



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

18/06/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases	Deaths	Deaths (%)	Recovered
187,764 (+ 580*)	8,856 (+ 30*)	4.7%	ca. 174,100**

*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.

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

Summary (as of 18/06/2020 12:00 AM)

- The cumulative nationwide incidence over the past 7 days was **2.6** cases per 100,000 inhabitants. A total of **145** districts transmitted zero cases.
- In total, **187,764** laboratory-confirmed COVID-19 cases and **8,856** deaths due to COVID-19 have been electronically reported to the RKI in Germany.
- 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 RKI in line with the Protection Against Infection Law (Data closure: 12:00 AM daily). Since January 2020, a total of **187,764 (+580)** laboratory-confirmed cases of coronavirus disease 2019 (COVID-19) have been electronically reported to and validated by the RKI (see Table 1). A total of **145** districts reported no cases in the past 7 days. Information on laboratory-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 laboratory-confirmed COVID-19 cases and deaths for each federal state electronically reported to RKI, Germany (18/06/2020, 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	35,218	41	318	132	1.2	1,816	16.4
Bavaria	47,747	37	365	201	1.5	2,556	19.5
Berlin	7,475	73	199	292	7.8	210	5.6
Brandenburg	3,365	3	134	40	1.6	163	6.5
Bremen	1,619	12	237	54	7.9	49	7.2
Hamburg	5,154	5	280	22	1.2	259	14.1
Hesse	10,440	54	167	137	2.2	498	7.9
Mecklenburg-Western Pomerania	787	1	49	9	0.6	20	1.2
Lower Saxony	13,063	95	164	293	3.7	618	7.7
North Rhine-Westphalia*	39,777	204	222	752	4.2	1,658	9.2
Rhineland-Palatinate	6,874	18	168	44	1.1	234	5.7
Saarland	2,773	0	280	7	0.7	168	17.0
Saxony	5,359	9	131	17	0.4	221	5.4
Saxony-Anhalt	1,802	27	82	71	3.2	57	2.6
Schleswig-Holstein	3,122	0	108	7	0.2	152	5.2
Thuringia	3,189	1	149	59	2.8	177	8.3
Total	187,764	580	226	2,137	2.6	8,856	10.7

* Yesterday, no cases for the outbreak in the district of Gütersloh in North Rhine Westphalia were transmitted to the RKI.

