



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

10/11/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
687,200	11506	115,668	139.1 cases/ 100,000 pop
(+15,332*)	(+154*)	(+102*)	
Proportion of deaths	Recovered	7-day incidence of people ≥ 60 years	No. of districts with 7- day incidence > 50
1.7%	ca. 441,200**	94.2 cases/ 100,000 pop	375
	(+11,700**)		(+12*)

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 10/11/2020, 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 **139.1** 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 **94.2** 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 **6** districts have an incidence ≤25 cases/100,000 population. As of today, **31** districts have an incidence of >25-50 cases /100,000 population, **107** districts have an incidence of >50-100 cases/100,000 population, **268** districts have an incidence of >100 cases/100,000 population and of these, **15** 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 has almost tripled in the past 2 weeks from **1,470** patients on **27/10/2020** to **3,059** patients on **10/11/2020**.
- In total, **687,299** laboratory-confirmed COVID-19 cases and **11,506** 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 been fluctuating around 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.

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.

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 **687,200 (+15,332)** 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 (10/11/2020, 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	102,293	1541	922	15,072	135.8	2,133	19.2
Bavaria	136,636	2828	1041	22,540	171.7	2,953	22.5
Berlin	40,460	836	1103	6,221	169.5	301	8.2
Brandenburg	10,790	274	428	1,795	71.2	223	8.8
Bremen	7,254	121	1065	1,363	200.1	88	12.9
Hamburg	17,437	298	944	2,251	121.9	304	16.5
Hesse	55,744	1701	887	10,811	171.9	786	12.5
Mecklenburg-Western Pomerania	3,786	41	235	802	49.9	31	1.9
Lower Saxony	47,319	997	592	7,440	93.1	834	10.4
North Rhine-Westphalia	175,951	4320	980	30,248	168.5	2,395	13.3
Rhineland-Palatinate	27,237	885	665	5,168	126.2	325	7.9
Saarland	8,640	214	875	1,359	137.7	202	20.5
Saxony	27,339	659	671	6,038	148.3	409	10.0
Saxony-Anhalt	6,928	194	316	1,338	61.0	93	4.2
Schleswig-Holstein	10,214	214	352	1,554	53.5	205	7.1
Thuringia	9,172	209	430	1,668	78.2	224	10.5
Total	687,200	15,332	826	115,668	139.1	11,506	13.8

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 **353,866** cases (51%) thus their date of reporting is provided in Figure 1.

