



Coronavirus Disease 2019 (COVID-19) Daily Situation Report of the Robert Koch Institute

12/06/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases	Deaths	Deaths (%)	Recovered
185,674 (+ 258*)	8,763 (+ 8*)	4.7%	ca. 171,600**

*Change from previous day; **Estimate

COVID-19 cases are notified to the local public health department in accordance with the German Protection against Infection Act. This situation report presents the data on laboratory-confirmed COVID-19 cases transmitted to RKI.

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

Summary (as of 12.06.2020, 12:00 AM)

- The number of newly transmitted COVID-19 cases to RKI continues to decrease in comparison to previous weeks. The cumulative nationwide incidence over the past 7 days was **2.6** cases per 100,000 inhabitants. A total of **131** districts transmitted zero cases.
- In total, **185,674** COVID-19 cases and **8,763** deaths due to COVID-19 have been electronically reported to the Robert Koch Institute in Germany.
- The cumulative incidence (cases per 100,000) of COVID-19 is currently highest in Bavaria (**364**), Baden-Wuerttemberg (**317**), Saarland (**280**) and Hamburg (**279**).
- Most cases (67%) are between 15 and 59 years old. Women (52%) and men (48%) are almost equally affected. Slightly more men (55%) than women (45%) died.
- People aged 70 years or older account for 86% of deaths but only 19% of all cases.
- COVID-19 outbreaks continue to be reported in nursing homes and hospitals.
- Outbreaks of COVID-19 have been reported in several federal states (including in institutions for asylum seekers and refugees, in meat processing plants and logistics companies, among seasonal harvest workers and in connection with religious events and family gatherings).

Epidemiological Situation in Germany

Geographical distribution of cases

Epidemiological analyses are based on validated cases notified electronically to the Robert Koch Institute (RKI) in line with the Protection Against Infection Law (Data closure: 12:00 AM daily). Since January 2020, a total of **185,674 (+258)** laboratory-confirmed cases of coronavirus disease 2019 (COVID-19) have been electronically reported to and validated by the RKI, including **8,763** deaths (see Table 1 and Figure 1). A total of **131** districts reported no cases in the past 7 days. Information on confirmed cases is also available on the RKI website at https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Fallzahlen.html and <https://corona.rki.de>.

Table 1: Number and cumulative incidence (per 100,000 population) of notified laboratory-confirmed COVID-19 cases and deaths for each federal state, Germany (12/06/2020, 12:00 AM).

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	35,057	55	317	160	1.4	1,802	16.3
Bavaria	47,574	38	364	289	2.2	2,538	19.4
Berlin	7,165	27	191	199	5.3	208	5.5
Brandenburg	3,306	-46*	132	25	1.0	161	6.4
Bremen	1,573	8	230	75	11.0	45	6.6
Hamburg	5,134	9	279	21	1.1	254	13.8
Hesse	10,313	17	165	148	2.4	489	7.8
Mecklenburg-Western Pomerania	780	2	48	16	1.0	20	1.2
Lower Saxony	12,777	50	160	384	4.8	610	7.6
North Rhine-Westphalia	39,060	77	218	635	3.5	1,643	9.2
Rhineland-Palatinate	6,827	0**	167	67	1.6	231	5.7
Saarland	2,769	3	280	31	3.1	168	17.0
Saxony	5,344	-2	131	23	0.6	219	5.4
Saxony-Anhalt	1,732	4	78	15	0.7	56	2.5
Schleswig-Holstein	3,120	3	108	15	0.5	148	5.1
Thuringia	3,143	13	147	78	3.6	171	8.0
Total	185,674	258	223	2,181	2.6	8,763	10.5

