



# Coronavirus Disease 2019 (COVID-19)

## Daily Situation Report of the Robert Koch Institute

16/09/2020 - UPDATED STATUS FOR GERMANY

Total (cumulative)		Previous 7 days	
Confirmed cases	Deaths	Confirmed cases	7-day incidence
263,663 (+ 1,901*)	9,368 (+ 6*)	9,128 (+ 522*)	11.0 cases/ 100.000 population
Proportion of deaths	Recovered	No. of districts reporting cases	No. of districts with 7- day incidence > 50
3.6 %	ca. 236,000** (+ 1,400**)	403/412 (+ 3*)	2 (- 1*)

*\*Change from previous day; \*\*Estimate*

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. **Since 14/09/2020 the RKI situation report will be published in a shortened version. The report will be more focused on the current situation. Demographic and clinical aspects, for which there are only few daily changes, will be presented once a week and in a weekly comparison. Further data is also available in the COVID 19 dashboard: <https://corona.rki.de>**

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

### Summary (as of 16/09/2020, 12:00 AM)

- After a high increase between calendar week 29 and 34, the 7-day-COVID-19 incidence had stabilized **in calendar weeks 35 and 36, but since calendar week 37, a slight increase can be observed.** Therefore, the situation must still be carefully monitored.
- The cumulative nationwide incidence over the past 7 days was **11.0** cases per 100,000 inhabitants. The 7-day incidence exceeded 50 cases/100,000 inhabitants in **2** districts: the district of Garmisch-Partenkirchen and the Würzburg in Bavaria. A total of **9** districts transmitted zero cases over the past 7 days.
- In Bavaria, Hamburg and Berlin the 7-day incidence is considerably higher, in Baden-Wuerttemberg and North Rhine-Westphalia it is slightly higher than the national mean 7-day incidence.
- In total, **263,663** laboratory-confirmed COVID-19 cases and **9,368** deaths associated with COVID-19 have been electronically reported to the RKI in Germany.
- Further COVID-19-related outbreaks are being reported in various settings, including nursing homes and hospitals, facilities for asylum-seekers and refugees, community facilities, various occupational settings, in the context of religious or family events and especially among travellers.

# Epidemiological Situation in Germany

In accordance with the international standards of WHO<sup>1</sup> and ECDC<sup>2</sup>, RKI considers all laboratory confirmations of SARS-CoV-2, irrespective of the presence and severity of clinical symptoms, as COVID-19 cases. Thus, in the following report the term "COVID-19 cases" covers acute SARS-CoV-2 infections as well as cases of COVID-19 disease.

## General current assessment

The increase in the number of cases reported since mid-July had stabilized at a slightly higher level in calendar weeks 35 and 36, but since calendar week 37, a slight increase can be observed again. The R-value is currently around 1. It is noticeable that in the last few weeks more young people have become infected, thus the 7-day incidence is significantly higher in younger age groups than in older age groups.

There are outbreaks in various districts throughout Germany, which are associated with different situations, including large celebrations in the family and circle of friends or, especially in cases among younger people, outbreaks originating from travel returnees. The proportion of COVID-19 cases among travel returnees has been decreasing since calendar week 34, while the absolute number of cases remains constant. This shows that people are increasingly being infected again within Germany.

The current development must be further carefully monitored. The current decline in the proportion of deaths among the reported cases is mainly explained by the relatively high proportion of younger people among the newly diagnosed cases, of which relatively few fall seriously ill and die. A renewed increase in new infections must nevertheless be avoided. In particular, it is important to prevent a renewed increase among the elderly and vulnerable groups of the population, as was the case at the beginning of the pandemic. If more elderly and vulnerable people become infected again, a renewed increase in hospitalizations and deaths must be expected. Since last week there has been a slight increase in the number of cases in the higher age groups; this trend should be observed carefully.

It is therefore still necessary for the entire population to be committed to infection control, e.g. by consistently observing rules of distance and hygiene - also outdoors -, by ventilating indoor spaces and, where necessary, by wearing a mouth-nose cover correctly. Crowds of people - especially indoors - should be avoided if possible and celebrations should be limited to the closest circle of family and friends.