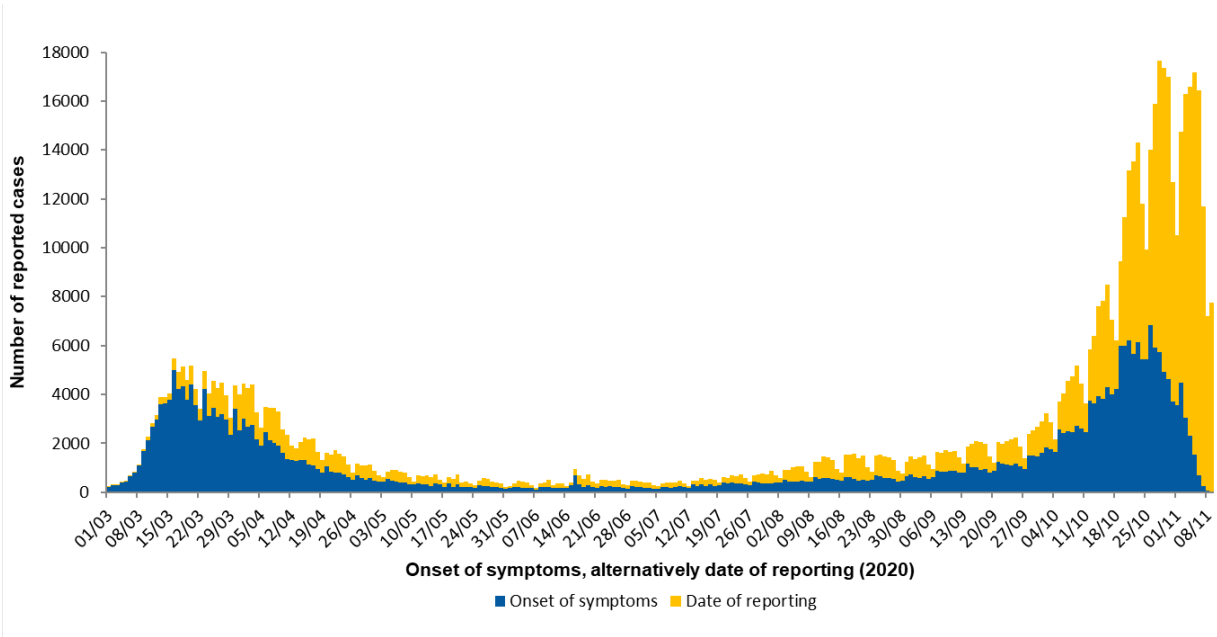


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (10/11/2020, 12:00 AM).

Demographic distribution of cases

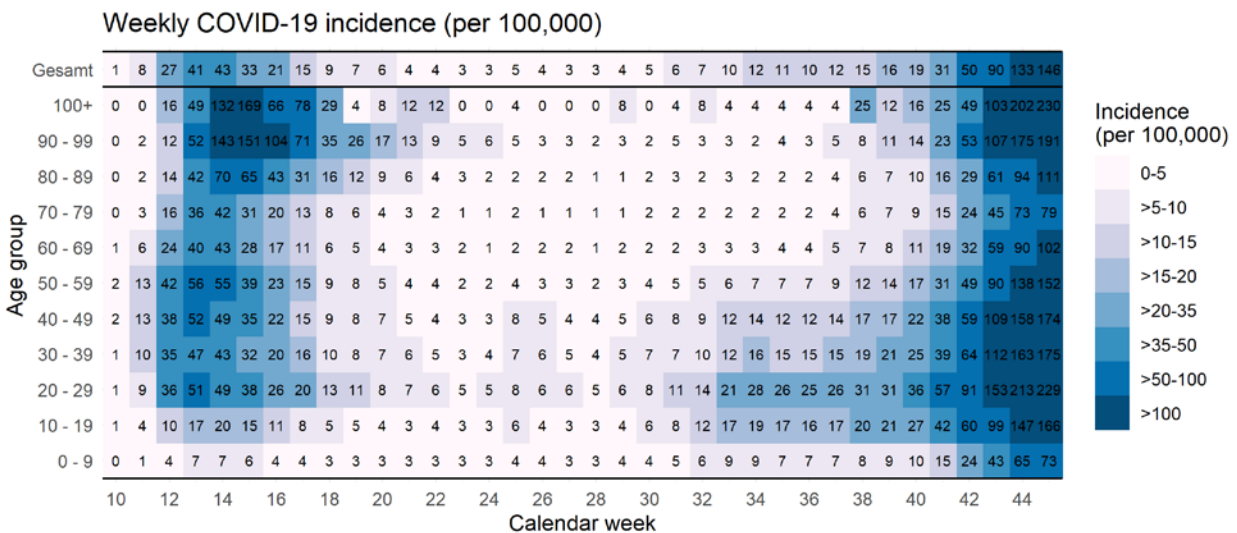


Figure 2: 7-day-incidence of notified COVID-19 cases by age group and reporting week (n=675,878 cases with respective data in the weeks 10 to 45 (10/11/2020, 12:00 AM).

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.

Clinical aspects

Information on symptoms is available for 445,747 (65%) of the notified cases, of these 15% had no or no relevant COVID-19 symptoms. Table 2 shows the number and percentage of the COVID-19 relevant or most common symptoms.

Table 2: Cases with COVID-19 relevant or most common symptoms (10/11/2020, 12:00 AM). *Ageusia and anosmia are reported since week 17.

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

Clinical feature	N with information	N with clinical feature	% with clinical feature
cough	445.747	182.100	41%
fever	445.747	139.845	31%
rhinorrhoea	445.747	107.238	24%
sore throat	445.747	95.504	21%
pneumonia	445.747	7.349	2%
ageusia and anosmia *	301.054	61.749	21%

Table 3: COVID-19 cases reported to the RKI by sex and the proportion of hospitalized and deceased for the reporting weeks 10 - 45 (10/11/2020, 12:00 AM).

