



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

16/04/2020 - UPDATED STATUS FOR GERMANY

Confirmed cases	Deaths	Deaths (%)	Recovered
<b>130,450</b> (+ 2,866*)	<b>3,569</b> (+ 315*)	<b>2.7%</b>	<b>ca. 77,000**</b>

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

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

### Summary (as of 16/04/2020, 12:00 AM)

- In total, **130,450** COVID-19 cases and **3,569** deaths due to COVID-19 have been electronically reported to the Robert Koch Institute in Germany.
- All 16 federal states are affected. The incidence (cases per 100,000) of COVID-19 is highest in Bavaria (**269**), Baden-Wuerttemberg (**234**), Saarland (**222**) and Hamburg (**215**).
- Most cases (68%) are between 15 and 59 years old; men (48%) and women (52%) are almost equally affected.
- **86%** of deaths, but only 18% of all cases, occurred in persons aged 70 years or older.
- COVID-19 related outbreaks in nursing homes and hospitals continue to be reported. In some of these outbreaks, the number of deaths is relatively high.
- As of 10/04/2020, the RKI no longer classifies countries or regions as international risk areas.

# Epidemiological Situation in Germany

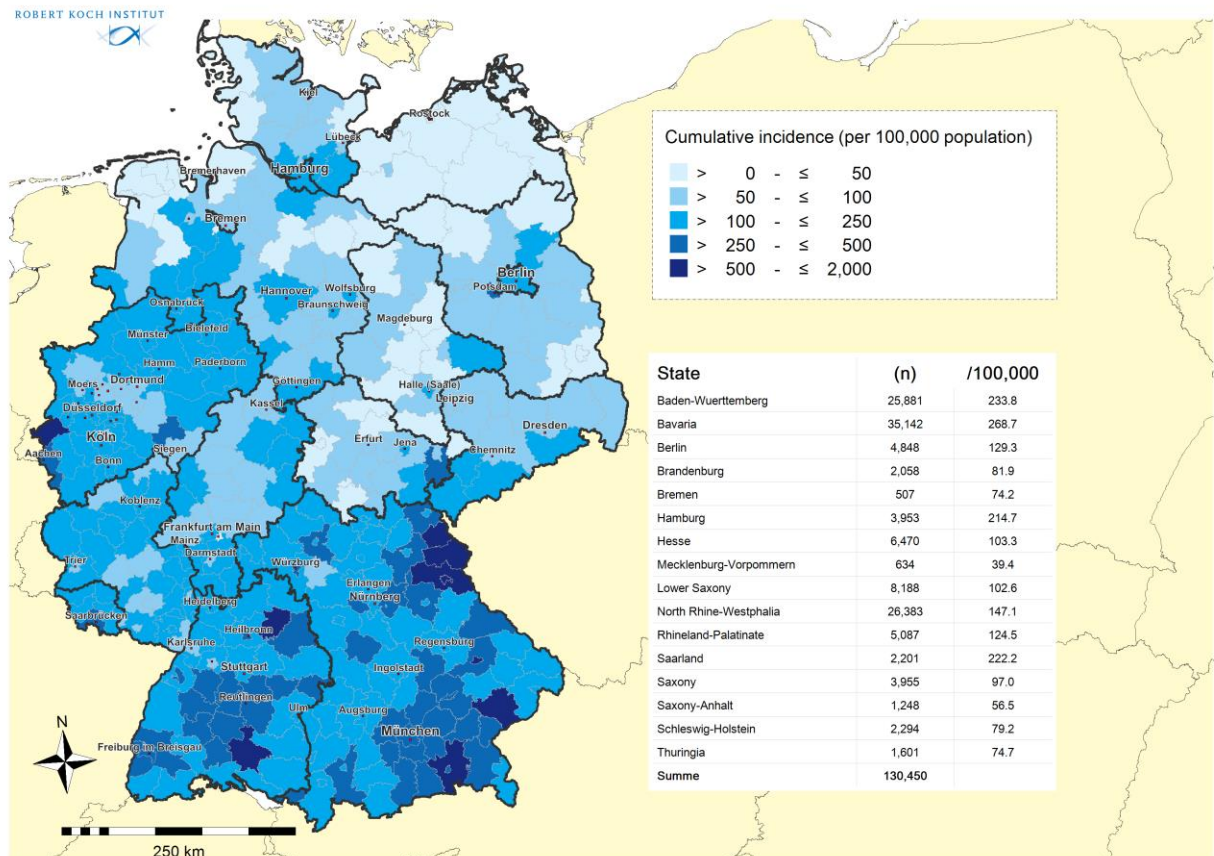
## Geographical distribution of cases

Epidemiological analyses are based on validated cases notified electronically to RKI according to the Protection Against Infection Law (Data closure: 12:00 AM daily).