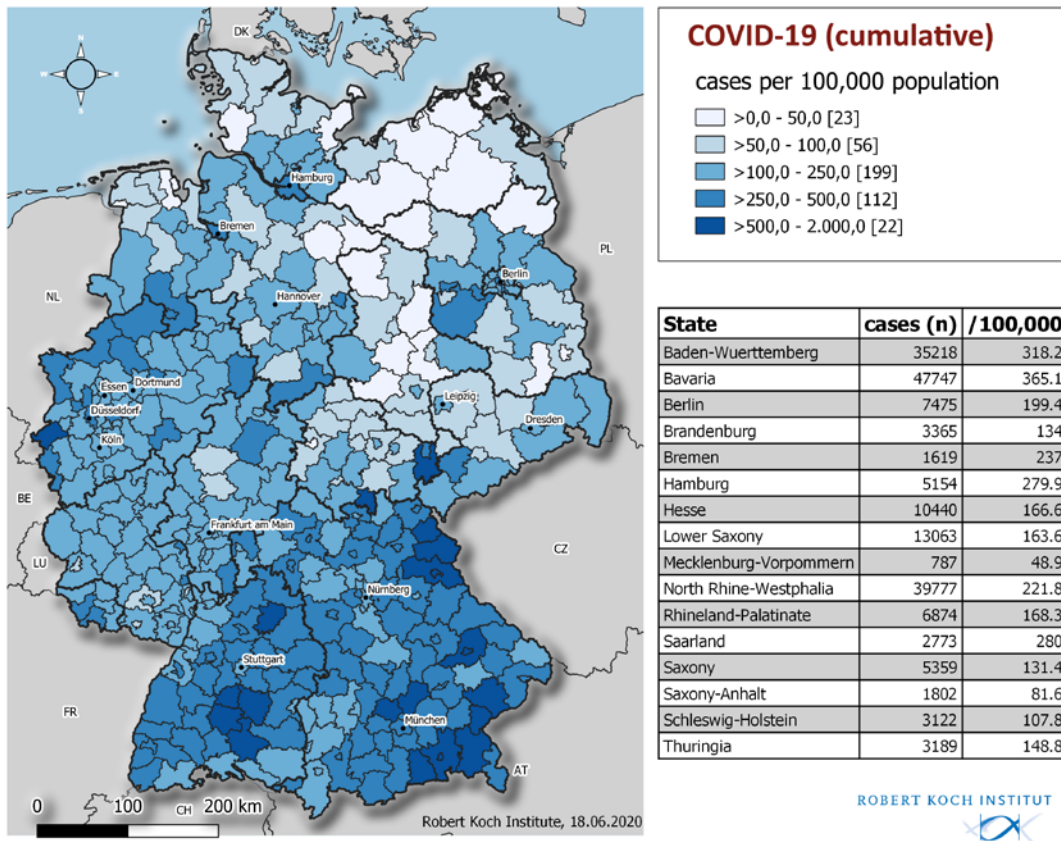


Figure 1: Number and cumulative incidence (per 100,000 population) of the 187,764 electronically reported COVID-19 cases in Germany by county and federal state (18/06/2020, 12:00 AM). Please see the COVID-19 dashboard (<https://corona.rki.de/>) for information on number of COVID-19 cases by county (local 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 55,490 cases (30%). When the onset of symptoms is unknown, the date of reporting is provided in Figure 2.

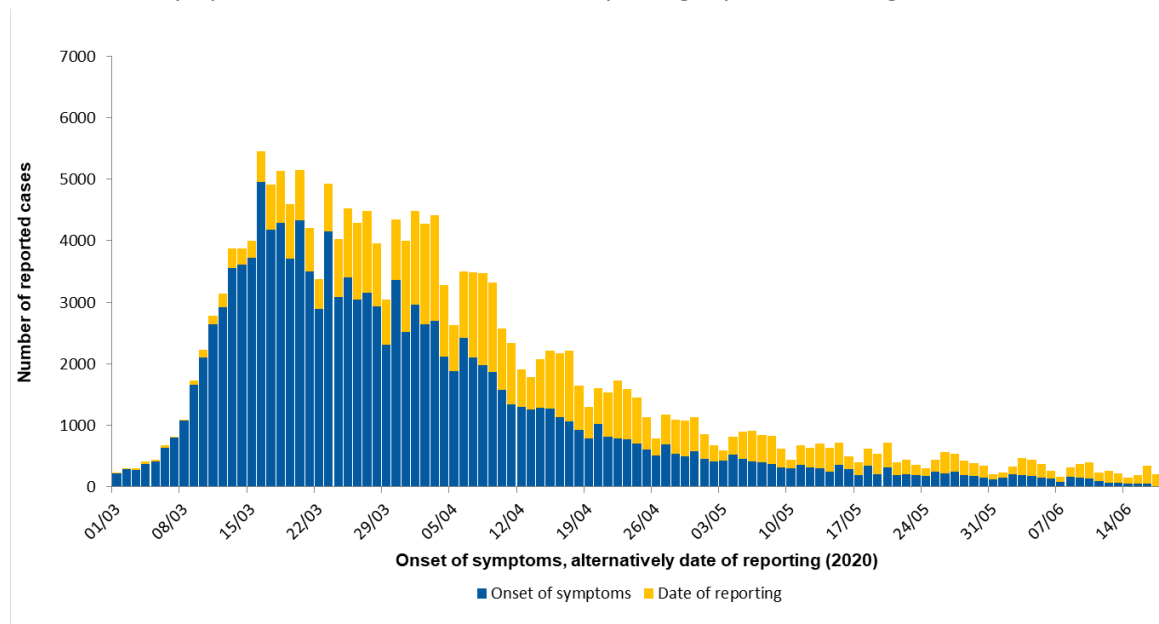


Figure 2: Number of COVID-19 cases in Germany electronically reported to the RKI by date of symptom onset or alternatively by date of reporting from 01/03/2020 (18/06/2020, 12:00 AM).

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, 4,271 were children under 10 years of age (2.3%), 8,730 children and teenagers aged 10 to 19 years (4.7%), 81,674 persons aged 20 to 49 years (43%), 57,884 persons aged 50 to 69 years (31%), 29,801 persons aged 70 to 89 years (16%) and 5,305 persons aged 90 years and older (2.8%). The age is unknown in 99 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).