<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 **263,663 (+1,901)** laboratory-confirmed cases of COVID-19 have been electronically reported to and validated by the RKI (Table 1). A total of **9** districts reported no cases in the past 7 days, while on 16/06/2020 the number of districts reporting zero cases still amounted to 139 districts.

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 (16/09/2020, 12:00 AM). The number of new cases covers positive cases, which have been sent 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	45,755	432	413	1,456	13.2	1,868	16.9
Bavaria	62,809	408	480	2,275	17.4	2,647	20.2
Berlin	12,463	109	333	538	14.4	227	6.1
Brandenburg	4,033	17	161	65	2.6	169	6.7
Bremen	2,159	22	316	71	10.4	59	8.6
Hamburg	6,917	71	376	267	14.5	268	14.6
Hesse	17,084	99	273	685	10.9	542	8.7
Mecklenburg-Western Pomerania	1,074	10	67	33	2.1	20	1.2
Lower Saxony	18,160	137	227	620	7.8	667	8.4
North Rhine-Westphalia	63,155	430	352	2,199	12.3	1,837	10.2
Rhineland-Palatinate	9,859	64	241	341	8.3	247	6.0
Saarland*	3,240	6	327	45	4.5	175	17.7
Saxony	6,467	37	159	236	5.8	226	5.5
Saxony-Anhalt	2,366	7	107	58	2.6	66	3.0
Schleswig-Holstein	4,288	33	148	116	4.0	161	5.6
Thuringia	3,834	19	179	123	5.7	189	8.8
<b>Total</b>	<b>263,663</b>	<b>1,901</b>	<b>317</b>	<b>9,128</b>	<b>11.0</b>	<b>9,368</b>	<b>11.3</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 **95,203** cases (36%), thus their date of reporting is provided.

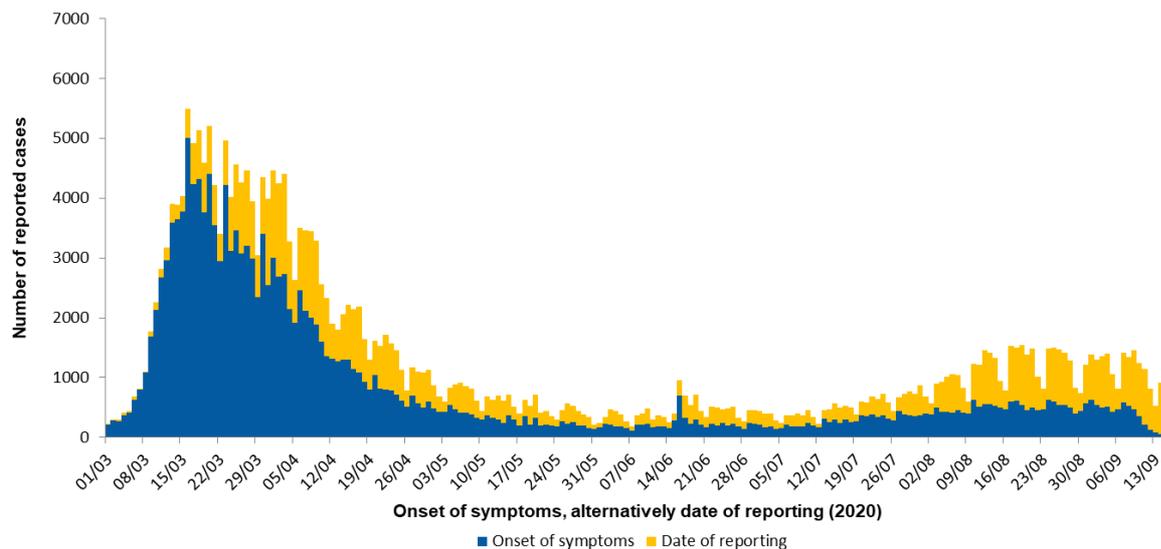


Figure 1: Number of COVID-19 cases in Germany electronically reported to the RKI by the date of symptoms onset or – if unknown – alternatively by date of reporting since 01/03/2020 (16/09/2020, 12:00 AM).

### 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 25% of 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 and among persons employed in medical facilities according to §23 IfSG (Table 2). The number of deaths was particularly high among persons cared for in these facilities.

Among the cases reported as working in medical facilities (§23 IfSG), 73% were female and 27% male. Their median age was 41 years. 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. The high number of cases among persons working in the food sector (§42 IfSG) is largely due to outbreaks in meat processing plants.