Since January 2020, a total of **130,450 (+2,866)** laboratory-confirmed cases of coronavirus disease 2019 (COVID-19) have been electronically reported to and validated at the RKI, including **3,569** deaths (see Table 1 and Figure 1). Information on confirmed cases are also available on the RKI website at [https://www.rki.de/DE/Content/InfAZ/N/Neuartiges\\_Coronavirus/Fallzahlen.html](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 per federal state, Germany (16/04/2020, 12:00 AM).

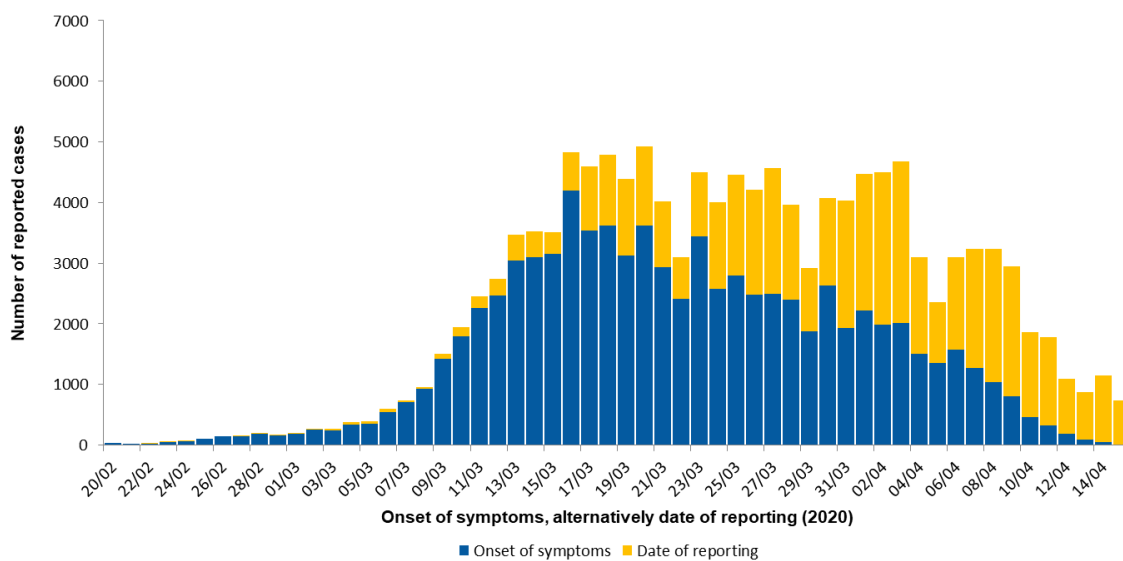
Federal State	Total Number of cases	Number of new cases	Cases/100,000 pop.	Number of deaths
<b>Baden-Wuerttemberg</b>	25,881	443	234	802
<b>Bavaria</b>	35,142	848	269	1.049
<b>Berlin</b>	4,848	126	129	74
<b>Brandenburg</b>	2,058	108	82	54
<b>Bremen</b>	507	7	74	21
<b>Hamburg</b>	3,953	84	215	80
<b>Hesse</b>	6,470	123	103	187
<b>Mecklenburg-Western Pomerania</b>	634	10	39	13
<b>Lower Saxony</b>	8,188	169	103	248
<b>North Rhine-Westphalia</b>	26,383	548	147	663
<b>Rhineland-Palatinate</b>	5,087	83	125	87
<b>Saarland</b>	2,201	56	222	71
<b>Saxony</b>	3,955	136	97	94
<b>Saxony-Anhalt</b>	1,248	25	57	26
<b>Schleswig-Holstein</b>	2,294	49	79	55
<b>Thuringia</b>	1,601	51	75	45
<b>Total</b>	<b>130.450</b>	<b>2.866</b>	<b>157</b>	<b>3.569</b>



**Figure 1:** Number and cumulative incidence (per 100,000 population) of the 130,450 electronically reported COVID-19 cases in Germany by county and federal state (16/04/2020, 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**

COVID-19 cases were first notified in Germany in January 2020. In 47,681 cases, onset of symptoms is unknown and therefore date of reporting is shown (see Figure 2).