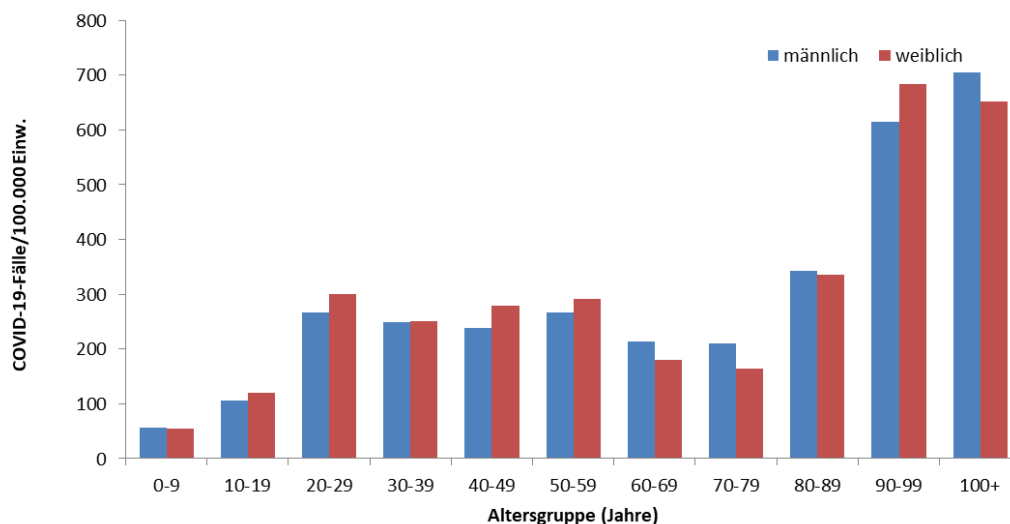


Figure 3: Electronically reported COVID-19 cases/100,000 population in Germany by age group and gender (n=187,362) for cases with information available (18/06/2020, 12:00 AM).

Clinical aspects

Information on symptoms is available for 160,996 (86%) of the notified cases. Common symptoms are cough (49%), fever (41%) and rhinorrhoea (21%). Pneumonia was reported in 4,886 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 2,771 of 18,601 cases (15%).

Hospitalisation was reported for 28,642 (18%) of 162,532 COVID-19 cases with information on hospitalisation status.

Approximately 174,100 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 this number.

Table 2: Number of notified COVID-19 deaths by age group and gender electronically reported to RKI (Data available for 8,851 of notified deaths; 18/06/2020, 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		2	6	17	49	228	621	1,341	2,076	556	6
Female	1		3	6	20	82	221	653	1,862	1,056	45
Total	1	2	9	23	69	310	842	1,994	3,938	1,612	51

In total, 8,856 COVID-19-related deaths have been reported in Germany (4.7% of all confirmed cases). Of these, 4,902 (55%) are men and 3,949 (45%) are women (see Table 2), the gender was unknown in five cases). The median age was 82 years. Of all deaths, 7,598 (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.

Occupation, accommodation or care in facilities

In accordance with the Protection Against Infection Law, 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, **13,602** 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. The increase in the number of cases among persons working in the food sector (§42) is largely due to outbreaks in meat processing plants.

Table 3: Notified COVID-19-cases according to possible occupation, accommodation or care in facilities relevant for transmission of infectious diseases electronically reported to RKI (186,181* cases, no data available for 48,540 cases; 18/06/2020, 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	3,220	2,311	611	2,500
	Occupation in facility	13,602	632	20	13,500
§ 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*	2,732	62	1	2,500
	Occupation in facility	2,640	134	8	2,600
§ 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	17,426	3,985	3,470	13,500
	Occupation in facility	9,731	416	47	9,600
§ 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	2,761	168	4	2,500
Neither cared for, accommodated in nor working in a facility		86,233	15,462	3,374	81,200

*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

Outbreaks

A high 7-day incidence was observed in three districts, primarily due to localised outbreaks: The districts of, Greiz (Thuringia), Guetersloh (North-Rhine-Westphalia), Verden (Lower Saxony) and [Magdeburg \(Saxony-Anhalt\)](#).

A local COVID-19 outbreak among harvest workers in the district of Aichach-Friedberg had led to a sharp increase in the 7-day incidence. The applied measures (isolation, hygiene as well as identification and testing of contact persons), which were initiated immediately, as well as the early termination of the seasonal harvest work, have led to a containment of the outbreak. The 7-day incidence has fallen considerably.

The increase in the 7-day incidence in the district Gütersloh is due to an outbreak in a meat processing plant. Several hundred employees tested positive for SARS-CoV-2. Contact tracing is ensured at the present time. The affected plant was temporarily closed at short notice and all employees are being quarantined. In addition, all schools and day-care centres in the district will be closed from 18.06. until the end of the summer holidays (11.08.2020). Such outbreaks have also occurred in other federal states, some of which have led to production closures.

