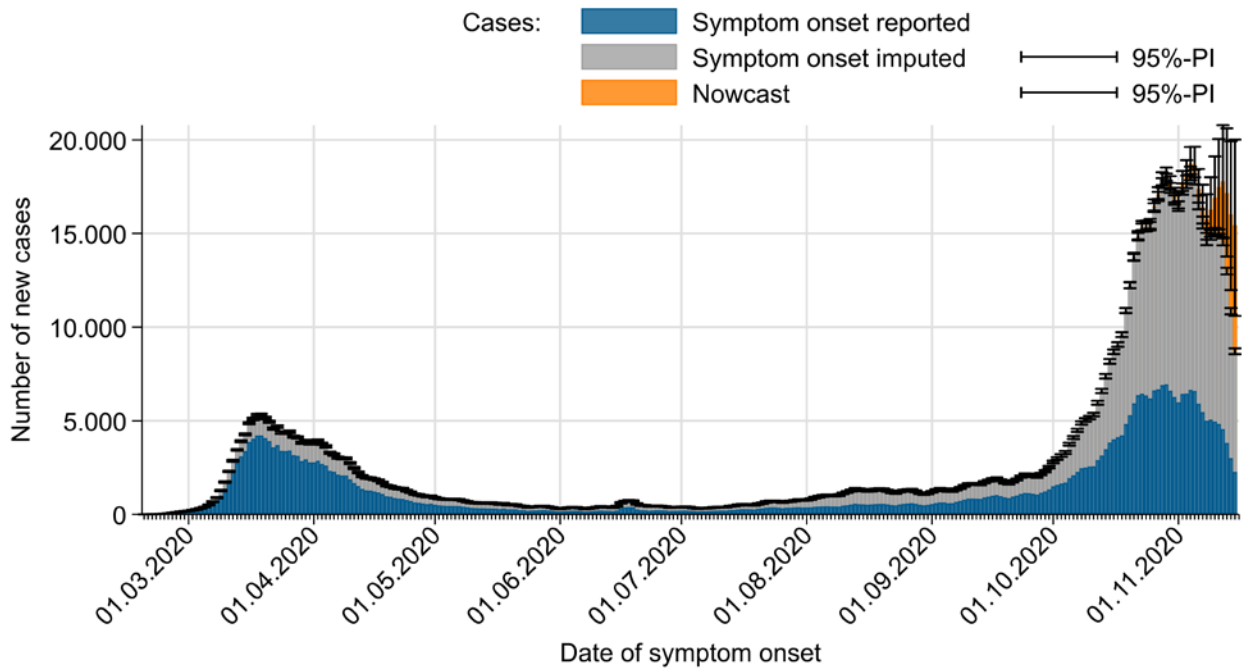


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (orange) (as of 19/11/2020,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

