



# Coronavirus Disease 2019 (COVID-19)

## Daily Situation Report of the Robert Koch Institute

26/11/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases		7-day incidence (7-di)		DIVI -Intensive care register
<b>Total<sup>1</sup></b>	<b>Active cases<sup>2</sup></b>	<b>Total population</b>	<b>No. of districts with 7-di &gt; 50/100,000 pop</b>	<b>Cases currently in ICU</b>
<b>+22,268</b> (983,588)	<b>2,200</b> [ca, 292,300]	<b>138 cases/ 100,000 pop</b>	<b>+9</b> [383/412]	<b>+ 45</b> [3,826]
<b>Recovered<sup>3</sup></b>	<b>Deaths</b>	<b>People ≥ 60 years</b>	<b>No. of districts with 7-di &gt; 100/100,000 pop</b>	<b>Ended treatment; thereof deceased [%]</b>
<b>+19,600</b> (ca, 676,100)	<b>+389</b> (15,160)	<b>110 cases/ 100,000 pop</b>	<b>-9</b> [273/412]	<b>+ 479</b> 32%

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 26/11/2020, 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 7-day incidence in Bavaria, Berlin, Hesse, North Rhine-Westphalia, Saxony and **Thuringia** is higher than the national total 7-day incidence of **138** 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 **110** cases/100,000 population.
- Almost all districts have a high 7-day incidence. Only **5** districts have an incidence of ≤ 25 cases/100,000 population. In comparison, **273** districts have an incidence of >100 cases/100,000 population and of these, **20** districts have an incidence of >250-500 cases/100,000 population and one district of >500-1000 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.
- The proportion of outbreaks with 5 people within the settings of nursing homes has continuously and considerably increased since week 38.
- **Between mid-October and mid-November, the number of COVID-19 cases treated in intensive care increased dramatically, from 655 patients on 15/10/2020 to 3,395 on 15/11/2020. Since then, the increase has slowed down slightly, with 3,826 cases on 26/11/2020**
- On 26/11/2020, **22.268** new laboratory-confirmed COVID-19 cases and **389** 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 increase has leveled off since the second week of November. The proportion of COVID-19 cases in older age groups is currently increasing. In November, the reported R-values have been fluctuating 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 results in a high number of new infections every day.

There are outbreaks in various districts throughout Germany, which are associated with different situations, including households, in schools and occupational settings. Increasingly, outbreaks in old people's and nursing homes are reported. Additionally, in many districts, there is an increasingly diffuse spread of SARS-CoV-2 without traceable transmission chains.

While the 7-day-incidence among younger age groups is decreasing, the incidence among older people is further increasing (cf. situation report 24/11/2020). 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. Since January 2020, a total of **983,588 (+22,268)** 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 (26/11/2020, 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	139,768	2,876	1,259	14,286	129	2,580	23.2
Bavaria	193,533	4,724	1,475	22,705	173	3,647	27.8
Berlin	60,554	1,630	1,650	7,397	202	508	13.8
Brandenburg	17,011	695	675	2,329	92	307	12.2
Bremen	9,642	193	1,415	902	132	114	16.7
Hamburg*	23,330	-1	1,263	1,330	72	347	18.8
Hesse	81,327	2,067	1,293	9,950	158	1,163	18.5
Mecklenburg-Western Pomerania	5,510	122	343	710	44	57	3.5
Lower Saxony	66,802	1,094	836	6,827	85	1,079	13.5
North Rhine-Westphalia	245,871	4,909	1,370	27,680	154	3,210	17.9
Rhineland-Palatinate	40,847	878	998	5,373	131	465	11.4
Saarland	11,960	274	1,212	1,105	112	249	25.2
Saxony	47,690	1,408	1,171	7,748	190	720	17.7
Saxony-Anhalt	10,930	514	498	1,784	81	145	6.6
Schleswig-Holstein	13,564	257	467	1,390	48	242	8.3
Thuringia	15,249	628	715	3,080	144	327	15.3
<b>Total</b>	<b>983,588</b>	<b>22,268</b>	<b>1,183</b>	<b>114,596</b>	<b>138</b>	<b>15,160</b>	<b>18.2</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.

\*Yesterday, no data were transmitted from Hamburg.

## 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 524,330 cases (53%) thus their date of reporting is provided in Figure 1.