Week	Total cases	Mean age (years)	Men	Women	Number with clinical information	Percent with no or no symptoms relevant for COVID-19	Number with information on hospitalization	Number hospitalized	Percent hospitalized	Number of deaths	Percent deaths
10	892	42	53%	47%	831	7.6%	800	162	20%	12	1.35%
11	6,433	44	56%	44%	5,774	5.3%	5,612	519	9%	85	1.32%
12	22,427	45	55%	45%	20,191	3.8%	19,339	2,204	11%	478	2.13%
13	34,026	48	49%	51%	30,835	3.2%	29,451	5,105	17%	1,449	4.26%
14	36,081	51	45%	55%	31,966	5.3%	31,472	6,054	19%	2,251	6.24%
15	27,181	52	44%	56%	23,562	8.3%	24,037	4,706	20%	1,864	6.86%
16	17,353	51	45%	55%	14,851	11.3%	15,500	3,352	22%	1,211	6.98%
17	12,384	50	45%	55%	10,279	13.9%	10,941	2,222	20%	717	5.79%
18	7,440	48	48%	52%	6,236	17.7%	6,587	1,353	21%	376	5.05%
19	6,225	47	48%	52%	5,217	19.8%	5,600	1,066	19%	251	4.03%
20	4,725	45	49%	51%	3,926	23.4%	4,198	731	17%	158	3.34%
21	3,614	43	50%	50%	2,811	26.4%	3,105	508	16%	109	3.02%
22	3,201	42	51%	49%	2,533	23.4%	2,758	414	15%	64	2.00%
23	2,354	39	51%	49%	1,834	23.3%	2,073	311	15%	45	1.91%
24	2,343	37	54%	46%	1,733	24.4%	2,081	283	14%	32	1.37%
25	4,088	36	59%	41%	2,928	25.1%	3,732	315	8%	37	0.91%
26	3,202	37	55%	45%	2,314	23.3%	2,848	289	10%	23	0.72%
27	2,694	36	52%	48%	2,062	26.9%	2,466	258	10%	26	0.97%
28	2,420	36	56%	44%	1,910	24.2%	2,187	250	11%	24	0.99%
29	3,018	36	53%	47%	2,349	22.8%	2,631	317	12%	30	0.99%
30	3,934	36	52%	48%	3,137	27.0%	3,430	325	9%	32	0.81%
31	4,817	36	50%	50%	3,588	24.6%	4,065	367	9%	32	0.66%
32	6,044	34	54%	46%	4,393	30.3%	5,146	377	7%	30	0.50%
33	7,935	32	53%	47%	5,628	33.4%	6,789	409	6%	29	0.37%
34	9,578	32	55%	45%	6,997	35.0%	8,049	405	5%	27	0.28%
35	8,805	32	53%	47%	6,634	31.0%	7,167	342	5%	16	0.18%
36	8,598	33	54%	46%	6,380	27.2%	6,868	373	5%	33	0.38%
37	9,764	35	52%	48%	7,158	20.7%	7,638	426	6%	57	0.58%
38	12,253	36	51%	49%	9,064	18.7%	9,569	607	6%	73	0.60%
39	13,041	37	52%	48%	9,629	18.6%	10,374	711	7%	97	0.74%
40	15,869	38	52%	48%	11,545	17.5%	12,715	785	6%	98	0.62%
41	26,093	39	51%	49%	18,312	16.4%	20,190	1426	7%	176	0.67%
42	41,973	39	51%	49%	27,706	15.8%	31,020	2032	7%	313	0.75%
43	74,630	40	50%	50%	43,295	15.3%	50,650	3340	7%	519	0.70%*
44	110,748	41	50%	50%	56,383	15.2%	67,822	4114	6%	504	0.46%*
45	121,838	41	49%	51%	49,293	15.5%	63,175	3623	6%	224	0.18%*

* Data not yet meaningful, as outcome of the diseases in these weeks is still unclear

Table 3 shows the distribution of hospitalizations and deaths by reporting week. The proportion of deaths among all notified cases peaked at 7% in reporting week 16, 2020. Since then, it decreased markedly until week 34 and has remained well under 1% since then. The proportion of cases reported with no or no symptoms relevant for COVID-19 increased over time until week 34 to 35%, but decreased since then to below 20% after week 38.