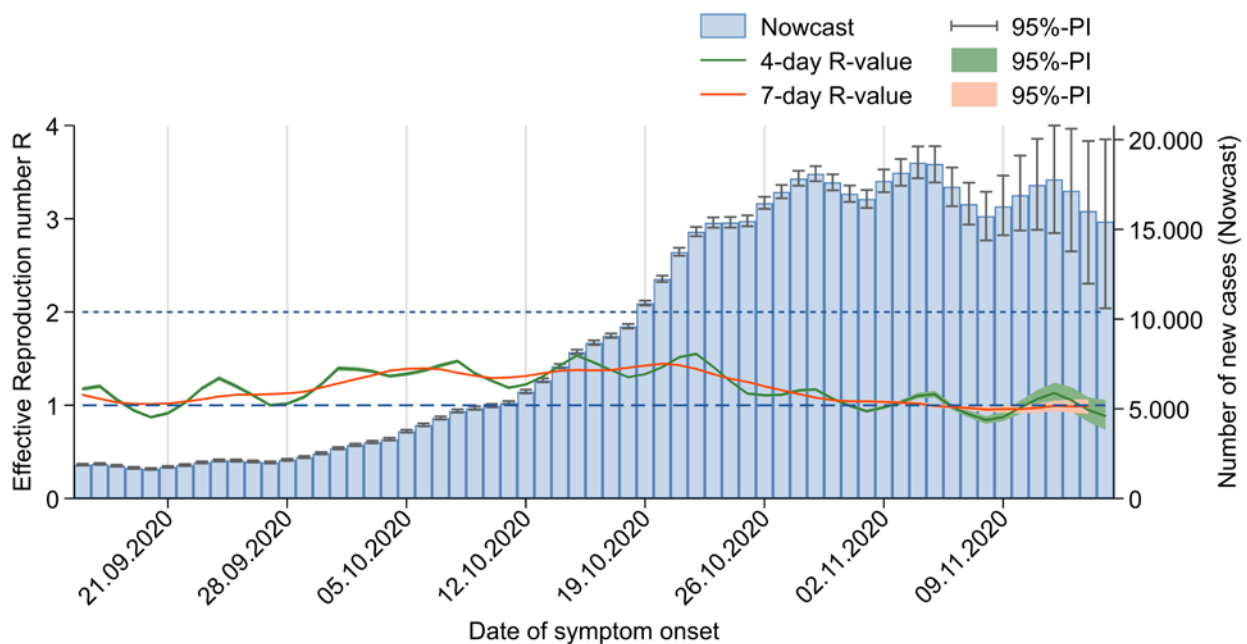


Figure 3: The estimated R-values (in green and orange) over the last 60 days, against the background of estimated number of COVID-19 cases according to illness onset (as of 19/11/2020, 12 AM, taking into account cases up to 15/11/2020).

The reported R-values have been stable well above 1 in October. Over the past few days the R-value has been fluctuating and is currently around 1. This means that, on average, each person infected with SARS-CoV-2 infects another person. As the number of infected persons is currently very high in Germany, this means that there is still a high number of new cases every day.

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](http://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](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 19/11/2020, a total of 1,288 hospitals or departments reported to the DIVI registry. Overall, 28,207 intensive care beds were registered, of which 21,934 (78%) are occupied, and 6,273 (22%) 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 (19/11/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
<b>Currently in ICU</b>	3,588		+27
- of these: with invasive mechanical ventilation	2,084	57%	+60
<b>Discharged from ICU</b>	27,645		+435
- of these: deaths	6,155	22%	+109

\*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 46, 2020, the rate of ARI ("ARI rate") decreased further. 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 46, 2020, the overall number of patients visits due to acute respiratory infections (ARI rate) decreased, but remained on a level comparable to that of previous seasons. The ARI rate declined in all age groups. The ARI rate had to be corrected downwards for week 46, 2020 and the previous weeks retrospectively, as additional diagnosis codes had been wrongly included since week 40, 2020. Within the viral surveillance of the AGI, respiratory viruses were detected in 17 of 67 sentinel samples (25%) in week 46, 2020. Among those, rhinovirus was identified in 14 samples (44%) and SARS-CoV-2 was found in 4 samples (6%). 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 45, 2020, the total number of SARI cases increased slightly. The number of SARI cases in the age group 35 to 59 years continued to increase to a high level, comparable to the peak level of previous influenza seasons. In contrast, the number of SARI cases in children aged 0

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

to 14 years remained below the usual level. Of all reported SARI cases in week 45, 2020, 53% were diagnosed with COVID-19 (ICD-10 code U07.1!) (See Figure 4). The proportion of COVID-19 infections among SARI cases has increased since week 40, 2020 and has reached a new peak in week 45, 2020. The proportion of COVID-19 infections among SARI by age groups can be found in Table 4. The proportions of COVID-19 cases in age groups 35 to 59 years and 60 years and above were slightly higher in autumn (weeks 40 to 44, 2020) than in spring (week 12 to 20, 2020). In SARI cases aged between 15 to 34 years, the proportion of COVID-19 cases in autumn has been nearly twice as high as in spring. In week 45, 2020, the proportion of COVID-19 cases was exceptionally high in the age groups above 14 years, comprising at least half of the SARI cases in this week. This proportion is highest in SARI cases aged between 35 to 59 years at 74%. 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.

