



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

12/01/2021 - UPDATED STATUS FOR GERMANY

Confirmed cases		7-day incidence (7-di)		Vaccination monitoring	DIVI-Intensive care register
Total ¹	Active cases ²	Total population	No. of districts with 7-di > 50/100,000 pop	No. of vaccinations in last 24h ⁴	Change to previous day for cases currently in ICU
+12,802 (1,933,826)	-12,600 [322,200]	164 cases/ 100,000 pop	+0 [409/412]	+60,858	-59 [5,230]
Recovered ³	Deaths	60-79 years	80+ years	Total no. of vaccinated with one vaccine dose ⁴	Completed ICU treatment; thereof deceased [%]
+24,500 (ca. 1,570,000)	+891 (41,577)	130 cases/ 100,000 pop	317 cases/ 100,000 pop	688,782	+834 35 %
		No. of districts with 7-di > 100/100,000 pop			
		-3 [342/412]			

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

¹ The difference to the previous day relates to data entry at RKI; due to delay in data transmission former cases may be included.

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

³ 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.

⁴ Data on COVID-19 vaccinations are only updated on weekdays. On Sunday, no updated figures are reported.

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 12/01/2021, 12:00 AM)

- Currently, the number of transmissions in the population in Germany is high. RKI now judges the level of threat to the health of the general population as **very high**.
- Yesterday, **12,802** new laboratory-confirmed COVID-19 cases as well as **891** new deaths associated with COVID-19 were transmitted to the RKI in Germany. The national 7-day incidence is **164** cases per 100,000 population. In Saxony and Thuringia, it is markedly above the national incidence.
- All 412 districts have a high 7-day COVID-19 incidence. **342** districts have an incidence of >100 cases/100,000 population and of these, **53** districts have an incidence of >250-500 cases/100,000 population, and four districts have an incidence of >500 cases/100,000 population.
- The 7-day incidence of people 60-79 years is currently **130** and of people ≥80 years 317 cases/100,000 population.
- The high nationwide number of cases is caused by increasingly diffuse transmission, with numerous clusters especially in households, occupational settings and nursing and long-term care homes.
- On **12/01/2021**, **5,230** COVID-19 patients were in intensive care. In the preceding 24 hours, **834** existing patients had been discharged (35% of whom had died) and **775** patients were newly admitted. The resulting number of cases under treatment was **59 less** than the prior day.
- Since 26/12/2020 a total of **688,782** people in Germany have been vaccinated against COVID-19 (**8.3** vaccinated per 1,000 population) (<http://www.rki.de/covid-19-impfquoten>).

Epidemiological Situation in Germany

In accordance with the international standards of WHO¹ and ECDC², the RKI considers all laboratory confirmations of SARS-CoV-2 and confirms these via nucleic acid based (e.g. PCR) or direct pathogen detection, 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

Since the beginning of December, there has been a renewed sharp rise in the number of cases. During the holidays, the number of cases decreased. In the last few days, the number of cases has risen again. Whether this trend will continue, beyond the expected retesting and re-reporting, will only become clear in the course of the next few days.

The R-value is currently **around 1**. Due to the very high number of infected persons in Germany, this means a high number of new infections per day.

Outbreaks are being reported from various districts throughout Germany, currently particularly in nursing and long-term care homes, occupational settings and households. Additionally, in many districts, there is an increasingly diffuse spread of SARS-CoV-2 without traceable transmission chains.

Since patients in older age groups more often have more severe illness due to COVID-19, the number of serious cases and deaths remains on a high level. These can be avoided if all 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.