* Negative number of new cases due to data correction

** No data transmission yesterday from Rhineland-Palatinate

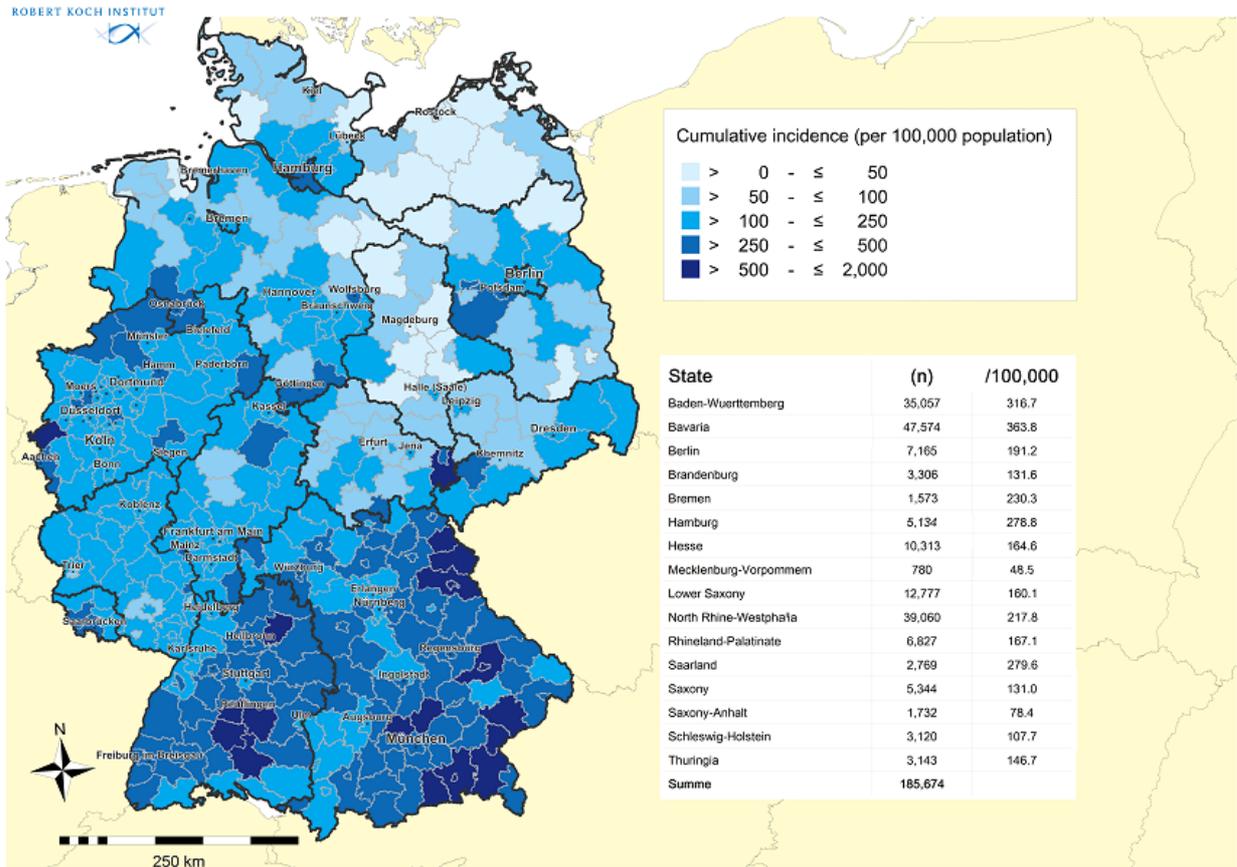


Figure 1: Number and cumulative incidence (per 100,000 population) of the 185,674 electronically reported COVID-19 cases in Germany by county and federal state (12.06.2020, 12:00 AM). Please see the COVID-19 dashboard (<https://corona.rki.de/>) for information on number of COVID-19 cases by county (local health authority).

Distribution of cases over time

The first COVID-19 cases in Germany were notified in January 2020. Figure 2 shows COVID-19 cases transmitted to RKI according to date of illness onset from 01.03.2020 onwards. With regard to all cases reported from 01.03.2020 onwards, the onset of symptoms is unknown in 55,330 cases (30%). When the onset of symptoms is unknown, the date of reporting is provided in Figure 2.