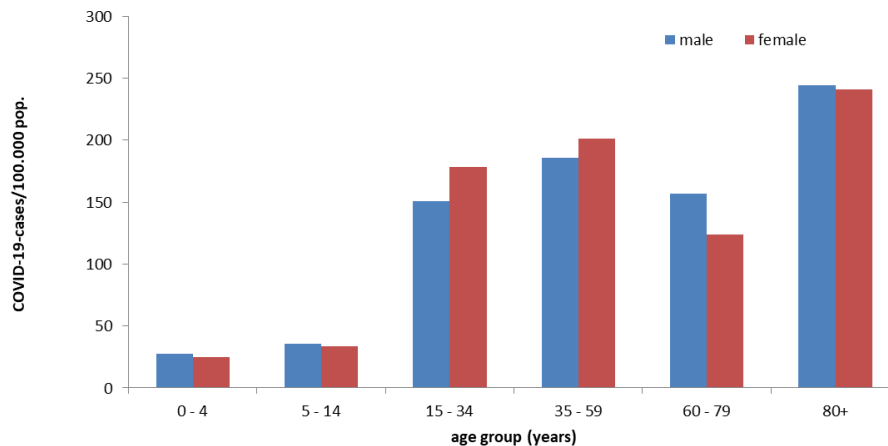


**Figure 2:** Number of electronically reported COVID-19 cases in Germany by date of symptom onset and alternatively by date of reporting from 20/02/2020 (16/04/2020, 12:00 AM)

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

### Demographic distribution of cases

Of reported cases, 48% are male and 52% are female. Among notified cases, 1,038 were children under 5 years of age (1%), 2,566 children aged 5 to 14 years (2%), 88,317 persons aged 15 to 59 years (68%), 25,188 persons aged 60 to 79 years (19%) and 13,109 persons aged 80 years and older (10%) (see Figure 3). The age of 232 notified cases is unknown. The median age of cases is 50 years.



**Figure 3:** Electronically reported COVID-19 cases/100,000 population in Germany by age group and sex (n=129,788) for cases with information available (16/04/2020, 12:00 AM).

### Clinical aspects

Information on symptoms is available for 101,538 of the notified cases. The most common symptoms are cough (51%), fever (42%) and rhinorrhoea (22%). Pneumonia was reported in 2,509 cases (2%). Hospitalisation was reported for 16,318 (16%) of 101,269 COVID-19 cases with information on hospitalisation available.

Approximately 77,000 persons have recovered from their COVID-19 infection. As the exact date of recovery is unknown in most cases, an algorithm was developed to estimate the number of recovered cases.

The 3,569 COVID-19 related deaths reported in Germany concerned 2,074 (58%) men and 1,490 (42%) women (sex was unknown in 5 cases, age was unknown in 2 cases). The median age was 82 years. Of all deaths, 3,079 (86%) were in persons 70 years or older, but only 18% of all cases were in this age group. COVID-19 related outbreaks continue to be reported in nursing homes and hospitals. In some of these outbreaks, the number of deaths is relatively high.

**Table 2:** Number of notified COVID-19 deaths by age group and sex  
(Data available for 3,562 of the 3,569 notified deaths; 16/04/2020, 12:00 AM)

Sex	Age groups (years)				
	<60	60 - 69	70 - 79	80 - 89	≥90
male	123	242	569	903	237
female	39	83	261	742	363

## SARS-CoV-2 infections among staff working in medical facilities

So far, 6,395 cases with a SARS-CoV-2 infection have been notified among staff working in medical facilities as defined by §23 of the German Protection Against Infection law (IfSG), such as hospitals, outpatient clinics and practices, dialysis clinics or outpatient nursing services. The proportion of cases increased over time from at least 6% in Week 12, 8% in Week 13, 9% in Week 14 to 11% in Week 15, 2020. Due to missing data on occupation in more than 40% of all cases, the true proportion of cases working in medical facilities may be higher. Among these cases, 72% were female and 28% male. The median age was 42 years. Hospitalisation was reported for 262 (4%) of 6,224 cases among staff working in medical facilities with information available. There were 8 COVID-19 related deaths among staff working in medical facilities.

## Estimation of the reproduction number (R)

The reproduction number, R, is the mean number of persons infected by a case. R can only be estimated and not directly extracted from the notification system. The current estimate is  $R = 0.7$  (95% confidence interval: 0.5-0.8) and is based on current electronically notified cases (16/04/2020, 12:00 A.M.) and an assumed mean generation time of 4 days. Cases with disease onset on the preceding 3 days were excluded from the estimation as their low number due to incomplete reporting would lead to an unstable estimate. For more details on the methodology see Epid. Bull. 17 | 2020 (in German)

[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)

## Information from further surveillance systems for acute respiratory illnesses based at RKI

GrippeWeb ("FluWeb") is a web interface at RKI for monitoring the activity of acute respiratory illness (ARI) utilizing information from the population. In Week 15, 2020, the rate of ARI ("ARI rate" as well as the rate of influenza-like illness ("ILI-rate") remained stable compared to the previous week. Further information can be found under <https://grippeweb.rki.de/>.