On 19/12/2020, a new virus variant (B.1.1.7) was reported in the UK. To date, it is unknown how the new virus variant will affect the COVID-19 pandemic. Cases with the new variant have already been detected in numerous countries around the world. So far, a few cases of this new variant in Germany have been reported to the RKI. Further cases may be expected. WHO has also reported another new virus variant detected in South Africa possibly associated with higher transmissibility and more severe disease. [Isolates of this lineage have also been identified sporadically in Germany.](#)

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 **1,933,826 (+12,802)** 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 (12/01/2021, 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	Cumulative cases			Last 7 days		Cumulative deaths	
	Total number of cases	Number of new cases*	Cases/100,000 pop.	Cases in the last 7 days	7-day incidence/100,000 pop.	Number of deaths	Number of deaths/100,000 pop.
Baden-Wuerttemberg	262,509	1,022	2,365	15,381	139	5,665	51.0
Bavaria	358,804	1,882	2,734	20,840	159	8,053	61.4
Berlin	107,226	1,036	2,922	6,873	187	1,591	43.4
Brandenburg	51,521	1,341	2,043	6,519	258	1,335	52.9
Bremen	14,383	18	2,111	588	86	225	33.0
Hamburg	40,960	273	2,217	2,347	127	820	44.4
Hesse	151,293	503	2,406	9,887	157	3,588	57.1
Mecklenburg-Western Pomerania	14,882	125	925	2,074	129	254	15.8
Lower Saxony	121,103	469	1,515	9,146	114	2,386	29.8
North Rhine-Westphalia	431,807	2,301	2,406	26,667	149	8,181	45.6
Rhineland-Palatinate	81,039	590	1,980	5,709	139	1,838	44.9
Saarland	22,142	242	2,244	1,819	184	555	56.2
Saxony	156,677	1,050	3,848	13,921	342	4,196	103.0
Saxony-Anhalt	38,320	1,020	1,746	5,216	238	912	41.6
Schleswig-Holstein	28,845	221	993	2,853	98	569	19.6
Thuringia	52,315	709	2,452	6,948	326	1,409	66.0
Total	1,933,826	12,802	2,325	136,788	164	41,577	50.0

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.

* In Brandenburg, some health authorities experienced a backlog in data entry and thus in data transmission to the RKI. In some cases, this leads to large discrepancies between locally reported incidences and case numbers compared to those reported by the RKI.

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 **1,066,349** cases (55%) thus their date of reporting is provided in Figure 1.

