



# Coronavirus Disease 2019 (COVID-19)

## Daily Situation Report of the Robert Koch Institute

05/02/2021 - UPDATED STATUS FOR GERMANY

Confirmed cases		7-day incidence (7-di)		Vaccination monitoring	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	No. of vaccinations reported in last 24h <sup>4</sup>	Change to previous day for cases currently in ICU
+12,908 (2,264,909)	-5,100 [ca. 196,100]	80 cases/ 100,000 pop	-3 [338/412]	+51,518 1 <sup>st</sup> vaccination +65,070 2 <sup>nd</sup> vaccination	-106 [4,072]
Recovered <sup>3</sup>	Deaths	60-79 years	80+ years	Total no. of vaccinated with one/two vaccine dose/s and share of population <sup>4</sup>	Completed ICU treatment; thereof deceased [%]
+17,200 (ca. 2,008,200)	+855 (60.597)	63 cases/ 100,000 pop	142 cases/ 100,000 pop	N1: 2,153,000 (2.6%) N2: 834,398 (1.0%)	+598 29%
				No. of districts with 7-di > 100/100,000 pop	
				-1 [109/412]	

Numbers in () brackets show cumulative values, numbers in [] brackets show current values. Footnotes can be found in the Annex.

COVID-19 cases are notified to the local public health department in the respective districts, in accordance with the German Protection against Infection Act (IfSG). The data are further transmitted through the respective federal state health authority to the Robert Koch Institute (RKI). This situation report presents the uniformly recorded nationwide data on laboratory-confirmed COVID-19 cases transmitted to RKI.

– Changes since the last report are marked **blue** in the text –

### Summary (as of 05/02/2021, 12:00 AM)

- Currently, the number of transmissions in the population in Germany remains high. RKI assesses the level of threat to the health of the general population to be **very high**.
- Yesterday, **12,908** new laboratory-confirmed COVID-19 cases as well as **855** new deaths associated with COVID-19 were transmitted to the RKI. The national 7-day incidence is **80** cases per 100,000 population. In Brandenburg, Saarland, Saxony, Saxony-Anhalt, and Thuringia it is well above the national incidence.
- In **338** of the 412 districts, the 7-day COVID-19 incidence is high (>50 cases/100,000 population). In **109** districts, the 7-day incidence is >100 cases/100,000 population and in **7** of these districts it is >250-500 cases/100,000 population.
- The 7-day incidence among people aged 60-79 years is currently **63** and of people aged ≥80 years, **142** 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 **05/02/2021 (12:15 PM)** **4,072** COVID-19 patients were in intensive care. In the preceding 24 hours, **+598** existing patients had been discharged (**29 %** of whom had died) and **+492** patients were newly admitted. The resulting number of cases under treatment was **106 less** than the prior day.
- Since 26/12/2020 a total of **2,153,000** people in Germany have been vaccinated at least once (vaccination rate **2.6%**) and **834.398** people twice (vaccination rate **1.0%**) against COVID-19 (<http://www.rki.de/covid-19-impfquoten>).
- In this situation report, the following additional information is given: **mortality monitoring**.

## Epidemiological Situation in Germany

In accordance with the international standards of WHO<sup>1</sup> and ECDC<sup>2</sup>, the RKI classifies all cases of laboratory confirmation via SARS-CoV-2-nucleic acid based (e.g. PCR) detection or SARS-CoV-2 isolation as COVID-19 cases, regardless of the presence and severity of clinical symptoms. 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 sharp rise in case numbers at the beginning of December, a decrease during the holidays and an increase in the first week of January the case numbers have been slowly decreasing.

The R-value is currently slightly below 1. Due to the still very high number of infected persons in Germany, this means that although the number of new infections per day is decreasing, it remains high.

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 suffer from more severe illness due to COVID-19, the number of serious cases and deaths remains at a high level. These can only be avoided if all persons 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 surgical mask or masks marked with N95 or KN95 or FFP2 correctly. Crowds of people - especially indoors - should be avoided.

Several variants of SARS-CoV-2 are currently being detected worldwide. Their effect on the spread of SARS-CoV-2 and the effectiveness of vaccinations on these variants are being examined in detail. Since mid-December there have been reports of the increasing spread of a new virus variant (B.1.1.7) in the United Kingdom. There is increasing clinical-diagnostic as well as epidemiological evidence of increased infectiousness of this variant. There are initial indications from the United Kingdom that infections with variant B.1.1.7 may lead to more severe diseases. Preliminary laboratory studies indicate that mRNA vaccine efficacy is unlikely to be strongly affected by variant B.1.1.7.

