



Coronavirus Disease 2019 (COVID-19)

Daily Situation Report of the Robert Koch Institute

11/12/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases		7-day incidence (7-di)		DIVI -Intensive care register
Total ¹	Active cases ²	Total population	No. of districts with 7-di > 50/100,000 pop	Cases currently in ICU
+29,875 (1,272,078)	+9,300 [ca. 309,000]	156 cases/ 100,000 pop	+3 [391/412]	+93 [4,432]
Recovered ³	Deaths	People ≥ 60 years	No. of districts with 7-di > 100/100,000 pop	Completed ICU treatment; thereof deceased [%]
+20,000 (ca. 942,100)	+598 (20,970)	143 cases/ 100,000 pop	+18 [321/412]	+562 26%

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.

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 11/12/2020, 12:00 AM)

- Currently, the number of transmissions in the population in Germany is high. Therefore, the entire population is strongly encouraged to commit itself to infection prevention and control.
- Since 04/12/2020, the case numbers show a **sharp** increase again.
- The national 7-day incidence is **156** cases per 100,000 population. In Saxony it is very clearly above, in Bavaria, Berlin and Thuringia clearly above, and **in Saarland and Baden Wuerttemberg somewhat above** the national average.
- 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 **143** cases/100,000 population.
- Almost all of the 412 districts have a high 7-day COVID-19 incidence. Only **7** districts have an incidence of ≤25 cases/100,000 population. In comparison, **321** districts have an incidence of >100 cases/100,000 population and of these, **35** districts have an incidence of >250-500 cases/100,000 population and 2 districts of >500 cases/100,000 population.
- The high nationwide number of cases is caused by increasingly diffuse transmission, with numerous clusters especially in households and nursing and long-term care homes, but also in occupational settings, community facilities and related to religious events. For a large proportion of cases the transmission setting remains unclear.
- With **4,432** cases, the current number of COVID-19 cases treated in intensive care continues to increase.
- On 10/12/2020, **29,875** new laboratory-confirmed COVID-19 cases, the highest number since the beginning of the pandemic, have been transmitted to the RKI in Germany, as well as **598** new deaths associated with COVID-19.
- **RKI's risk assessment was updated. RKI now judges the level of danger to the health of the general population as very high.**

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, a steep increase in case numbers ensued in October in all federal states. Due to measures implemented at the beginning of November the increase could be stopped, albeit no considerable reduction in case numbers ensued. Since 04/12/2020 case numbers are **sharply** increasing again.

Since November, the reported R-values have been fluctuating around 1, **with a tendency in the past days towards values above 1**. This means that, on average, each person infected with SARS-CoV-2 infects **a little more than** one other person. As the number of infected persons is currently very high in Germany, this results in a high **and increasing** number of new infections every day.

Outbreaks are being reported from various districts throughout Germany in various settings, particularly in households and increasingly in nursing and long-term care homes, but also in occupational and educational settings. 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 stable or slightly decreasing, the incidence among older people is further increasing. As the latter more often have more severe illness due to COVID-19, the number of serious cases and deaths is also increasing. 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.

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 **1,272,078 (+29,875)** 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 (11/12/2020, 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	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 per 100,000 pop.	Number of deaths	Number of deaths/100,000 pop.
Baden-Wuerttemberg	179,160	4,212	1,614	18,747	169	3,293	29.7
Bavaria	248,679	4,882	1,895	24,699	188	4,723	36.0
Berlin	76,204	1,652	2,077	6,708	183	768	20.9
Brandenburg	24,910	1,018	988	2,840	113	464	18.4
Bremen	11,366	182	1,669	881	129	150	22.0
Hamburg	28,202	506	1,527	1,942	105	458	24.8
Hesse	102,817	1,917	1,635	9,538	152	1,659	26.4
Mecklenburg-Western Pomerania	7,597	246	472	1,139	71	94	5.8
Lower Saxony	82,321	1,427	1,030	6,346	79	1,380	17.3
North Rhine-Westphalia	305,464	7,033	1,702	27,507	153	4,346	24.2
Rhineland-Palatinate	53,467	1,318	1,306	5,870	143	805	19.7
Saarland	15,178	535	1,538	1,669	169	294	29.8
Saxony	78,704	2,809	1,933	12,751	313	1,505	37.0
Saxony-Anhalt	17,087	648	779	2,968	135	251	11.4
Schleswig-Holstein	17,104	529	589	1,972	68	283	9.7
Thuringia	23,818	961	1,116	4,164	195	497	23.3
Total	1,272,078	29,875	1,530	129,741	156	20,970	25.2