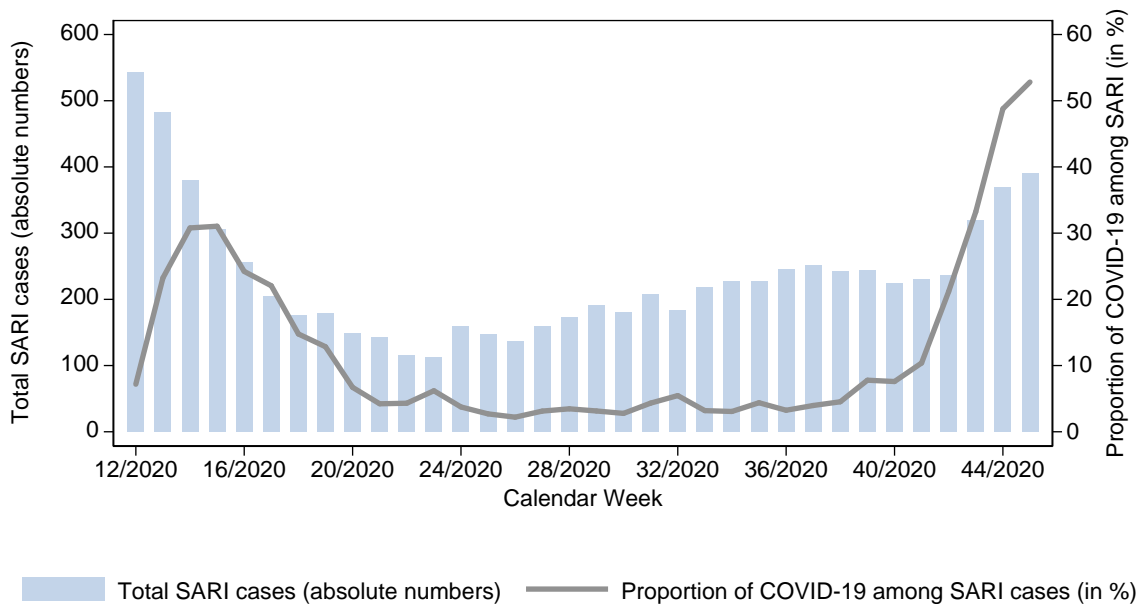


Figure 4: Weekly number of SARI cases (ICD-10 codes J09-J22) and proportion of cases with a diagnosis of COVID-19 (ICD-10 code U07.1!) among SARI cases with duration of hospitalisation of up to one week and with date of admission in weeks 12 to 45, 2020, from 71 sentinel hospitals

Table 4: Total 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 by age groups for different time periods since week 12, 2020; only patients with duration of hospitalisation of up to one week, data from 71 sentinel hospitals

		week 12 - 20, 2020	week 21 - 39, 2020	week 40 - 43, 2020	week 44, 2020
0 to 14 years	SARI cases (total)	321	857	199	32
	Proportion of COVID-19 (%)	0.3%	0.2%	1.0%	9.4%
15 to 34 years	SARI cases (total)	175	187	103	18
	Proportion of COVID-19 (%)	19%	13%	35%	67%
35 to 59 years	SARI cases (total)	527	503	269	105
	Proportion of COVID-19 (%)	31%	13%	45%	75%
60 years and older	SARI cases (total)	1,652	2,023	808	235
	Proportion of COVID-19 (%)	20%	3%	27%	48%
Overall	SARI cases (total)	2,675	3,570	1,379	390
	Proportion of COVID-19 (%)	20%	4%	27%	53%

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



## Data on emergency department utilisation

In collaboration with the National Emergency Department Register AKTIN (<https://www.aktin.org/en/>), and with the ESEG project partners

[https://www.rki.de/EN/Content/infections/epidemiology/ESEG/ESEG\\_node.html](https://www.rki.de/EN/Content/infections/epidemiology/ESEG/ESEG_node.html)), 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 18 November 2020, data from 20 emergency departments have been included from 01 January 2019 up to and including 15 November 2020. In week 46-2020, 11,507 admissions were recorded; which was a -2.3% change compared to last week, and a -23.5% average change compared to the mean of last year (Figure 5).