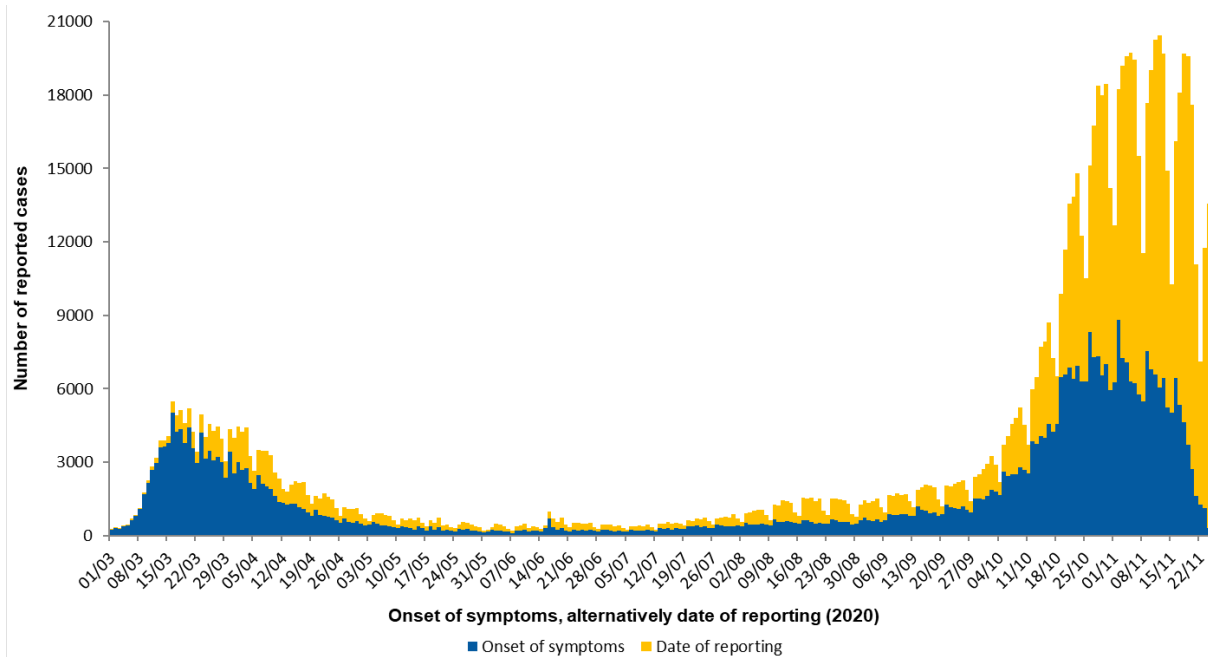


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (26/11/2020, 12:00 AM).

## 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.

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=131.495 cases; 26/11/2020, 12:00 AM).

Facility according to		Total	≥60 years, number (prop.)	Hospitalised	Deaths	Recovered (estimate)
§ 23 IfSG (e.g. hospitals, outpatient clinics and practices, dialysis clinics or outpatient nursing services)	Cared for / accommodated in facility	8,291	5,542 / 67%	5309	1,075	5,700
	Occupation in facility	27,568	2,153 / 8%	981	26	24,500
§ 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*	28,629	n.a.	320	3	23,700
	Occupation in facility	13,282	1,004 / 8%	339	11	11,300
§ 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, prisons)	Cared for / accommodated in facility	34,813	24,270 / 70%	6,374	4,957	24,100
	Occupation in facility	18,912	2,144 / 11%	642	51	16,400

\*for care according to § 33 IfSG only cases under 18 years of age are considered, as other information may be assumed to be incorrect. Due to changes in the variables, no notifications according to §42 are listed here.

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 (

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.

## Outbreaks

An increased incidence of >25 cases in 7 days/100,000 population was reported for almost every district (407 of 412). There are 20 districts in the incidence group of >250 to 500 cases/100,000 and one district in the incidence group of >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	7-day R-value
0.76 (95%-prediction interval: 0.62 – 0.91)	0.90 (95%- Prädiktionsintervall: 0.83 – 0.99)

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.