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. Because of technical problems, some federal states did not transmit all cases on Wednesday 09/12/2020. Therefore, additional cases were transmitted on 10/12/2020. This concerns about 3-5% of the cases. The technical problems have been solved in the meanwhile.

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 691,138 cases (54%) thus their date of reporting is provided in Figure 1.

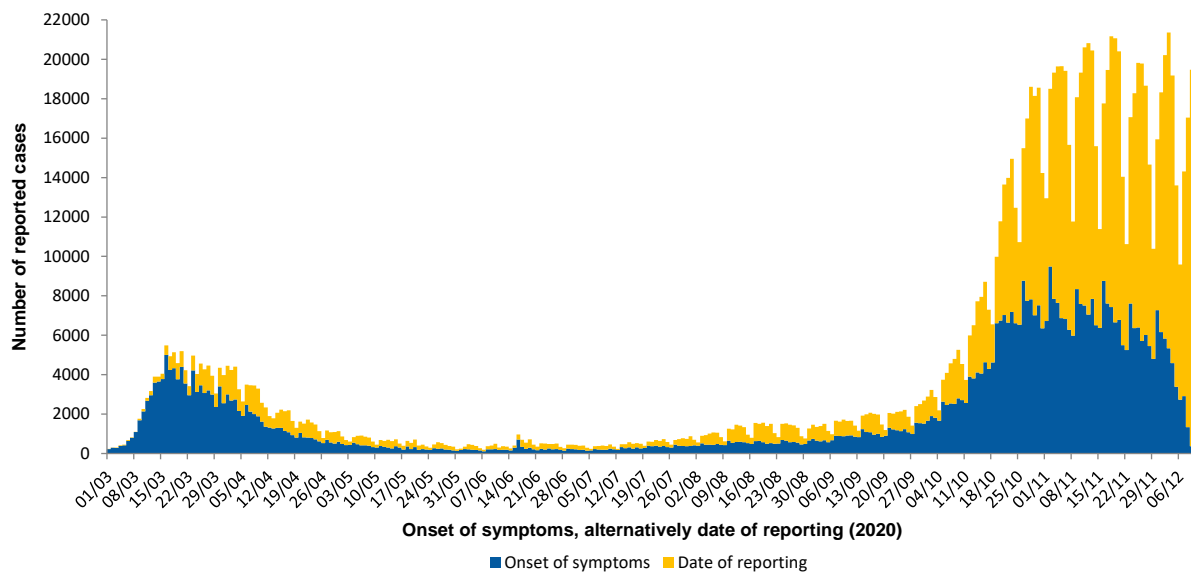


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (11/12/2020, 12:00 AM).

Occupation, accommodation or care in facilities

In accordance with the Protection Against Infection Act (Infektionsschutzgesetz, IfSG), the RKI receives information on occupation, accommodation or care in a facility relevant for infection control for reported COVID-19 cases.

Since information on occupation, accommodation or care in these facilities is missing in many cases, the numbers of cases working, accommodated or cared for in these facilities reported here should be considered minimum values. Among the COVID-19 cases reported from the above-mentioned facilities, the proportion of cases that actually acquired their infection in these facilities is unknown.

The number of COVID-19 cases was highest among persons cared for or employed in care facilities according to § 36 IfSG, among persons employed in medical facilities according to § 23 IfSG and among persons cared for in educational facilities according to § 33 IfSG (Table 2). The number of deaths was particularly high among persons cared for in facilities according to §§ 23 and 36.

The high number of cases among people cared for or working in various care facilities (§ 36 IfSG) is consistent with numerous reported outbreaks, especially in nursing homes.