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 (261,904\* cases, no data available for 66,689 cases; 16/09/2020, 12:00 AM)

Facility according to		Total	Hospitalised	Deaths	Recovered (estimate)
§ 23 IfSG (e.g. hospitals, outpatient clinics and practices, dialysis clinics or outpatient nursing services)	Cared for / accommodated in facility	4,055	2,857	683	3,200
	Occupation in facility	15,611	685	23	15,300
§ 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*	7,614	126	1	6,700
	Occupation in facility	3,964	175	8	3,600
§ 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, repatriates and refugees as well as other mass accommodation and prisons)	Cared for / accommodated in facility	19,619	4,350	3,680	15,600
	Occupation in facility	10,853	470	40	10,700
§ 42 IfSG (e.g. meat processing plants or kitchens in the catering trade, in inns, restaurants, canteens, cafés, or other establishments with or for communal catering)	Occupation in facility	5,911	253	5	5,700
Neither cared for, accommodated in nor working in a facility		127,636	18,245	3,629	116,900

\*for care according to § 33 IfSG only cases under 18 years of age are taken into account, as other information may be assumed to be incorrect.

## Outbreaks

In 24 districts an increased incidence of >25 cases in 7 days/100,000 population was reported, including the district of Garmisch-Partenkirchen and the urban district of Würzburg, in Bavaria where the incidence is > 50 cases/100,000 population. Most districts affected are in the federal state of Bavaria.

The increased incidence in the city of Würzburg can be attributed to COVID-19 cluster after an outbreak in a shisha bar and further cases in private (bar visit) or work environments. On 10.09.2020, a general ruling was published for the city which provides for restrictions on private events (max. 50 persons indoors, max. 100 persons outdoors) and on the serving of alcohol on the Old Main Bridge (city center).

A travel returnee contributed to the sharp increase in COVID-19 cases in the Garmisch-Partenkirchen district. She had stayed in several locations despite symptoms and ordered quarantine.

The increased incidence in the affected districts is mainly due to transmission during family and other private events. The proportion of travel returnees among the cases is decreasing.

An increase in COVID-19-related outbreaks is reported in nursing homes; hospitals, facilities for asylum seekers and refugees, community facilities, various occupational settings and in connection with religious events are continuously reported.

## Estimation of the reproduction number (R)

The reproduction number, R, is defined as the mean number of people infected by one infected person. R can only be estimated based on statistical analyses such as nowcasting (Figure 2) and not directly extracted from the notification system.

4-day R-value
1.00 (95%-prediction interval: 0.81 - 1.23)

7-day R-value
1.06 (95%-prediction interval: 0.95 - 1.20)