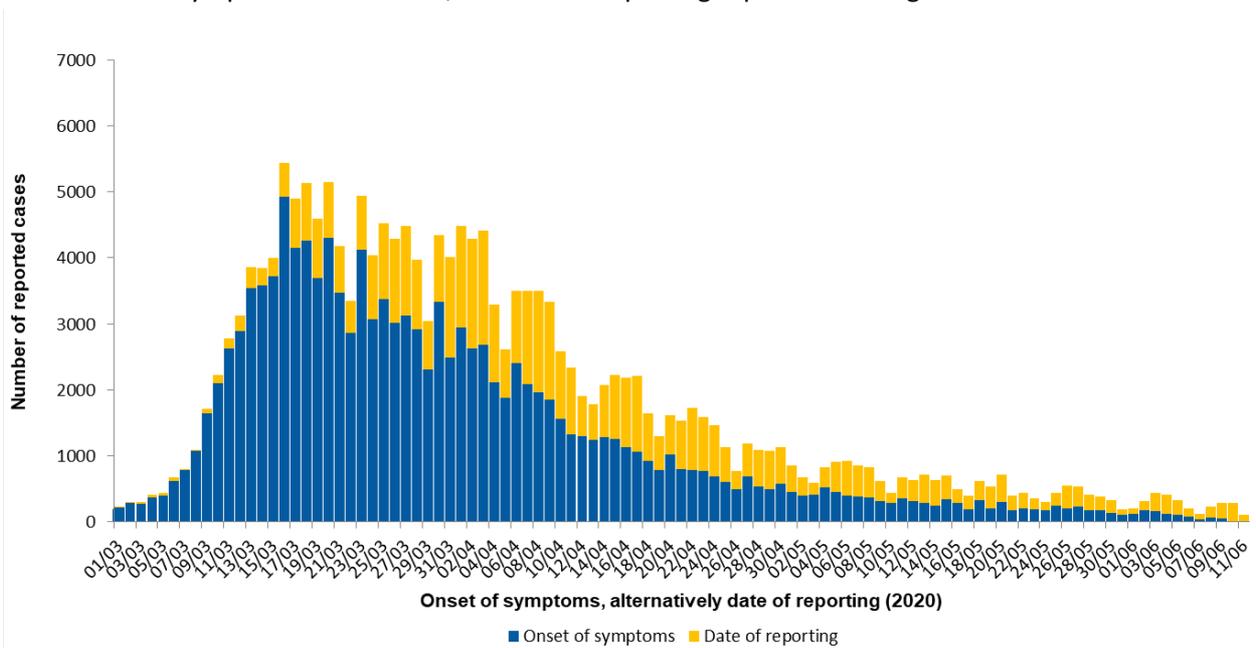


Figure 2: Number of electronically reported COVID-19 cases in Germany by date of symptom onset and by date of reporting from 01/03/2020 (12.06.2020, 12:00 AM).

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

Demographic distribution of cases

Of all reported cases, 52% are female and 48% are male. Among notified cases with data on gender, **4,068** were children under 10 years of age (2.2%), **8,497** children and teenagers aged 10 to 19 years (4.6%), **80,593** persons aged 20 to 49 years (43%), **57,507** persons aged 50 to 69 years (31%), **29,639** persons aged 70 to 89 years (16%) and **5,266** persons aged 90 years and older (2.8%). The age is unknown in 104 notified cases. The mean age of cases is 49 years (median age 49 years). The highest incidences are seen in persons aged 90 years and older (Figure 3).

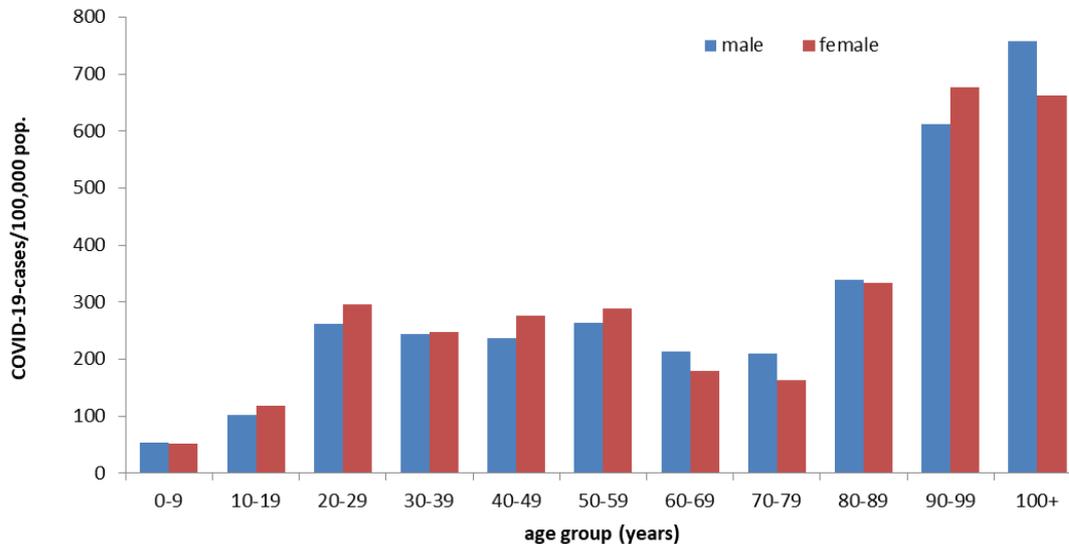


Figure 3: Electronically reported COVID-19 cases/100,000 population in Germany by age group and gender (n=185,272) for cases with information available (12.06.2020, 12:00 AM).