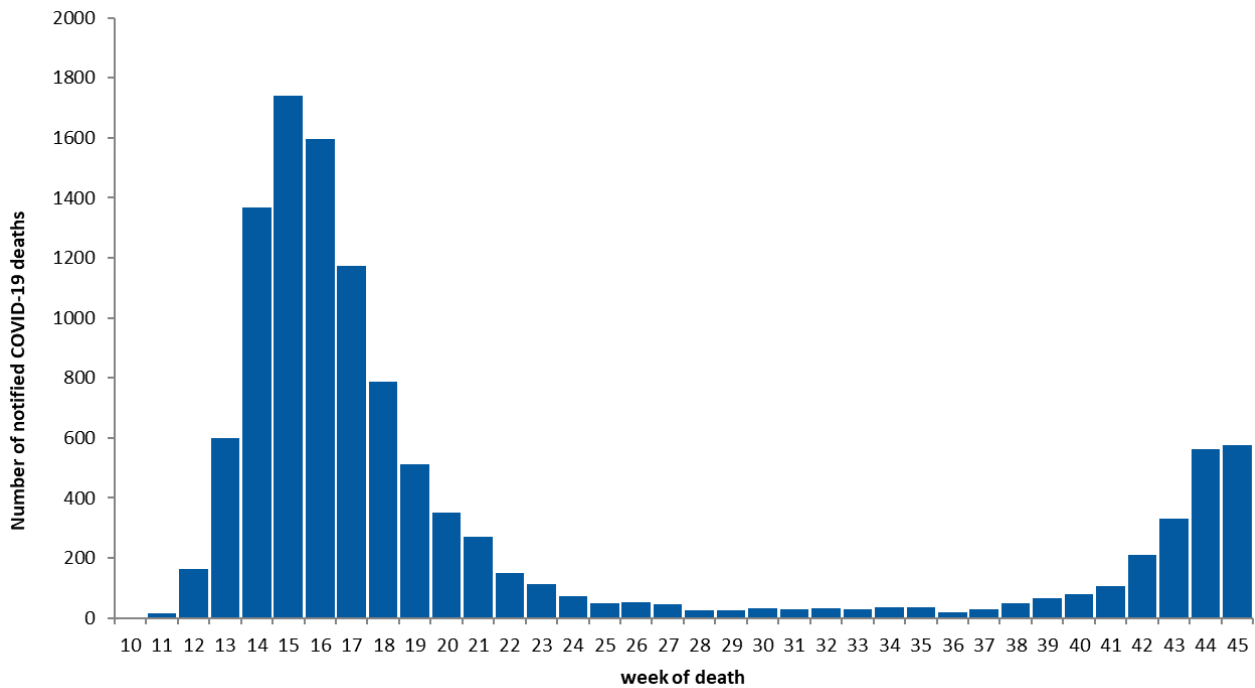


Figure 3: Number of notified COVID-19 deaths according to week of death for the reporting weeks 10 - 45 (10/11/2020, 12:00 AM).

Notified COVID-19 deaths according to week of death are shown in Figure 3. The number of deaths has been increasing since week 37; markedly since week 42.

Of all deaths, 9,860 (86%) were in people aged 70 years or older, but only 12% of all cases were in this age group (Table 4). Thus far, 6 deaths among COVID-19 cases under 20 years of age have been reported to the RKI, three of these have been confirmed. Validation of the other three is in progress. Pre-existing medical conditions were reported for two of the six cases. The number of deaths may change upon completion of data validation.

Table 4: Number of notified COVID-19 deaths by age group and gender electronically reported to RKI (Data available for 11,498 of notified deaths; 10/11/2020, 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	90-99	100+
Male	2*	2*	11	23	70	297	790	1,706	2,696	767	9
Female	2*		5	9	31	114	282	829	2,394	1,401	58
Total	4	2	16	32	101	411	1,072	2,535	5,090	2,168	67

*Three of these cases are currently being validated.

Occupation, accommodation or care in facilities

Due to technical problems, case numbers among people cared for or employed in facilities according to §§ 23, 33, 36 and 42 Protection Against Infection Act (Infektionsschutzgesetz, IfSG) cannot be shown today.

Possible countries of exposure

Of the 687,200 reported COVID-19 cases, information regarding the country of exposure was missing in 301,541 (44%) 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. While the absolute figures for cases with foreign exposure since week 38 are at an average of 1586 cases per week [range 1256 - 2088], the proportion has clearly decreased to 1.0% in week 45. This is due to the high number of autochthonous cases, which is >100,000 cases in the last 7 days. In weeks 42-45, 6.870 persons reported a possible site of infection abroad.