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

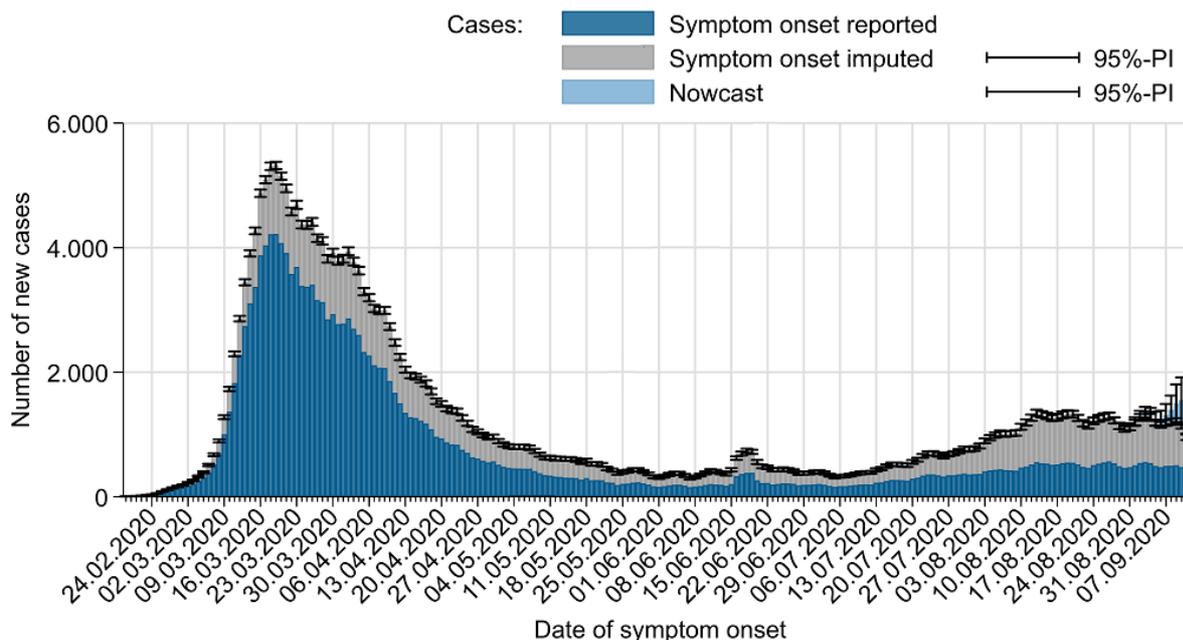


Figure 2: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 16/09/2020, 12 AM, taking into account cases up to 11/09/2020).

The reported R values have been above 1 since mid-July 2020. Since mid-August they are below or around 1. The increased R-values can be attributed in large part to increasing cases among travellers, particularly returning after trips during the summer vacations, but also to a still existing larger number of smaller outbreaks.

Sample calculations as well as an excel sheet presenting both R-values with daily updates can be found under [www.rki.de/covid-19-nowcasting](http://www.rki.de/covid-19-nowcasting). A detailed description of the methodology is available at [https://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2020/17/Art\\_02.html](https://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2020/17/Art_02.html) (Epid. Bull. 17 | 2020 from 23/04/2020).

## DIVI intensive care register

The German Interdisciplinary Association for Intensive and Emergency Medicine (DIVI) has in collaboration with RKI established a registry to document the number of available intensive care beds as well as the number of COVID-19 cases treated in participating hospitals on a daily basis. Since 16/04/2020, all hospitals with intensive care beds are required to report.

(<https://www.intensivregister.de/#/intensivregister>)

As of 15/09/2020, a total of **1,283** hospitals or departments reported to the DIVI registry. Overall, **30,759** intensive care beds were registered, of which **22,142 (72%)** are occupied, and **8,617 (28%)** 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 (16/09/2020, 12:15 PM).

	Number of patients	Percentage	Change to previous day*
<b>Currently in ICU</b>	233		-3
- of these: mechanically ventilated	128	55%	-1
<b>Discharged from ICU</b>	17,064		52
- of these: deaths	4,100	24%	13

\*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.

## Surveys on SARS-CoV-2 laboratory tests in Germany

In order to assess the SARS-CoV-2 test numbers, data from university hospitals, research institutions as well as clinical and outpatient laboratories throughout Germany are merged weekly at the RKI. These data are ascertained on a voluntary basis and are transmitted to RKI via an internet-based RKI test laboratory survey, via the network for respiratory viruses (RespVir), via the laboratory-based SARS-CoV-2 Surveillance established at the RKI (an extension of the Antibiotic Resistance Surveillance (ARS)) and via the enquiry of a professional association of laboratory medicine.

Since the beginning of testing in Germany up to and including week 37/2020, 14,557,136 laboratory tests have been recorded to date, 300,047 of which have tested positive for SARS-CoV-2.

Up to and including week 37, 252 laboratories have registered for the RKI test laboratory survey or in one of the other transmitting networks and transmit data upon reminder largely on a weekly basis. Since laboratories can register the tests of the previous calendar weeks at a later date, it is possible that the ascertained numbers can increase retrospectively. It should be noted that the number of tests is not the same as the number of persons tested, as the data may include multiple tests of individual patients (see Table 4).