Clinical aspects

Information on symptoms is available for **158,738** (85%) of the notified cases. Common symptoms are cough (49%), fever (41%) and rhinorrhoea (21%). Pneumonia was reported in **4,782** cases (3.0%). Since calendar week 17, cases are reported to the RKI as a distinct COVID-19 surveillance category. Since then, ageusia and anosmia can also be entered as symptoms. At least one of these two symptoms was reported in **2,542** of **16,946** cases (15%).

Hospitalisation was reported for **28,260** (18%) of **160,075** COVID-19 cases with information on hospitalisation status.

Approximately **171,600** people have recovered from their COVID-19 infection. Since the exact date of recovery is unknown in most cases, an algorithm was developed to estimate the number of recovered cases.

In total, **8,763** COVID-19-related deaths have been reported in Germany (4.7% of all confirmed cases). Of these, **4,849** (55%) are men and **3,909** (45%) are women (see Table 2; gender was unknown in five cases). The median age was 82 years. Of all deaths, **7,530** (86%) were in people aged 70 years or older, but only 19% of all cases were in this age group. So far, three deaths among COVID-19 cases under 20 years of age have been reported to the RKI. Pre-existing medical conditions were reported for all three.

Table 2: Number of notified COVID-19 deaths by age group and gender (Data available for 8,758 of notified deaths; 12.06.2020, 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	0	2	6	17	49	222	611	1,325	2,058	554	5
Female	1	0	3	6	19	80	215	647	1,853	1,040	45
Total	1	2	9	23	68	302	826	1,972	3,911	1,594	50

Occupation, accommodation or care in facilities

In accordance with the Protection Against Infection Law (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 26% of cases, the proportion 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.

So far, 13,377 cases with a SARS-CoV-2 infection have been notified among staff working in medical facilities as defined by Section 23 IfSG. Among the cases reported as working in medical facilities, 73% were female and 27% male. The median age was 41 years, 20 persons died.

The low number of cases among persons who attend or work in facilities providing child care or education (Section 33 IfSG) reflects the low incidence in children observed thus far. The high number of cases among people cared for or working in various care facilities (Section 36 IfSG) is consistent with numerous reported outbreaks, especially in nursing homes.

Table 3: Notified COVID-19-cases according to possible occupation, accommodation or care in facilities relevant for transmission of infectious diseases (184,684* cases, no data available for 49,036 cases; 12.06.2020, 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	3,140	2,240	591	2,400
	Occupation in facility	13,377	615	20	13,200
§ 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*	2,529	62	1	2,300
	Occupation in facility	2,573	129	7	2,500
§ 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	17,214	3,914	3,426	13,100
	Occupation in facility	9,623	407	48	9,400
§ 42 IfSG (e.g. kitchens in the catering trade, in inns, restaurants, canteens, cafés, or other establishments with or for communal catering)	Occupation in facility	2,541	157	4	2,400
Neither cared for, accommodated in nor working in a facility		84,651	15,237	3,335	79,600

*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.
IfSG: Protection Against Infection Law

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

Outbreaks

A high 7-day incidence rate was observed in [one](#) district, primarily due to a localised outbreak: The districts of Aichach-Friedberg (Bavaria). Here, an outbreak was reported among seasonal harvest workers. Tracing and testing of contacts as well as implementation of hygiene and quarantine measures were rapidly implemented. Harvest activities were temporarily halted.

[In other cities/district with formerly high 7-day incidence rates, incidence rates are decreasing.](#) In the city of Bremerhaven an outbreak extending to other districts, including Cuxhaven, occurred within a religious community. Another outbreak occurred following a large family gathering.

In addition an outbreak occurred in a nursing home for the elderly in the district of Sonneberg, in which both residents and employees were infected with SARS-CoV-2. In the neighbouring district of Coburg an increased number of SARS-CoV-2 infections were also reported in nursing homes, some in conjunction with dialysis treatment.

A large Covid-19 outbreak occurred in the district of Göttingen related to family gatherings, for which a large number of contact persons has been identified. Due to a high number of affected children, numerous schools and day care institutions were temporarily closed.