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=167,238 cases; 11/12/2020, 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	10,369	7,108 / 69%	6,642	1,364	7,100
	Occupation in facility	33,761	2,618 / 8%	1,157	32	29,500
§ 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*	36,245	n.a.	405	3	31,700
	Occupation in facility	17,113	1,308 / 8%	404	13	14,800
§ 36 IfSG (e.g. facilities for the care of older, disabled or other persons in need of care, homeless shelters, community facilities for asylum-seekers, prisons)	Cared for / accommodated in facility	45,815	33,288 / 73%	7,945	6,312	30,600
	Occupation in facility	23,980	2,774 / 12%	755	60	20,400

*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.

Outbreaks

An increased incidence of >25 cases in 7 days/100,000 population was reported for almost every district (405 of 412). There are 35 districts with incidences of >250 to 500 cases/100,000 and 2 districts with an incidence of >500 cases/100,000 in the last 7 days. The dashboard (<https://corona.rki.de>) shows the incidence for all districts.

In most districts, the transmission is diffuse, with several cases clustering in households. Many outbreaks particularly in households and retirement and nursing homes, but also in various occupational settings, hospitals and facilities for asylum seekers and refugees, community facilities such as kindergartens and schools, and in the context of religious gatherings continue to contribute to the elevated 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
1.02 (95%-prediction interval: 0.87 – 1.23)	1.11 (95%- prediction interval: 1.02 – 1.23)

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.

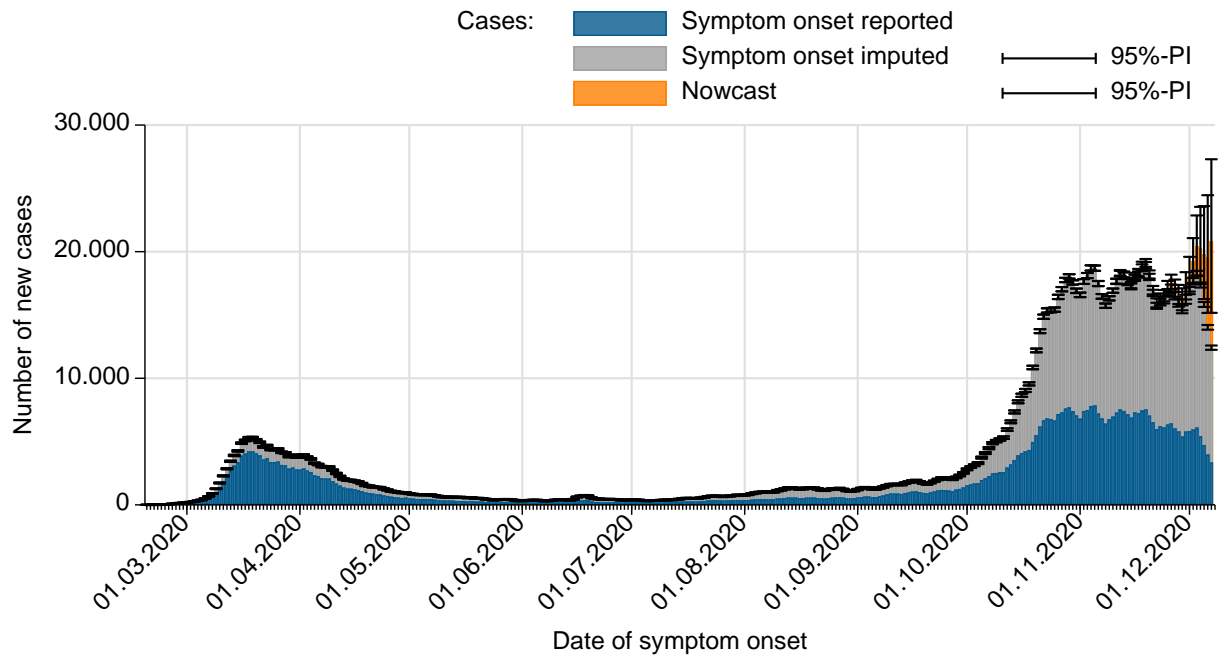


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (orange) (as of 11/12/2020, 12 AM, considering cases up to 07/12/2020).