Also, in December 2020, an increased occurrence of a SARS-CoV-2 variant in South Africa (B.1.351) was reported, which has displaced other variants. Therefore, an increased infectiousness is conceivable. For this virus variant, too, laboratory tests show that the efficacy of the licensed mRNA vaccines is only minimally affected. In addition, a SARS-CoV-2 variant derived from line B.1.1.28 is circulating in the Brazilian state of Amazonas. Travels, which are non-essential, should be avoided – especially due to the circulation of new virus mutations.

All three variants have already been detected in Germany. With increased sequencing and data acquisition in the German Electronic Sequence Data Hub (DESH - [https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/DESH/DESH.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/DESH/DESH.html)) the infection process is increasingly monitored through integrated molecular surveillance.

<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 **2,264,909 (+12,908)** laboratory-confirmed cases of COVID-19 have been reported to and validated by the RKI (Table 1).

Table 1: Number and cumulative incidence (per 100,000 population) of laboratory-confirmed COVID-19 cases and deaths for each federal state electronically reported to RKI, Germany (05/02/2021, 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	297,994	1,245	2,685	7,094	64	7,341	66.1
Bavaria	410,005	1,984	3,124	10,712	82	11,023	84.0
Berlin	121,878	479	3,321	2,630	72	2,420	65.9
Brandenburg	70,233	428	2,785	2,455	97	2,539	100.7
Bremen	16,355	129	2,401	612	90	285	41.8
Hamburg	47,191	225	2,555	1,175	64	1,120	60.6
Hesse	175,378	889	2,789	5,280	84	5,114	81.3
Mecklenburg-Western Pomerania	20,849	258	1,296	1,399	87	520	32.3
Lower Saxony	146,205	1,567	1,829	5,491	69	3,509	43.9
North Rhine-Westphalia	495,483	2,814	2,761	13,938	78	11,386	63.4
Rhineland-Palatinate	94,801	499	2,316	2,753	67	2,685	65.6
Saarland	26,500	204	2,685	1,158	117	766	77.6
Saxony	183,110	777	4,497	4,096	101	6,659	163.5
Saxony-Anhalt	53,825	467	2,452	2,607	119	1,922	87.6
Schleswig-Holstein	37,359	315	1,287	1,945	67	985	33.9
Thuringia	67,743	628	3,175	3,121	146	2,323	108.9
<b>Total</b>	<b>2,264,909</b>	<b>12,908</b>	<b>2,723</b>	<b>66,466</b>	<b>80</b>	<b>60,597</b>	<b>72.9</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 1,169,843 cases (52 %) thus their date of reporting is provided in Figure 1.