Table 5 lists the countries in addition to Germany that were most frequently reported as the probable place of infection in weeks 42 to 45. Poland, Romania, Italy, Turkey, and Austria were most frequently reported as the country of exposure.

Table 5: Countries of exposures named for COVID-19 cases notified in weeks 42 to 45; 2020 (a total of 6.622 answers of a foreign country), multiple answers possible (10/11/2020, 12:00 AM).

Probable country of infection	Week 42	Week 43	Week 44	Week 45	Total
Germany	22.498	36.701	48.633	46.189	154.021
Poland	254	475	493	279	1.501
Romania	205	164	109	87	565
Italy	91	148	160	63	462
Turkey	112	132	118	84	446
Austria	73	97	132	83	385
Kosovo	31	78	113	124	346
Switzerland	53	91	49	34	227
Bosnia and Herzegovina	39	61	52	37	189
The Netherlands	63	62	45	14	184
France	54	49	46	26	175
Spain	49	50	49	19	167
Northern Macedonia	41	33	56	23	153
Ukraine	35	51	30	20	136
Croatia	32	33	33	31	129
Others	382	501	405	269	1.557
Total	24.045	38.765	50.554	47.401	160.765

The proportion of cases with a probable place of infection abroad increased significantly after the opening of borders in calendar week 25, but has been declining again since week 35 (see Figure 5). Through consistent prevention and early case identification, transmission and subsequent cases can be greatly reduced. It remains essential that people follow the rules of physical distancing and hygiene and avoid crowds, and that anyone who develops symptoms compatible with COVID-19 be tested immediately. In addition, travelers who stayed in a COVID-19 risk area within 14 days of entry must maintain a 14-day quarantine unless they have a negative test result (see <https://www.bundesgesundheitsministerium.de/coronavirus-infos-reisende/>).

Outbreaks

An increased incidence of >25 cases in 7 days/100,000 population was reported for almost every district (405 of 412). By now, 266 urban and rural districts have an incidence of over 100 cases/100,000 population, including 15 districts with an incidence of over 250 cases/100,000 population; additionally, 97 districts have a 7-day incidence of >50 -100 cases/100,000 population and 42 districts have a 7-day incidence of > 25 – 50 cases/100,000 population. The dashboard (<https://corona.rki.de>) shows all affected districts.

In most districts the transmission is diffuse, with several cases clustering in the context of celebrations with family and friends. On some occasions, specific large outbreaks have been the cause for large increases in the affected districts. However, 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 4), 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 5.

4-day R-value	7-day R-value
0.88	0.92
(95%-prediction interval: 0.73 – 1.05)	(95%-prediction interval: 0.84 – 1.00)

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.