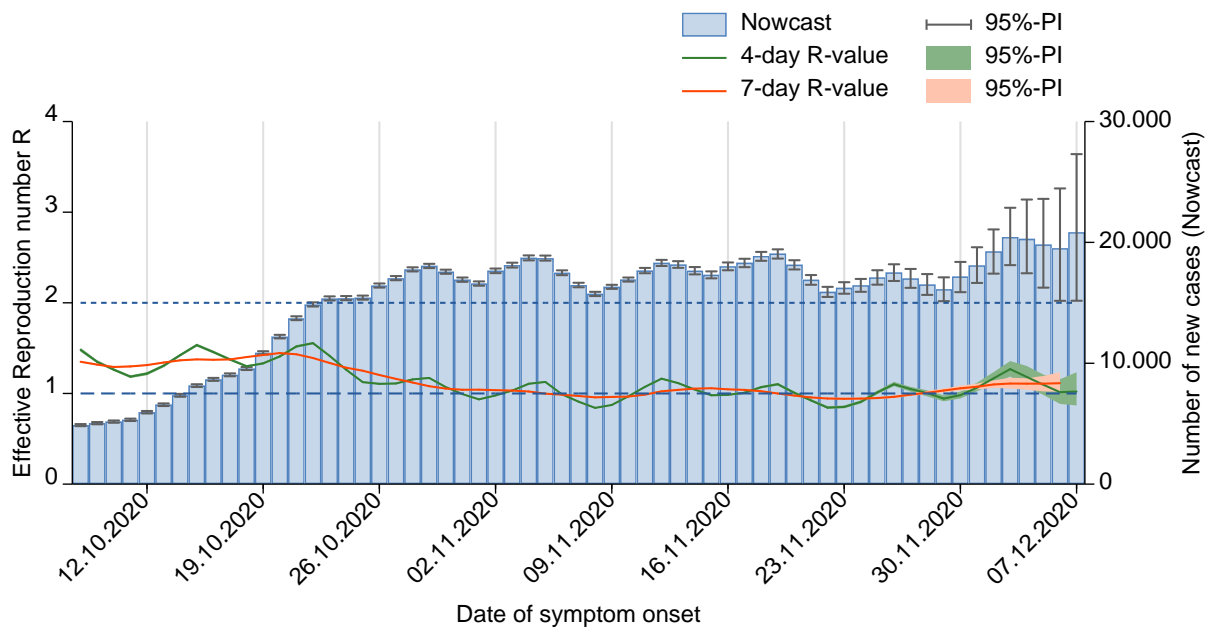


Figure 3: The estimated R-values (in green and orange) over the last 60 days, against the background of estimated number of COVID-19 cases according to illness onset (as of 11/12/2020, 12 AM, considering cases up to 07/12/2020).

The reported R-values have been fluctuating around 1 in November, with a tendency in the past days towards values above 1. This means that, on average, each person infected with SARS-CoV-2 infects a little more than one other person. As the number of infected persons is currently very high in Germany, this results in a high and increasing 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. 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 11/12/2020, a total of 1,290 hospitals or departments reported to the DIVI registry. Overall, 27,140 intensive care beds were registered, of which 22,494 (83%) are occupied, and 4,646 (17%) 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 (11/12/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	4,432		93
- of these: with invasive mechanical ventilation	2,540	57%	35
New admissions to ICU	655		
Discharged from ICU	37,546		562
- of these: deaths	9,017	24%	144

*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

A total of 26 European countries 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, 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 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 46 (9/11 – 15/11/2020), 19,161 persons died

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

(+471 compared to week 45).

<https://www.destatis.de/DE/Themen/Querschnitt/Corona/Gesellschaft/bevoelkerung-sterbefaelle.html> (in German), status from 11/12/2020.

Risk Assessment by the RKI

In view of persistently high case numbers the risk assessment of the RKI was adapted to the current situation on 11/12/2020. The RKI now judges the level of danger to the health of the general population as **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. 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

- 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 (04/12/2020, in German) 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
- Information on the designation of international risk areas (4/12/2020) https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/Archiv_Risikogebiete/Risikogebiete_04122020_en.pdf?blob=publicationFile
- 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
- 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 <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.