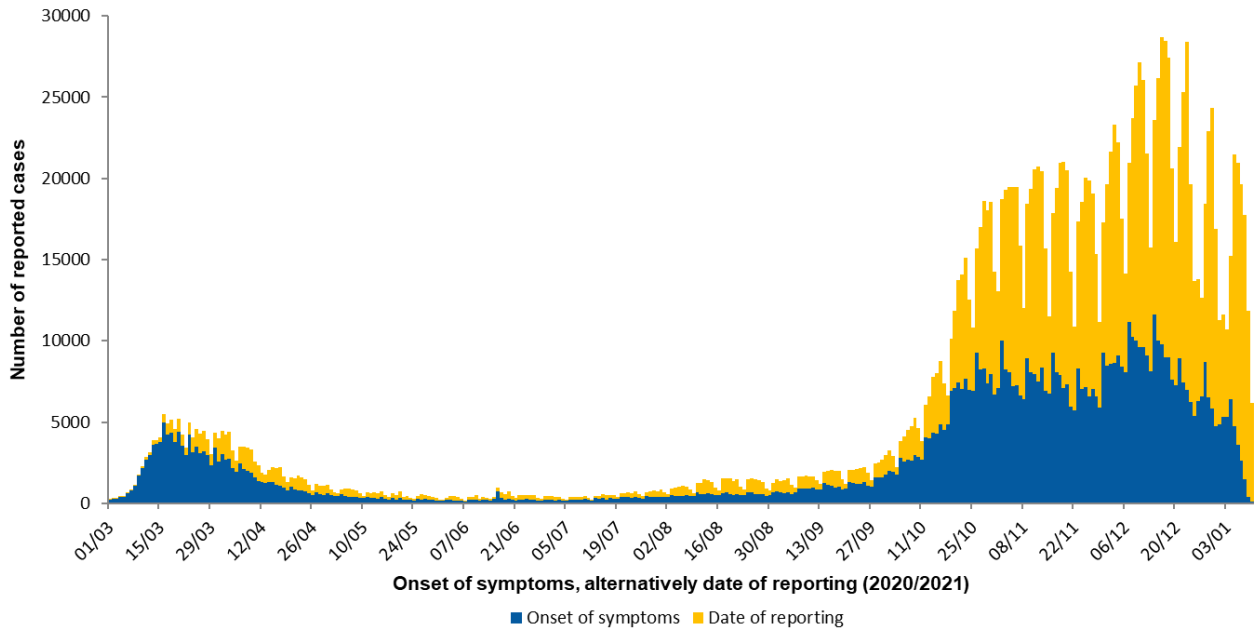


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (12/01/2021, 12:00 AM).

Demographic distribution of cases

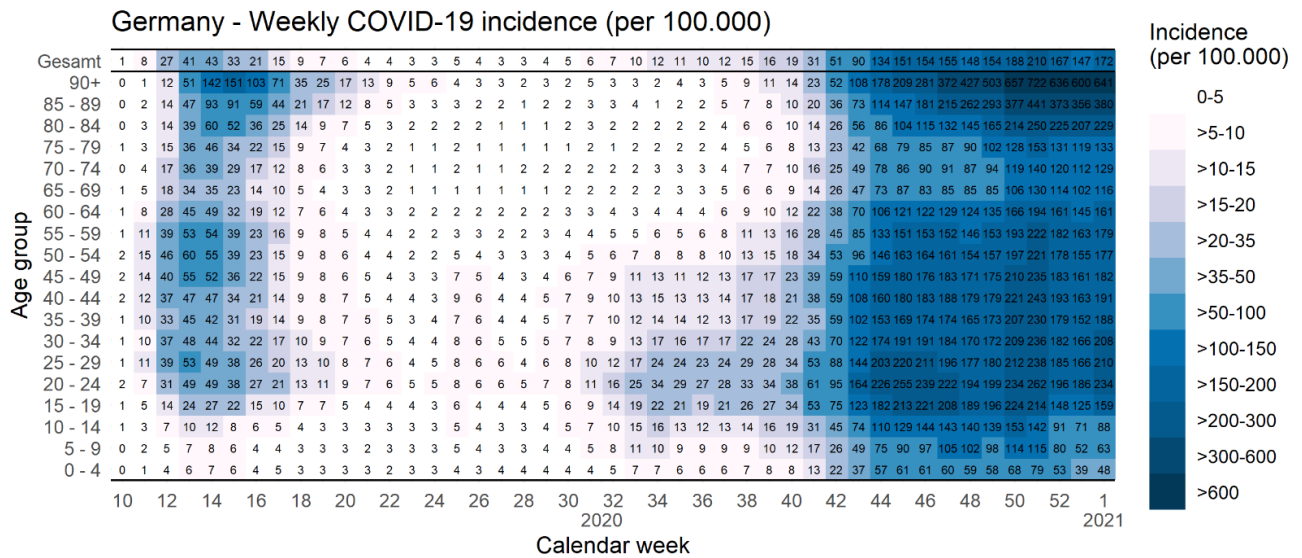


Figure 2: 7-day-incidence of notified COVID-19 cases by age group and reporting week (n=1,926,001 cases with respective data in the weeks 10 to 53, 2020 and week 01, 2021 (12/01/2021, 12:00 AM)).

The age-specific 7-day incidence is shown using a heat map (Figure 2). Age-specific case numbers and age-specific 7-day incidences can be accessed at: www.rki.de/covid-19-altersverteilung.

The first wave of the pandemic in Germany started in week 11 with a high 7-day incidence in 20-59-year-olds followed by a rising incidence in the over-80 years old until week 15, which fell again until week 24. Since reporting week 32, the nationwide 7-day incidence has increased steadily starting in younger age-groups, and since reporting week 41 also in older age groups. Until week 51 an increase of the 7-day incidence could be seen in all age groups, especially in the age groups 80 years and older. The decrease in the 7-day incidence observed over the holidays and the turn of the year does not continue. Significant increases are observed in all age groups, especially in the younger age groups (between 15 and 39 years).