In Magdeburg, an outbreak affecting several now closed schools has led to an increase in the 7-day incidence.

Once again there were major outbreaks in retirement- and nursing homes. In the districts of Greiz and Verden residents and nursing staff have been tested positive for SARS-CoV-2.

Further outbreaks were reported among members of religious communities, eg. from Berlin, Hesse and Mecklenburg-Western Pomerania.

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 data 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.

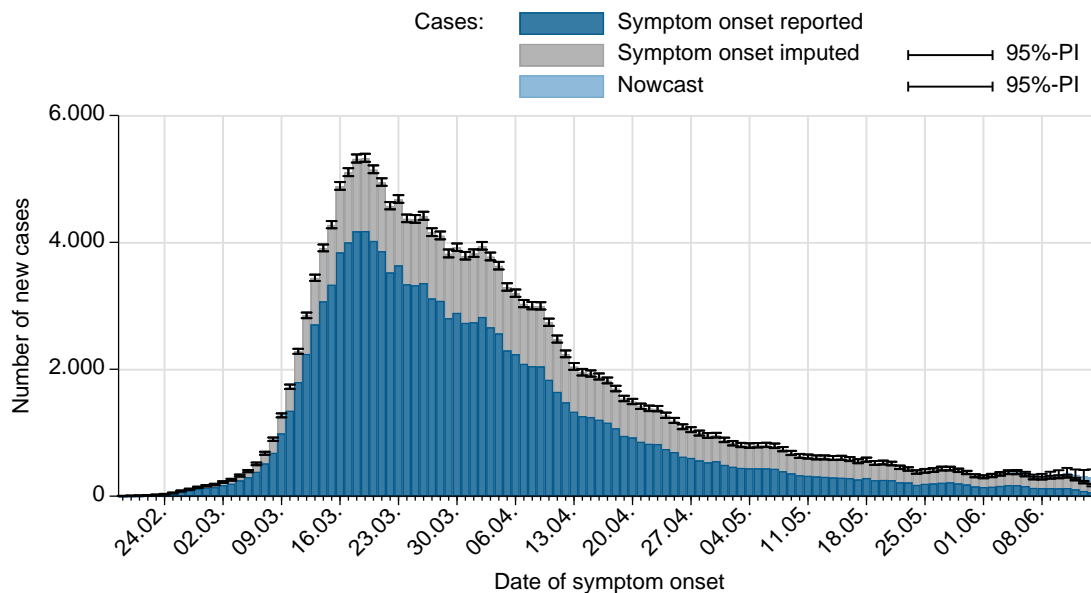


Figure 4: Number of notified COVID-19 cases with known date of illness onset (dark blue), estimated date of illness onset for cases without reported date of onset (grey) and estimated number of not yet notified cases according to illness onset electronically reported to RKI (light blue) (as of 18/06/2020, 12 AM, taking into account cases up to 14/06/2020).

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 sensitive R -value reported can be estimated by using a 4-day moving average of the number of new cases estimated by nowcasting. This 4-day value reflects the infection situation about one to two weeks ago. This value reacts sensitively to short-term changes in case numbers, such as those caused by individual outbreaks. This can lead to relatively large fluctuations, especially if the total number of new cases is small. The current estimate of the 4-day- R -value is **0.86** (95%-prediction interval: **0.68 – 1.06**) and is based on electronically notified cases as of 18/06/2020, 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, as this value 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 **1.00** (95%-prediction interval: **0.90– 1.10**) and is based on electronically notified cases as of 18/06/2020, 12:00 AM. In light of the still low daily case numbers, both R -values should be interpreted with caution and in their course over several days.

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 7day 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 18/06/2020, a total of **1,271** hospitals or departments reported to the DIVI registry. Overall, **31,637** intensive care beds were registered, of which **20,705 (65%)** are occupied, and **10,932 beds (35%)** 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 (18/06/2020 18/06/2020, 12:15 AM).

	Number of patients	Percentage	Change to previous day*
Currently in ICU	396		-10
- of these: mechanically ventilated	240	61%	-12
Discharged from ICU	14,431		+43
- of these: deaths	3,659	25%	0

*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.