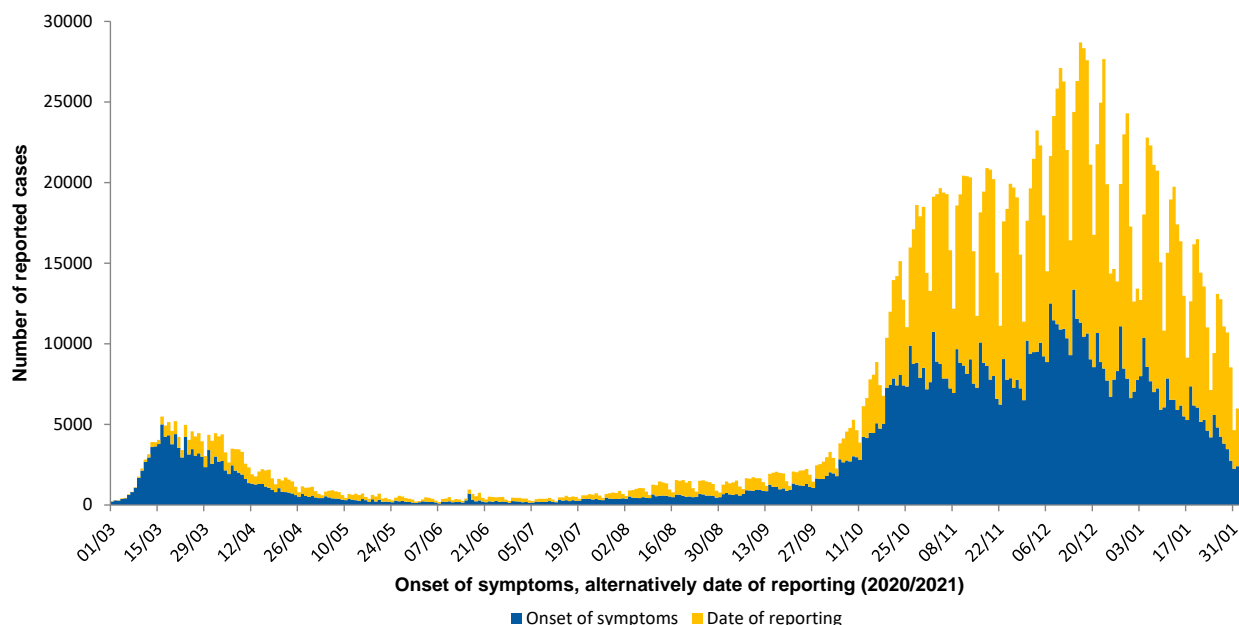


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (05/02/2021, 12:00 AM).

## 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
0.88	0.93
(95%-prediction interval: 0.75 – 1.01)	(95%-prediction interval: 0.86 – 1.01)

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.

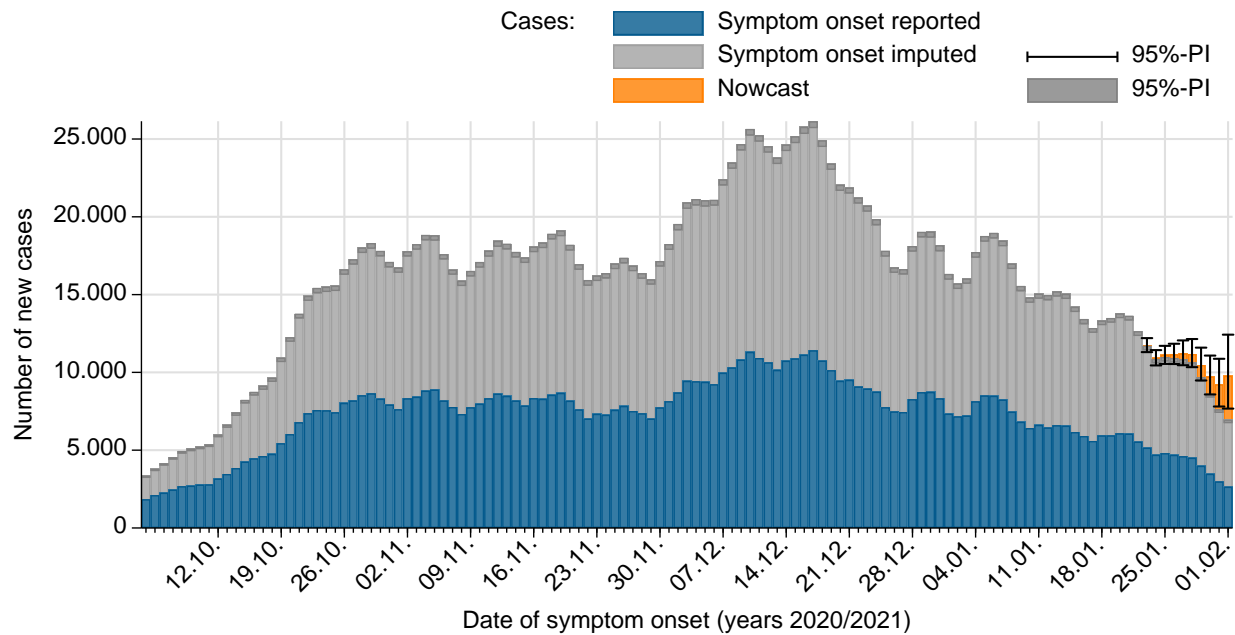


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (orange) (as of 05/02/2021, 12 AM, considering cases up to 01/02/2021).