Clinical aspects

Information on symptoms is available for 1,195,918 (62%) of the notified COVID-19 cases. Table 2 shows the number and percentage of COVID-19 relevant or most common symptoms.

Clinical feature	N with information	N with clinical feature	% with clinical feature
cough	1,195,918	474,017	40%
fever	1,195,918	326,199	27%
rhinorrhoea	1,195,918	327,669	27%
sore throat	1,195,918	251,575	21%
pneumonia	1,195,918	16,216	1%
ageusia and anosmia*	1,051,096	224,661	21%

Table 2: Cases with COVID-19 relevant or most common symptoms (12/01/2021, 12:00 AM). *Ageusia and anosmia have been reported since week 17.

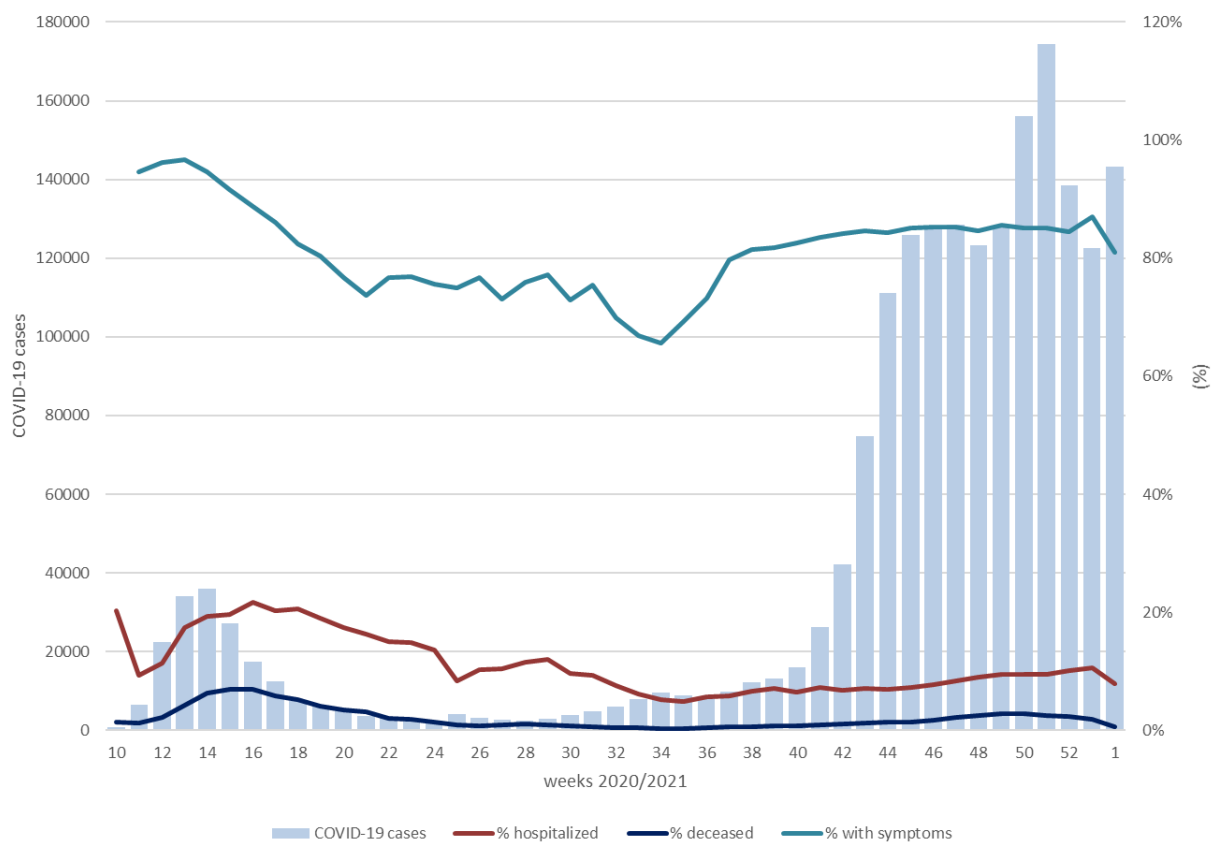


Figure 3: Depiction of the COVID-19 cases and proportion of deceased as well as proportion of hospitalized and COVID-19 cases with relevant symptoms, in relation to the respective number with corresponding data between week 10 – 53, 2020 and week 01, 2021. See the underlying data table at www.rki.de/covid-19-tabelle-klinische-aspekte

Figure 3 displays the percentages of deceased, hospitalized and cases with COVID-19 relevant symptoms. The percentage of deaths among cases was less than 1% between week 30 and 41. An increasing trend is visible from week 36 onwards. In the weeks 47 to 51 it is between 2.2 and 2.8%. As deaths occur on average only 2-3 weeks after infection, further reports of deaths among currently reported cases are expected for weeks 52/2020 – 01/2021. The proportion of hospitalized COVID-19 cases increased from 5% in week 35 to 11% in week 53. The percentage of cases with COVID-19 relevant symptoms is since week 38 over 80%. These percentages may equally change due to delayed reporting and data corrections. During the summer (weeks 26-36) these proportions were lower at 65% and 77%. During that time period returning travelers were increasingly tested, among whom asymptomatic infections were detected more frequently. The data on which the figure is based and that were published here on previous Tuesdays can be found at: www.rki.de/covid-19-tabelle-klinische-aspekte