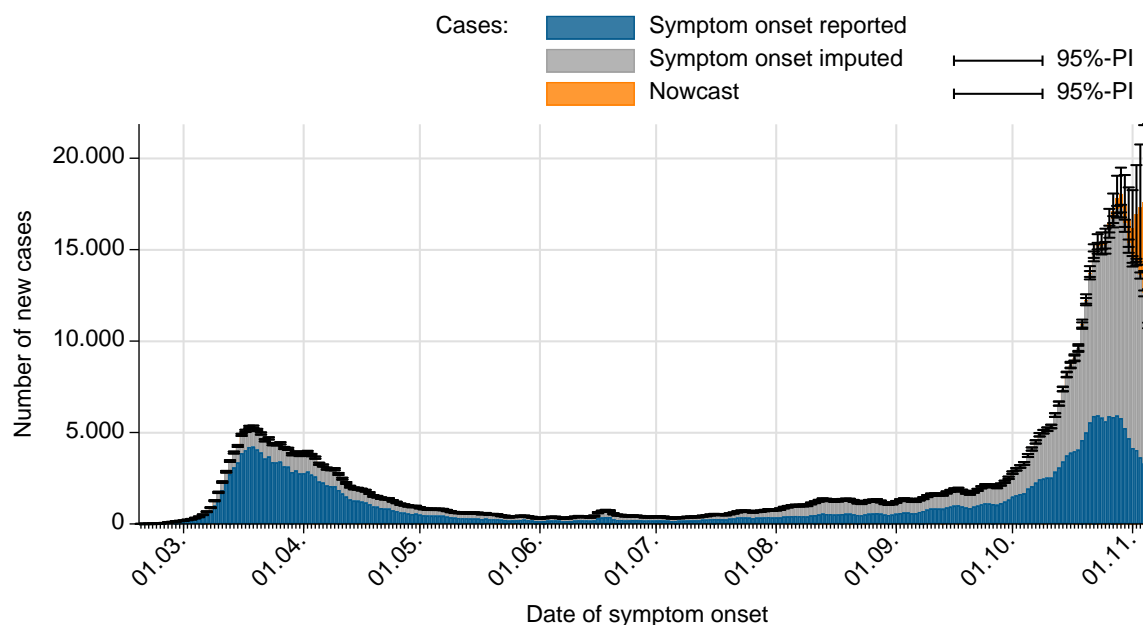


Figure 4: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (orange) (as of 10/11/2020, 12 AM, taking into account cases up to 06/11/2020).

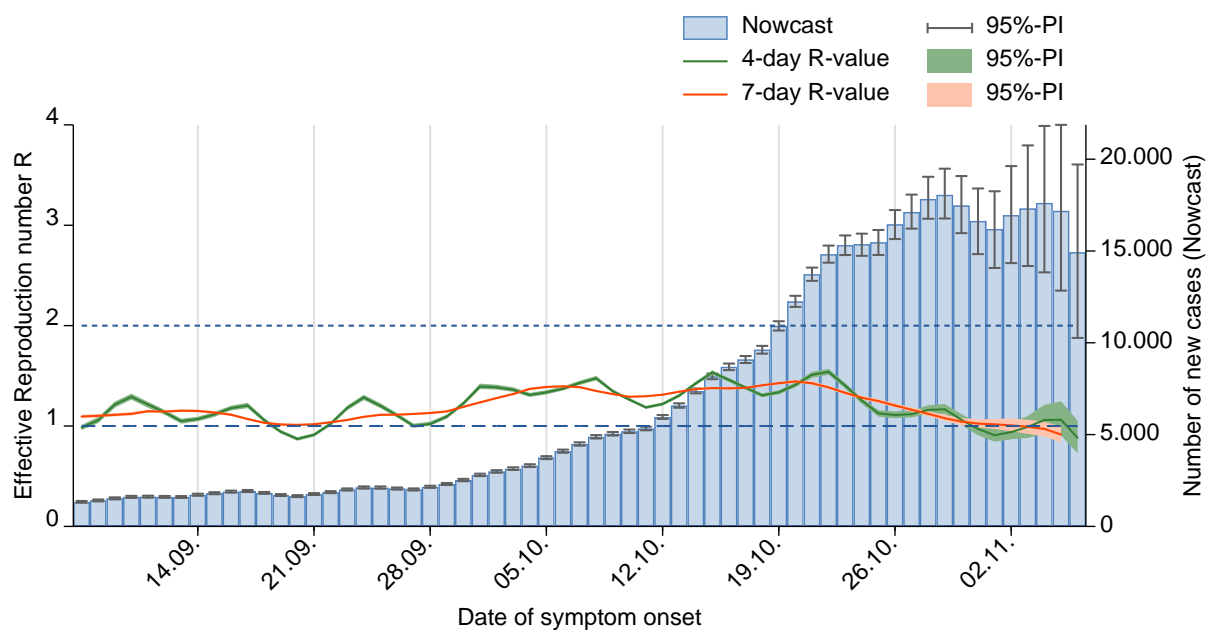


Figure 5: The estimated R-values (in green and orange) over the last 60 days, against the background of estimated number of COVID-19 cases according to illness onset (as of 10/11/2020, 12 AM, taking into account cases up to 06/11/2020).

The reported R-values have been stable well above 1 in October. Over the past few days the R-value has been fluctuating 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. 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 09/11/2020, a total of 1,288 hospitals or departments reported to the DIVI registry. Overall, 28,494 intensive care beds were registered, of which 21,577 (76%) are occupied, and 6,917 (24%) are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 6.

Table 6: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (10/11/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	3,059		+54
- of these: with invasive mechanical ventilation	1,737	53%	+49
Discharged from ICU	23,782		+400
- of these: deaths	5,370	23%	+81

*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.

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

- 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-positionspapier-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
- 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>
- 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.