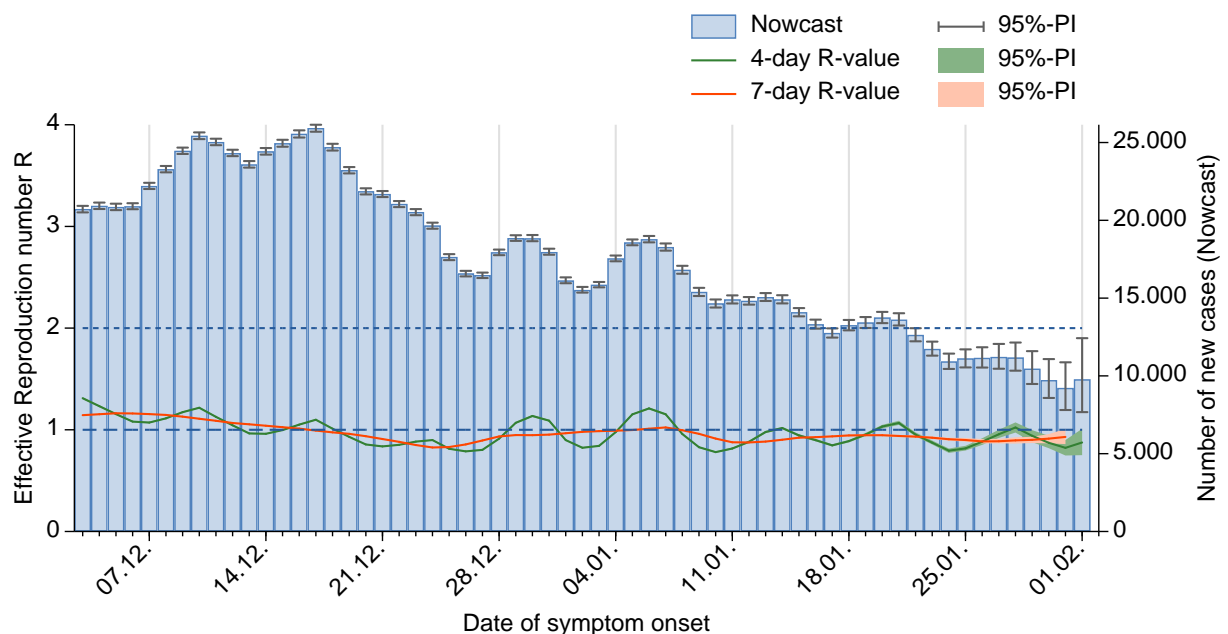


Figure 3: The estimated R-values (in green and orange) over the last 60 days, against the background of the estimated number of COVID-19 cases according to illness onset (as of 05/02/2021, 12 AM, considering cases up to 01/02/2021).

The R-value is currently slightly below 1. Due to the still very high number of infected persons in Germany, this means that although the number of new infections per day is decreasing, it remains high.

Sample calculations as well as an excel sheet presenting both R-values with daily updates can be found under <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/#/index>).

As of 05/02/2021, a total of 1,281 hospitals reported to the DIVI registry. Overall, **27,003** intensive care beds were registered, of which **22,663 (84 %)** are occupied, and **4,340 (16 %)** beds are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 2.

Table 2: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (05/02/2021, 12:15 PM).

		Number of patients	Change to previous day*
Currently	Currently in ICU	4,072	-106
	- thereof with invasive ventilation	2,266 (56%)	-34
	New admissions to ICU		+492
Total	Discharged from ICU	68,248	+598
	- thereof deaths	19,346 (28%)	+171 (29%)

\*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.

## Mortality Monitoring

**At the time of preparing the Covid-19 Situation Report, there was no update of the data from Destatis. As a result, you will find the data as of January 29, 2021, below.**

A total of 27 European countries or regions provide the European EuroMOMO project (European monitoring of excess mortality for public health action) with official mortality statistics on a weekly basis which allows the detection and measuring of excess deaths related to e.g. seasonal influenza and pandemics (<https://www.euromomo.eu/>). In Germany, two regional systems that allow the transmission of data have been established so far (since 2007 in Berlin and Hesse). The establishment of a nationwide monitoring system is planned from 2021 onwards.

An increase in all-cause mortality was observed in conjunction with the COVID-19 pandemic primarily in April 2020. Excess mortality was observed primarily in persons 65 years of age and older, but also among those 15 to 64-years of age. Excess mortality was highest in Belgium, France, Italy, the Netherlands, Spain, Sweden, Switzerland and the UK. After a return to expected levels for most countries in May (with the exception of a heat-related peak in August), total all-cause mortality in the reporting countries has again increased above expected levels since calendar week 38. Mortality is particularly high in Austria, Belgium, France, Italy, [the Netherlands](#), [Portugal](#), Slovenia, Spain and Switzerland. The excess all-cause mortality is seen primarily in the age group of 45 years and above.