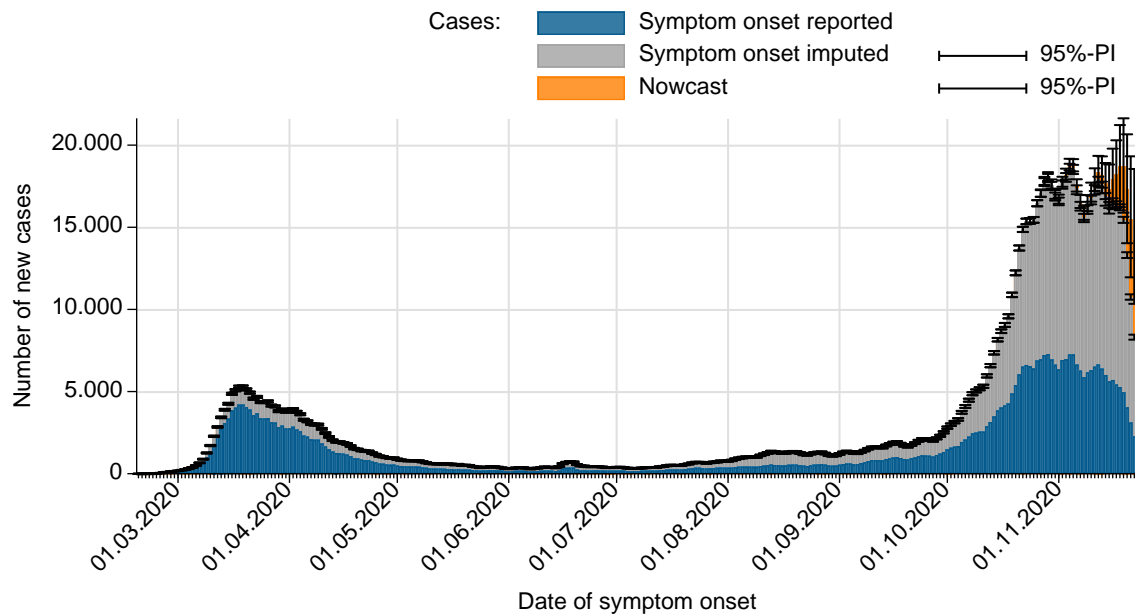


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (orange) (as of 26/11/2020, 12 AM, considering cases up to 22/11/2020).

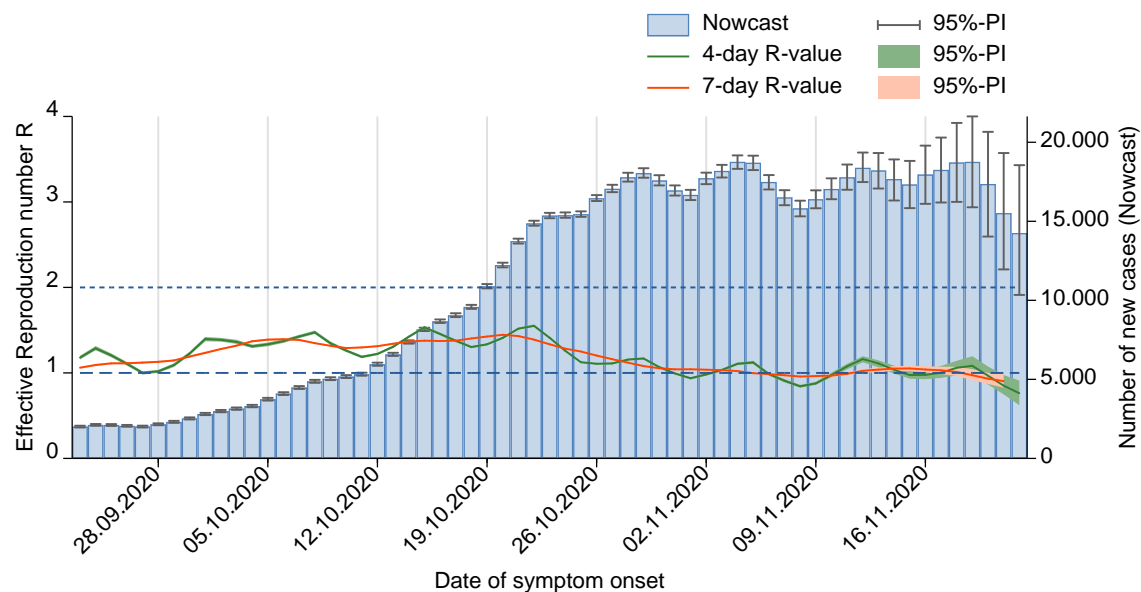


Figure 3: The estimated R-values (in green and orange) over the last 60 days, against the background of estimated number of COVID-19 cases according to illness onset (as of 26/11/2020, 12 AM, considering cases up to 22/11/2020).