Table 4: Number of SARS-CoV-2-laboratory tests in Germany (as of 16/09/2020)

weeks* 2020	Number of tests	Tested positiv	Proportion positive (%)	Number of reporting laboratories
Up to and including week 10	124,716	3,892	3.12	90
week 11	127,457	7,582	5.95	114
week 12	348,619	23,820	6.83	152
week 13	361,515	31,414	8.69	151
week 14	408,348	36,885	9.03	154
week 15	380,197	30,791	8.10	164
week 16	331,902	22,082	6.65	168
week 17	363,890	18,083	4.97	178
week 18	326,788	12,608	3.86	175
week 19	403,875	10,755	2.66	182
week 20	432,666	7,233	1.67	183
week 21	353,467	5,218	1.48	179
week 22	405,269	4,310	1.06	178
week 23	340,986	3,208	0.94	176
week 24	327,196	2,816	0.86	173
week 25	388,187	5,316	1.37	176
week 26	467,413	3,689	0.79	180
week 27	506,490	3,104	0.61	151
week 28	510,551	2,992	0.59	179
week 29	538,701	3,497	0.65	177
week 30	572,967	4,534	0.79	182
week 31	581,037	5,699	0.98	168
week 32	733,990	7,330	1.00	168
week 33	891,988	8,661	0.97	188
week 34	1,055,662	8,921	0.85	196
week 35	1,101,299	8,178	0.74	181
week 36	1,051,125	7,754	0.74	180
week 37	1,120,835	9,675	0.86	185
<b>Total</b>	<b>14,557,136</b>	<b>300,047</b>		

### Testing of travellers at German points of entry

At several points of entry (airports, train stations, motorway service stations), SARS-CoV-2 test centres have been established. Some of the laboratories attached to those test centres have voluntarily provided aggregated statistics on the number of tests. For week 37/2020, 156,641 tests were reported from these entry points, of which 1,187 were positive (0.76%). It is not possible to say to which extent these 156,641 tests are included in those reported in Table 4.

## Risk Assessment by the RKI

### General assessment

At the global and the national level, the situation is dynamic and must be taken seriously. This is a dynamic and serious situation worldwide and in Germany. The number of cases continues to increase worldwide. The number of newly reported cases in Germany declined from about mid-March to the

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

beginning of July, since then the number of cases has increased but has stabilized over the past week. Large and small outbreaks continue to occur throughout Germany, particularly in connection with celebrations with family and friends and at group events. Travel returnees, especially in the younger age groups, have also contributed to the increase in case numbers in July and August. There are still no approved vaccines and the treatment of severe disease courses is complex and lengthy.

The Robert Koch Institute still estimates the risk to the health of the German population to be high, and very high for risk groups. This assessment may change in the short term due to new findings.

### **Infection risk**

SARS-CoV-2 can be transmitted easily from person to person. The risk of infection depends heavily on the regional spread, living conditions and also on individual behaviour (physical distancing, hygiene measures and community masks). Here, contacts in risk situations (such as long face-to-face contact) play a special role. Aerosol emission increases sharply when speaking loudly, singing or laughing. In indoor rooms, this significantly increases the risk of transmission, even if a distance of more than 1.5 m is maintained. If the minimum distance of 1.5 m without covering the mouth and nose is not maintained, e.g. when groups of people sit at a table or in large gatherings, there is also an increased risk of transmission outdoors.

### **Disease severity**

In most cases, the disease is mild. The probability of progression towards serious disease increases with increasing age and underlying illnesses. Individual long-term consequences cannot be estimated yet. The individual risk cannot be derived from epidemiological/statistical data. Thus, even without known previous illnesses and in young people, the course of the disease can be severe or even life-threatening. Long-term consequences, even after slight progressions, cannot yet be assessed.

### **Burden on health system**

The burden on the health care system depends largely on the geographical distribution of cases, the main population groups affected, the health care capacity and initiation of containment measures (isolation, quarantine, physical distancing etc.). In large parts of Germany it is currently low, but it can rapidly increase locally and affect the public health system in particular as well as medical care facilities.

## **Measures taken in Germany**

- 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](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 <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/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/WarnApp/Warn\\_App.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/WarnApp/Warn_App.html)
- Regulations for persons entering Germany in connection with the novel coronavirus SARS-CoV-2 (7.08.2020) [https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Transport/BMG\\_Merkblatt\\_Reisende\\_Tab.html](https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/BMG_Merkblatt_Reisende_Tab.html)

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- 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: <https://www.bundesregierung.de/breg-de/themen/coronavirus/corona-bundeslaender-1745198> *(in German)*
- (Non-medical) face masks must be worn on public transport and in shops in all federal states.
- 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: <https://www.bundesregierung.de/breg-de/themen/coronavirus/besprechung-der-bundeskanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248> *(in German)*