Weekly mortality statistics are also recorded on the website of the Federal Statistical Office, albeit with a certain time lag. Looking at the development by months, in March 2020 there was no noticeable increase in the number of deaths compared to March of the previous year. In April, however, all-cause mortality was considerably higher than the average of previous years; since the beginning of May, mortality

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

decreased to expected levels, with the exception of a heat-related increase in August. In September, however, deaths again increased to 5% above the expected number based on the mean number of deaths observed from 2016 to 2019. In calendar week 53 (28/12/21 – 03/01/2021), 24,531 persons died (-287 compared to week 52). This is 31% more deaths than the average of the 4 previous years. In the previous week, the number of deaths exceeded the average for the previous years by 31%.

<https://www.destatis.de/DE/Themen/Querschnitt/Corona/Gesellschaft/bevoelkerung-sterbefaelle.html> (in German), status from 29/01/2021.

## Risk Assessment by the RKI

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

Against the background of rising occurrence of variants of concern (VOC) with higher infectiousness, a rigorous reduction of physical contacts, usage of protective measures as well as intensive efforts to contain outbreaks and chains of infections are necessary to reduce the number of new infections and to protect vulnerable persons.

On 03/02/2021, 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](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikobewertung.html) (in German)

## Measures taken in Germany

- Seroepidemiological studies in Germany (04/02/2021)  
[https://www.rki.de/EN/Content/infections/epidemiology/outbreaks/COVID-19/AK-Studien-english/Sero\\_List.html;jsessionid=3EE48AEBD0DAD123295A873BA8FE3C72.internet091?nn=13490888](https://www.rki.de/EN/Content/infections/epidemiology/outbreaks/COVID-19/AK-Studien-english/Sero_List.html;jsessionid=3EE48AEBD0DAD123295A873BA8FE3C72.internet091?nn=13490888)
- Entry restrictions to Germany for travelers from countries designated as regions with variants (30/01/2021; in German)  
[https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Transport/CoronaSchV\\_Mutationen.pdf?blob=publicationFile](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/CoronaSchV_Mutationen.pdf?blob=publicationFile)
- Information on the designation of international risk areas (25/01/2021)  
[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)
- German electronic Sequencing-Data-Hub (DESH, Deutscher elektronischer Sequenzdaten-Hub)  
[https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/DESH/DESH.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/DESH/DESH.html) (21.01.2021, in German)
- Recommendations on COVID-19-vaccination (in German)  
<https://www.rki.de/DE/Content/Infekt/Impfen/ImpfungenAZ/COVID-19/Impfempfehlung-Zusfassung.html>
- Further governmental resolutions regarding additional containment measures (Lockdown, in German)  
<https://www.bundesregierung.de/breg-de/themen/coronavirus/mpk-beschluss-corona-1834364>
- Vaccination started in Germany on the 26<sup>th</sup> of December 2020 (in German) <http://www.rki.de/covid-19-impfquoten>
- Regulation to entry to Germany (13/01/2021. in German)  
[https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3\\_Downloads/C/Coronavirus/Verordnungen/Corona-Einreiseverordnung\\_BAnz.pdf](https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/C/Coronavirus/Verordnungen/Corona-Einreiseverordnung_BAnz.pdf)

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

- National Testing Strategy – who will be tested for SARS-CoV-2 in Germany (*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)
- Important information and guidance on SARS-CoV-2 for returning travellers (*in German*)  
[https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Transport/BMG\\_Merkblatt\\_Reisen\\_de\\_Tab.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/BMG_Merkblatt_Reisen_de_Tab.html)
- Selected and regularly updated information on COVID-19 <https://www.rki.de/covid-19-en>
- 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>

## Annex

- <sup>1</sup> The difference to the previous day is based on the date cases are received at RKI. Due to delay in data transmission, cases from preceding days 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 on disease onset and hospitalization, but not for late effects, because such data are not recorded regularly.
- <sup>4</sup> Data on COVID-19 vaccinations are only updated on weekdays. On Sundays, updated figures are not reported.