Outbreaks continue to occur in meat-processing plants in several federal states, some of which have led to closures of plants.

Outbreaks in the context of religious communities have been reported from Berlin, Hesse and Mecklenburg-Western Pomerania.

In addition, several large outbreaks have occurred among workers at logistics companies, for instance in North Rhine-Westphalia and Lower Saxony.

Estimation of the reproduction number (R)

The presented case numbers do not fully reflect the temporal progression of incident COVID-19 cases, since the time intervals between actual onset of illness and diagnosis, reporting, as well as transmission to the RKI vary greatly. Therefore, a nowcasting approach is applied to model the true temporal progression of COVID-19 cases according to illness onset. Figure 4 shows the result of this analysis.

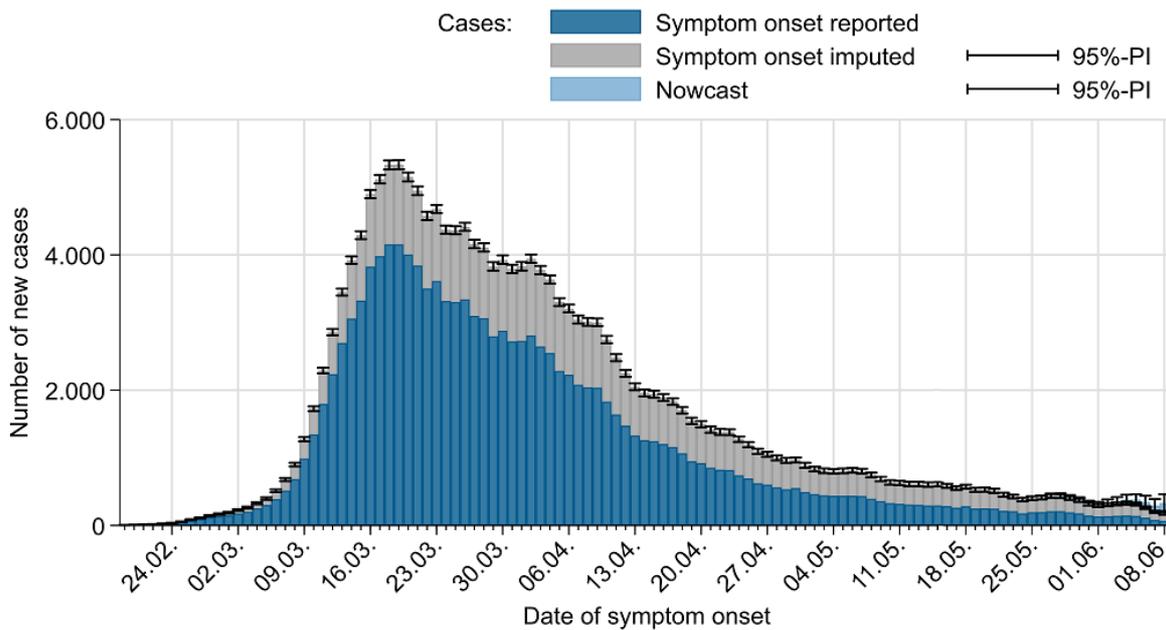


Figure 4: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset (light blue) (as of 12.06.2020 12 AM, taking into account cases up to 08/06/2020).

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 and not directly extracted from the notification system.

The R -value reported to date reflects the trend in the number of incident cases with a high degree of sensitivity. This value is thus sensitive to short-term changes in the number of cases - such as those caused by individual outbreaks - which can lead to relatively large fluctuations, especially if the total number of new cases is relatively low. In addition to this sensitive R -value, the RKI therefore now provides a second, more stable 7-day R -value, which is based on data from a longer time period and is therefore less subject to short-term fluctuations. Thus, it reflects trends more reliably, but is based on infections that occurred on average earlier than those on which the more sensitive R -value is based.

Both R -values are estimated on the basis of nowcasting. The nowcasting predicts the number of cases with illness onset up to the date of 4 days ago, as no reliable prediction can be made about the number of new cases in the last 3 days.