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

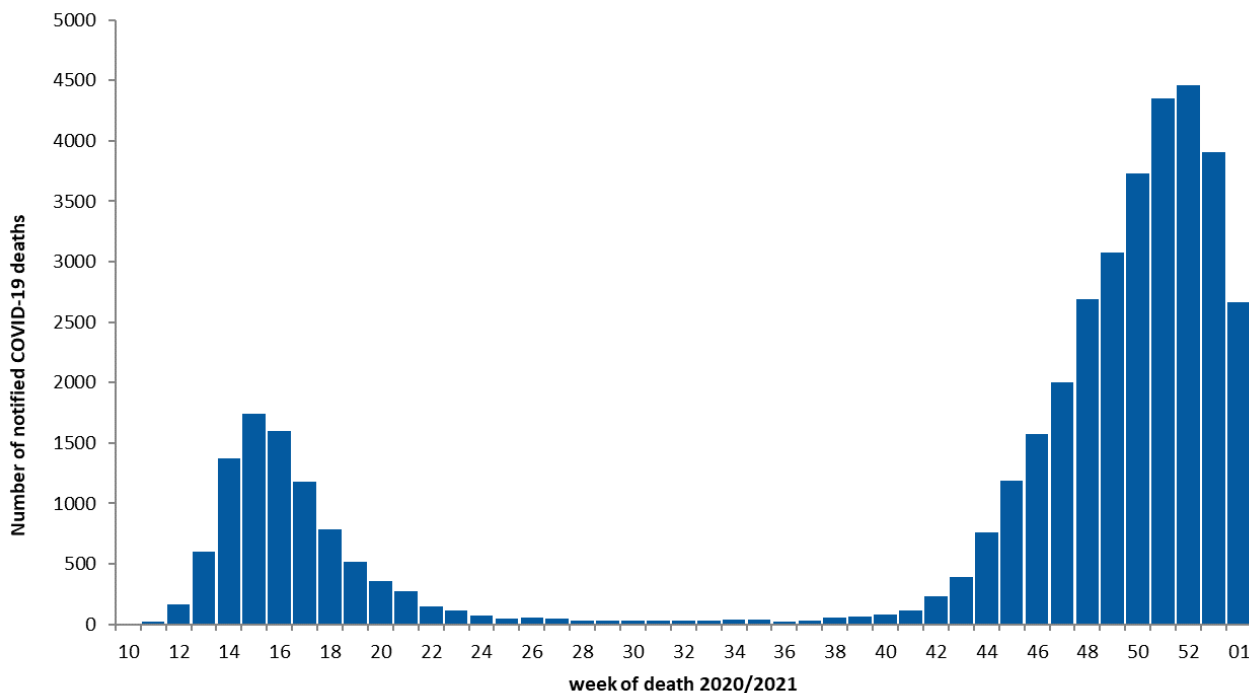


Figure 4: Number of notified COVID-19 deaths according to week of death for the reporting weeks 10 – 53, 2020 and week 01, 2021 (12/01/2021, 12:00 AM).

The figures on the first page show the number of deaths reported daily according to date of entry at RKI. This may also include cases with a date of death several days in the past. Figure 4 shows the reported COVID-19 deaths by calendar week according to the date of death. For recent weeks, further reports of deaths among reported cases can be expected.

A significant increase in the number of deaths was observed since week 37. Of all deaths, **36,857 (89%)** were among people aged 70 years or older, with a median age of 84 years (Table 3), while this age group accounts for only 15% of all cases. Thus far, **14** deaths among COVID-19 cases under 20 years of age have been reported to the RKI. **Nine of these deaths are validated; these children and adolescents were between 0 and 17 years of age, and five of seven with information in this regard had known pre-existing conditions.**

Table 3: Number of notified COVID-19 deaths by age group and gender electronically reported to RKI (Data available for 41,486 notified deaths; 12/01/2021, 12:00 AM)

Gender	Age group (in years)									
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90+
Male	4	3	22	49	168	788	2,217	5,247	9,907	3,215
Female	7		14	27	85	312	933	2,841	9,498	6,149
Total	11*	3*	36	76	253	1,100	3,150	8,088	19,405	9,364

* 5 cases are currently being validated.

Possible countries of exposure

In weeks **51, 2020 to week 01, 2021**, of the **588,899** reported COVID-19 cases, information regarding the country of exposure was missing in **310,328 (53%)** cases. In reporting week 11, the proportion of all cases was 46% for cases that had a possible foreign country as place of exposure. It then fell steadily to 0,4% in reporting week 19 as a result of travel restrictions.