The reported R-values have been fluctuating around 1 in November. 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 results in a high number of new infections 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 26/11/2020, a total of **1,288** hospitals or departments reported to the DIVI registry. Overall, **27,703** intensive care beds were registered, of which **22,128** (80%) are occupied, and **5,575** (20%) 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 (26/11/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
<b>Currently in ICU</b>	3,826		+45
- of these: with invasive mechanical ventilation	2,290	60%	+76
<b>Discharged from ICU</b>	30,362		+479
- of these: deaths	6,923	23%	+153

\*The interpretation of these numbers must consider 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 **47**, 2020, the rate of ARI ("ARI rate") **increased slightly**. 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 **47**, 2020, the overall number of patients visits due to acute respiratory infections (ARI rate) **remained stable** on a level comparable to that of previous seasons. Within the viral surveillance of the AGI, respiratory viruses were detected in **23** of **73** sentinel samples (**32%**) in week **47**, 2020. Among those, rhinovirus was identified in **21** samples (**29%**) and SARS-CoV-2 was found in **2** samples (**3%**). 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 **46**, 2020, the total number of SARI cases **continued to increase** slightly. The number of SARI cases in the age group 35 to 59 years **remained on** a high level, comparable to the peak level of previous influenza seasons. In contrast, the number of SARI cases in children aged 0 to 14 years remained below the usual level. Of all reported SARI cases in week **46**, 2020, **59%** 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 **46**, 2020. The proportion of COVID-19 infections among SARI by age groups can be found in Table 4.

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

The proportions of COVID-19 cases in all age groups were markedly higher in autumn (weeks 40 to 45, 2020) than in spring (week 12 to 20, 2020). In week 46, 2020, the proportion of COVID-19 cases was exceptionally high in the age groups above 14 years, comprising more than half of the SARI cases in this week. This proportion is highest in SARI cases aged between 35 to 59 years at 72%. Since week 40, 2020, the proportion of COVID-19 cases has also increased among SARI cases below 15 years of age to 13% in week 46, 2020. 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.