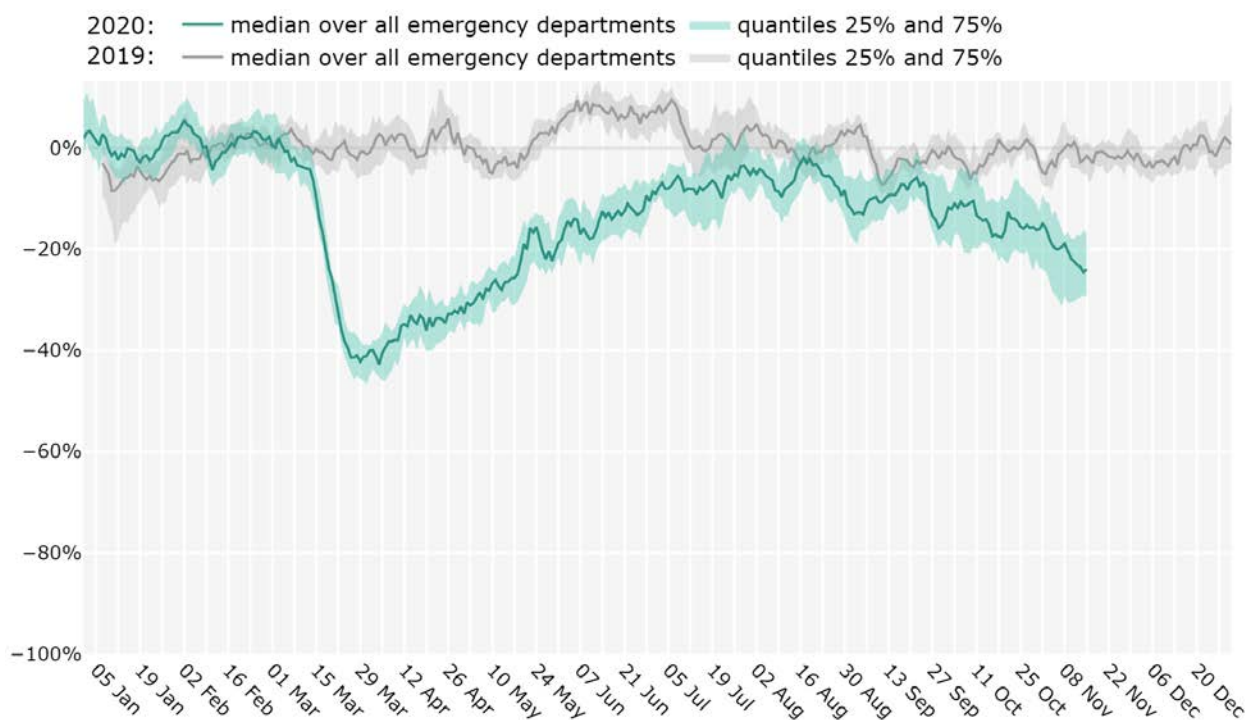


Figure 5: Relative deviation of admissions in each emergency department compared to its mean in 2019, from January 2019 to November 2020 (as of 18 November 2020), averaged over all emergency department

## Risk Assessment by the RKI

In view of the recent increase in case numbers with severe disease, which have to be treated in ICUs and the increasingly tense situation in the health system the risk assessment of the RKI was adapted to the situation on 11/11/2020, The current version can be found here:

[https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Risikobewertung.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikobewertung.html) (in German)

## Measures taken in Germany

- Third law on protection of the population in the event of an epidemic of national concern (18/11/2020, in German) <https://www.bundesgesundheitsministerium.de/service/gesetze-und-verordnungen/guv-19-lp/drittes-bevoelkerungsschutzgesetz.html>
- Management of contact persons (18/11/2020, in German) [https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Kontaktperson/Management.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Kontaktperson/Management.html)

- Updated Testing Criteria for autumn and winter season (11/11/2020, *in German*)  
[https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Teststrategie/Testkriterien\\_Herbst\\_Winter.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Teststrategie/Testkriterien_Herbst_Winter.html)
- Recommendations on distribution of COVID-19-vaccines by The Standing Committee on Immunisation (STIKO). The German Ethics Council and German National Academy of Sciences Leopoldina (09/11/2020, *in German*) <https://www.ethikrat.org/fileadmin/Publikationen/Ad-hoc-Empfehlungen/deutsch/gemeinsames-positions-papier-stiko-der-leopoldina-impfstoffpriorisierung.pdf>
- 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](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](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](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](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>
- 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](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.