Information from additional RKI-based surveillance systems for acute respiratory illnesses

GrippeWeb ("FluWeb") is a web interface at RKI for monitoring the activity of acute respiratory illness (ARI), utilizing information from the population. In week 24, 2020, the rate of ARI ("ARI rate") increased slightly. Since the end of the influenza epidemic in week 12, 2020, the ARI rate has been markedly lower than in previous seasons at this time of the year. Further information can be found under <https://grippeweb.rki.de/>.

The Influenza Working Group (AGI) monitors ARI through a sentinel network of physicians in private practices. In week 24, 2020, the number of patient visits due to acute respiratory infections remained stable at a very low level. Within the viral surveillance of the AGI, rhinovirus was detected in 8 of 36 samples (22%) in week 24, 2020. Since week 15, 2020, no influenza activity has been observed within the viral surveillance of the AGI. No SARS-COV-2 has been detected since week 16, 2020. Further information can be found under <https://influenza.rki.de/>.

A third, ICD-10 code based system, monitors severe acute respiratory illness (SARI) in hospitalized patients (ICD-10 codes J09 to J22: primary diagnoses influenza, pneumonia or other acute infections of the lower respiratory tract). In week 23, 2020, the total number of SARI cases decreased further to an unusually low level. Of all reported SARI cases in week 23, 2020, 6% were diagnosed with COVID-19 (ICD-10 code U07.1!) (see Figure 5). Please note that only patients with an ICD-10 Code for SARI as the main diagnosis and hospitalisation duration of up to one week were included in this analysis.

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

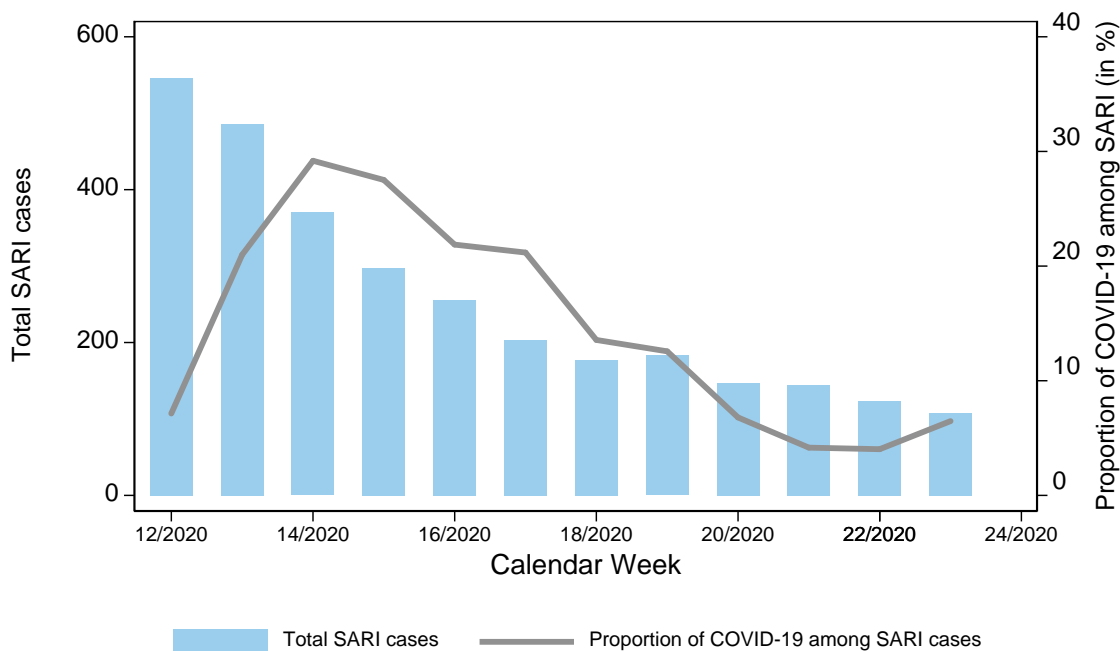


Figure 5: Weekly number of SARI cases (ICD-10 codes J09-J22) and proportion of cases with a diagnosis of COVID-19 (ICD-10 code U07.1!) among SARI cases with duration of hospitalisation of up to one week and with date of admission in weeks 12 to 23, 2020, from 70 sentinel hospitals

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 currently 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

- Corona-Warn-App
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 (15.06.2020) https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Transport/BMG_Merkblatt_Reisende_Tab.html
- From 15 June, borders will open within Europe, making travel possible again – provided the COVID-19 activity in destination countries permits this (12/06/2020) <https://www.auswaertiges-amt.de/de/ReiseUndSicherheit/covid-19/2296762>
- 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)