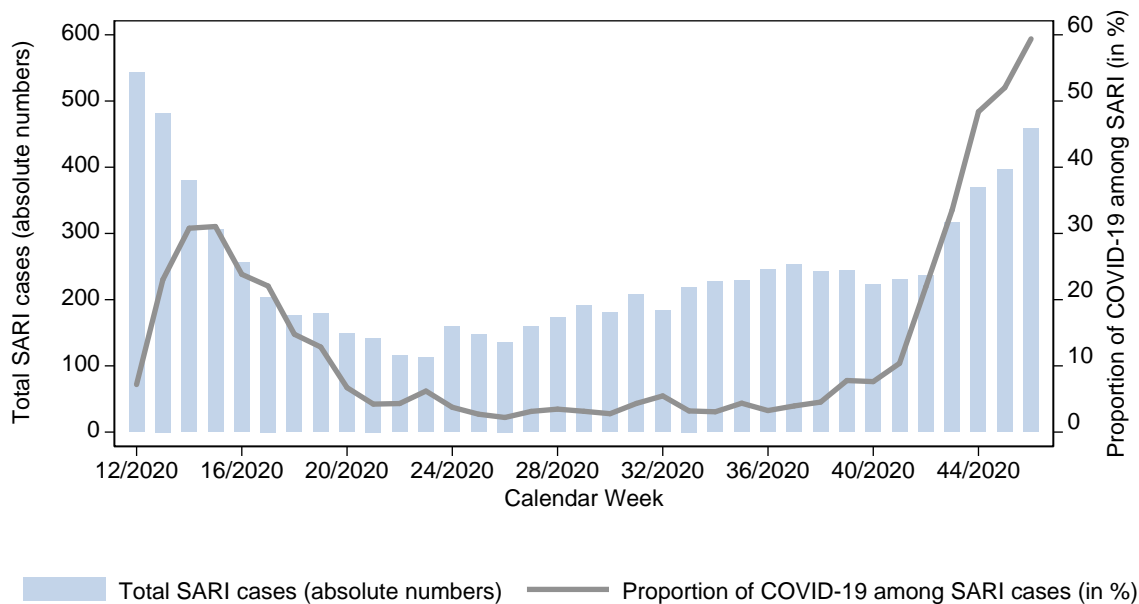


Figure 4: Weekly number of SARI cases (ICD-10 codes J09-J22) and proportion of cases with a diagnosis of COVID-19 (ICD-10 code U07.1!) among SARI cases with duration of hospitalisation of up to one week and with date of admission in weeks 12 to 46, 2020, from 71 sentinel hospitals

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 - 45, 2020	week 46, 2020
0 to 14 years	SARI cases (total)	321	857	231	40
	Proportion of COVID-19 (%)	0.3%	0.2%	2%	13%
15 to 34 years	SARI cases (total)	175	188	123	34
	Proportion of COVID-19 (%)	19%	13%	40%	62%
35 to 59 years	SARI cases (total)	527	504	378	113
	Proportion of COVID-19 (%)	31%	13%	53%	72%
60 years and older	SARI cases (total)	1,652	2,023	1,041	271
	Proportion of COVID-19 (%)	20%	3%	32%	61%
Overall	SARI cases (total)	2,675	3,572	1,773	458
	Proportion of COVID-19 (%)	20%	4%	33%	59%



## 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 25 November 2020, data from 21 emergency departments have been included from 01 January 2019 up to and including 22 November 2020. In week 47-2020, 11,893 admissions were recorded; which was a +0.1% change compared to last week, and a -24.2% average change compared to the mean of last year (Figure 5).

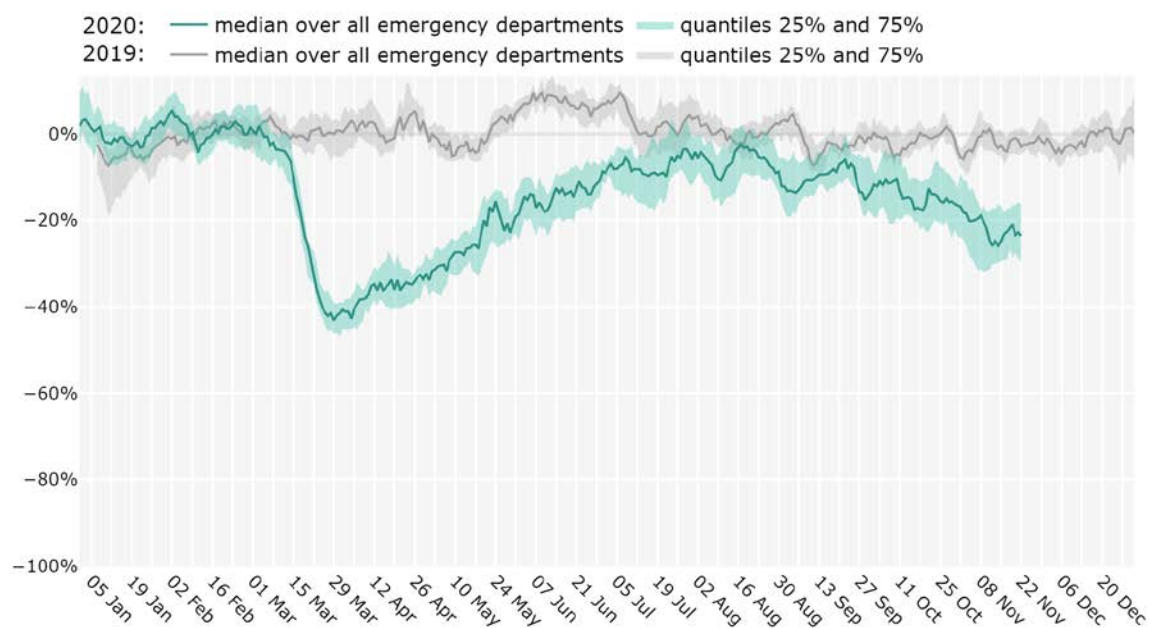


Figure 5: Relative deviation of admissions in each emergency department compared to its mean in 2019, from January 2019 to November 2020 (as of 25 November 2020), averaged over all emergency departments.

## 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  
<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.