As of reporting week 25, borders reopened, initially in Europe, after which the proportion of cases reporting a probable country of infection abroad markedly increased. It peaked in week 34 at 49% and declined again since then. The absolute number of cases with exposure abroad was stable after the end of the summer vacation period (week 38) to week 45 with an average of 1,700 cases per week.

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

Since then, it has decreased to currently 262 cases in week 52, 2020. Since the Christmas holidays, the number of cases has risen slightly again, to 762 cases currently in week 01, 2021. In weeks 51, 2020 to 01, 2021, a total of 1,757 persons (less than 0.3% of all cases) reported a possible site of infection abroad.

Travelers from a COVID-19 risk area within 14 days of entry into Germany must maintain a 10-day quarantine unless they have a negative test result from a test taken five days after arrival (for further details see <https://www.bundesgesundheitsministerium.de/coronavirus-infos-reisende>).

Outbreaks

An increased incidence of >25 cases in 7 days/100,000 population was reported in all 412 districts. There are 53 districts with incidences of >250 to 500 cases/100,000 in the last 7 days and there are four districts with an incidence if >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 many outbreaks particularly in retirement and nursing homes, occupational settings and private households. In some counties, a specific, larger outbreak is known to be the cause of the high incidence. Many smaller outbreaks continue to contribute to the elevated incidence, for example outbreaks in hospitals.

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 5), 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 6.

4-day R-value	7-day R-value
0.99 (95%-prediction interval: 0.83 – 1.15)	1.07 (95%-prediction interval: 0.98 – 1.16)

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.