The sensitive R -value reported so far can be estimated using a moving 4-day average of the number of incident cases as estimated by nowcasting. It compares the 4-day mean of incident cases on one day with the corresponding mean 4 days before. Thus, taking into account that infection occurs four to six days before the onset of symptoms, the daily sensitive R -value represents the course of infection approximately one to two weeks ago. This value is sensitive to short-term changes, e.g. due to local outbreaks, especially, if the number of new cases is relatively low. The current estimate is $R = 0.87$ (95%-prediction interval: $0.69 - 1.09$) and is based on electronically notified cases as of 12.06.2020, 12:00 AM.

Similarly, the 7-day R -value is estimated by using a moving 7-day average of the nowcasting curve. This compensates for fluctuations more effectively. The 7-day R -value then compares the 7-day average of the new cases on one day with the 7-day average four days earlier. The 7-day R thus represents a slightly later course of infection of about one to a little over two weeks ago. The 7-day R -value is estimated at 1.04 (95% prediction interval: $0.94 - 1.17$) and is based on electronically notified cases as of 12.06.2020, 12:00 AM. **Today's 7-day R -value reflects the previously elevated 4-day R -value over the past few days. Due to the decreasing daily case numbers both R -values have to be interpreted with caution and in a few days trend.**

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

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 methodological explanation of the more stable R-value is also available there. More general information and sample calculations for both R-values can also be found in our FAQs (<http://www.rki.de/covid-19-faq>).

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

A registry of the German Interdisciplinary Association for Intensive and Emergency Medicine (DIVI), the RKI and the German Hospital Federation (DKG) was established to document intensive care capacity as well as the number of COVID-19 cases treated in participating hospitals (<https://www.intensivregister.de/#/intensivregister>). The DIVI intensive care register documents the number of available intensive care beds in the reporting hospitals on a daily basis. Since 16/04/2020, all hospitals with intensive care beds are required to report.

As of 12.06.2020, a total of 1,270 hospitals or departments reported to the DIVI registry. Overall, 31,903 intensive care beds were registered, of which 20,296 (64%) are occupied, and 11,607 beds (36%) are currently available. The number of COVID-19 cases treated in participating hospitals is shown in Table 4.

Table 4: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (12.06.2020, 12:15 AM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	447		-16
- of these: mechanically ventilated	274	61%	-7
Discharged from ICU	14,138		+83
- of these: deaths	3,657	26%	+4

*The interpretation of these numbers must take into account the slightly changing number of reporting hospitals (with large differences in their number of beds) from day to day. This can explain the observed decrease in the cumulative number of discharged patients and deaths on some days compared to the previous day.

Mortality monitoring

A total of 24 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.

All-cause mortality for the countries in the EuroMOMO network are approaching normal levels, following a period of a substantial excess mortality coinciding with the COVID-19 pandemic. A few countries are still seeing some excess mortality. Excess mortality was observed primarily in the age group of over-65s, but also in the age group of 15-64s.

Weekly mortality statistics are also recorded on the website of the Federal Statistical Office, albeit with a certain time lag (currently 10/05/2020)

https://www.destatis.de/DE/Presse/Pressemitteilungen/2020/06/PD20_203_12621.html?nn=209016. A special evaluation on excess mortality is updated every two weeks:

<https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/Tabellen/sonderauswertung-sterbefaelle.html?nn=209016> (in German). Looking at the development by calendar weeks, since the last week of March (week 13), there have been increased

mortality rates compared to the average for the years 2016 to 2019. This upward deviation was greatest in week 15. From week 16 onwards, the mortality rates have fallen again considerably. With a further decrease, the mortality figures in week 19 are no longer above the average of the previous years.

Risk Assessment by the RKI

General assessment

At the global and the national level, the situation is very dynamic and must be taken seriously. The number of newly reported cases is decreasing. The RKI currently assesses the risk to the health of the German population overall as **high** and as **very high** for risk groups. This assessment may change at short notice based on new insights.

Infection risk

The risk of infection depends heavily on the regional spread, living conditions and also on individual behaviour.

Disease severity

In most cases, the disease is mild. The probability of progression towards serious disease increases with increasing age and underlying illnesses.

Burden on health system

The burden on the health care system depends on the geographical distribution of cases, health care capacity and initiation of containment measures (isolation, quarantine, physical distancing etc.). The burden is currently low in many regions, but may be high in some locations.

Measures taken by Germany

- From 15 June, travel within Europe should be possible again – provided the COVID-19 activity in destination countries permits this. <https://www.bundesregierung.de/breg-de/themen/coronavirus/reisen-wieder-moeglich-1757372> (in German)
- 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 in the daily situation reports and 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)