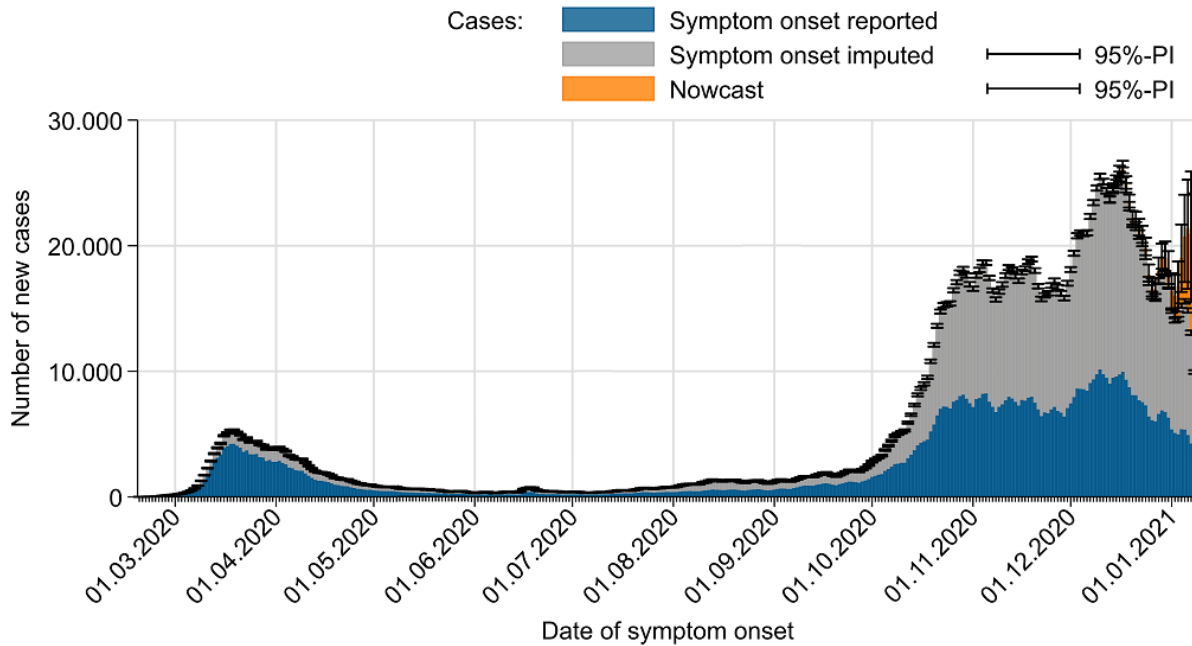


Figure 5: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (orange) (as of 12/01/2021, 12 AM, considering cases up to 08/01/2021).

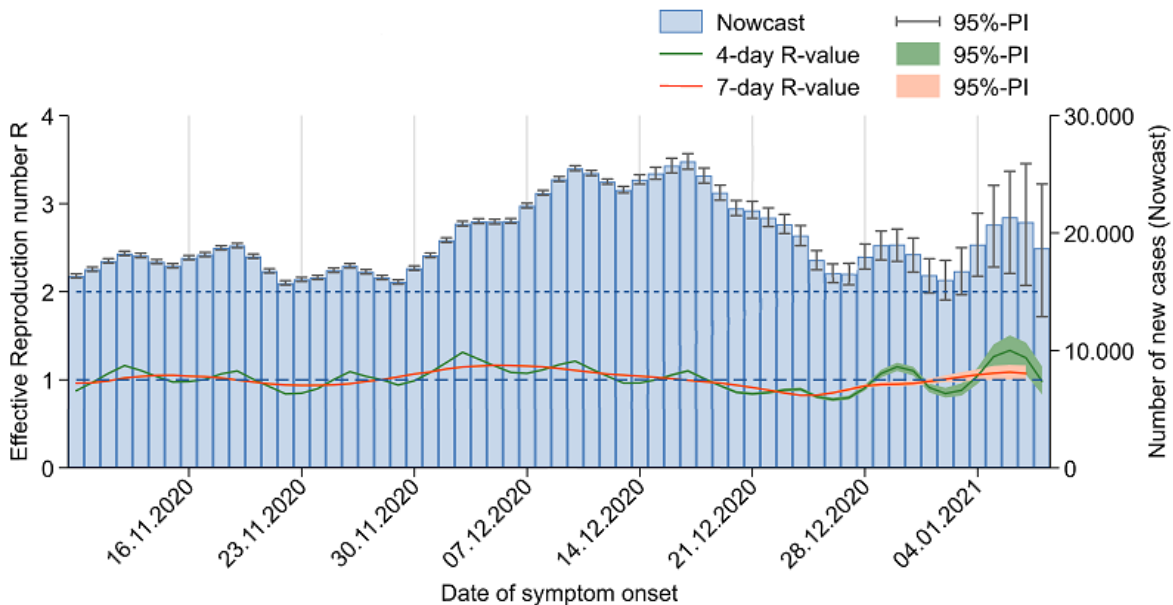


Figure 6: The estimated R-values (in green and orange) over the last 60 days, against the background of estimated number of COVID-19 cases according to illness onset (as of 12/01/2021, 12 AM, considering cases up to 08/01/2021).

The R-value is currently **around 1**. Due to the very high number of infected persons in Germany, this means a high number of new infections per 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. 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/#/index>).

As of 12/01/2021, a total of 1,283 hospitals or departments reported to the DIVI registry. Overall, 27,014 intensive care beds were registered, of which 22,433 (83%) are occupied, and 4,581 (17%) are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 4.

Table 4: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (12/01/2021, 12:15 PM).

		Number of patients	Change to previous day*
Currently	Currently in ICU	5,230	-59
	- thereof with invasive ventilation	3,000 (57%)	-6
	New admissions to ICU		+775
Total	Discharged from ICU	57.557	+834
	- thereof deaths	15,667 (27%)	+289 (35%)

*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.

Risk Assessment by the RKI

In view of persistently high case numbers, the RKI now judges the threat to the health of the general population to be **very high**. The revised version highlights the increasingly diffuse SARS-CoV-2 transmission as well as the occurrence of outbreaks especially in households, occupational settings and nursing and senior care homes.

Therefore, more rigorous case finding and contact tracing as well as better protection of vulnerable groups is essential. Vulnerable persons can only be reliably protected if the number of new infections can be substantially reduced. On 12/01/2021, the risk assessment was updated with reference to the new SARS-CoV-2 variants. The current version can be found here:

https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikobewertung.html (in German)

Measures taken in Germany

- Recommendations on COVID-19-vaccination (08.01.2020. in German) <https://www.rki.de/DE/Content/Infekt/Impfen/ImpfungenAZ/COVID-19/Impfempfehlung-Zusfassung.html>
- Further governmental resolutions regarding additional containment measures (Lockdown. 05/01/2021. in German) <https://www.bundesregierung.de/breg-de/themen/coronavirus/mpk-beschluss-corona-1834364>
- Vaccination started in Germany on the 26th of December 2020 <http://www.rki.de/covid-19-impfquoten> (in German)

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

- Regulation to protect against entry-related infection risks regarding novel mutations of the coronavirus SARS-CoV-2 (21/12/2020. *in German*)
https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/C/Coronavirus/Verordnungen/CoronaSchV_BAnz_AT_21.12.2020_V4.pdf
- Information on the designation of international risk areas
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikogebiete_neu.html
- 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>
- National Testing Strategy – who will be tested for SARS-CoV-2 in Germany (30/11/2020. *in German*)
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Teststrategie/Nat-Teststrat.html
- Important information and guidance on the novel coronavirus SARS-CoV-2 for returning travellers (08/11/2020)
https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/BMG_Merkblatt_Reisende_Tab.html
- Selected and regularly updated information on COVID-19
<https://www.rki.de/EN/Content/infections/epidemiology/outbreaks/COVID-19/COVID19.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>
- 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/>