The Influenza Working Group (AGI) monitors ARE through a sentinel network of physicians in private practice. In Week 15, 2020 the number of patient visits declined yet again among patients of all age groups. The AGI broadened its viral surveillance to include SARS-CoV-2. Since Week 8, 2020, a total of 12 SARS-CoV-2 positive samples were detected in 1,111 tested samples (1%) sent from a subsample of the sentinel physicians. The influenza season ended in Week 12, 2020; no influenza activity was detected in Week 15, 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 airways). In Week 14, 2020, 31% of all reported cases were diagnosed with COVID-19 (Table 5), with no cases among children under 15 years of age and up to 44% among 35 to 59 year old patients. Please note that only patients with an ICD-10 Code for SARI in the main DRG diagnosis and a hospitalisation duration of up to one week were included in this analysis.

**Table 5: Proportion of cases with a diagnosis of COVID-19 (U07.1!) among SARI cases (ICD-10-Codes J09-J22) with duration of hospitalisation of up to one week and with a date of admission in weeks 12 to 14, 2020, from 71 sentinel hospitals**

Age group	COVID-19 diagnosis (U07.1!) in SARI cases		
	Week 12, 2020	Week 13, 2020	Week 14, 2020
0 to 4 years	0%	0%	0%
5 to 14 years	0%	0%	0%
15 to 34 years	5%	33%	23%
35 to 59 years	15%	46%	44%
60 to 79 years	15%	26%	34%
80 years und older	3%	13%	27%
<b>Total</b>	<b>7%</b>	<b>23%</b>	<b>31%</b>

### 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 set up to document the capacities for intensive care as well as the number of COVID-19 cases treated in participating hospitals. [The DIVI intensive care register shows, how many intensive care beds are available in which clinics on a daily basis. Since 16/04/2020, reporting is compulsory for all hospital sites with intensive care places.](#)

As of [16/04/2020](#), [1,067](#) hospitals or departments reported to DIVI to the registry. A total of [26,628](#) intensive care beds were registered, of which [15,316](#) (58%) are occupied and [11,312](#) beds are currently available (Table 3).

	Number of patients	Percentage	Changes to previous day
<b>Currently in ICU</b>	2,773		+94
- of these: mechanically ventilated	2,083	75%	+87
<b>Discharged from ICU</b>	4,861		+884
- of these: deaths	1,501	31%	+255

**Table 3: COVID-19 patients requiring intensive care (ICU) recorded in the DIVI register (16/04/2020, 8:15 am). Migration of the registry to a new server led to temporary reporting delays, thus comparisons with data prior to 03/04/2020 are not meaningful. Currently, fewer than half of all ICU beds in Germany are likely captured by the registry. Source: <https://www.intensivregister.de/#/intensivregister>**

## Assessment by the RKI

At the global and the national level, the situation is very dynamic and must be taken seriously. Severe and fatal courses occur in some cases. The number of cases, hospitalisations and fatalities in Germany continues to increase. The RKI currently assesses the risk to the health of the German population overall as **high** and as **very high** for risk groups. The probability of serious disease progression increases with increasing age and underlying illnesses. The risk of disease varies from region to region. The burden on the health care system depends on the geographical and age distribution of cases, health care capacity and initiation of containment measures (isolation, quarantine, social distancing etc.), and may be very

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high in some geographical regions. This assessment may change on short notice as a result of new findings.

## Measures taken by Germany

### International risk areas

As of 10/04/2020 countries and regions are not longer classified as international risk areas. Due to pandemic spread, there is a global risk of acquiring COVID-19. Outbreaks are ongoing in a considerable number of countries, often with high numbers of cases; in other countries, the exact numbers of cases is unknown. Therefore there is a risk of transmission in Germany as well as in many other, not always well-defined regions worldwide.

All arriving travellers in Germany are to remain in quarantine for 14 days:

<https://www.bundesregierung.de/breg-de/themen/coronavirus/neue-einreiseregeln-1739634> (in German)

### Other measures

- Outbreaks are ongoing in many districts, some with high case numbers. Data on current disease activity can be found on the dashboard <https://corona.rki.de/> and in the daily situation reports.
- RKI teams are currently supporting outbreak containment measures with a focus on outbreaks in retirement and health care homes as well as hospitals in several federal states.
- A new federal law was implemented on 28/03/2020 for the protection of the public in the event of epidemic situations, granting the federal government additional competencies for the control of epidemics. <https://www.bundesgesundheitsministerium.de/presse/pressemitteilungen/2020/1-quartal/corona-gesetzpaket-im-bundesrat.html> (in German)
- As of 23/03/2020, gatherings of more than 2 persons (with the exception of families and household members) are banned in all federal states. Restaurants and businesses concerned with body care were closed. In public spaces, all persons must maintain a distance of 1.5 metres to other individuals <https://www.bundesregierung.de/breg-de/themen/coronavirus/besprechung-der-bundeskanzlerin-mit-den-regierungschefinnen-und-regierungschefs-der-laender-1733248> (in German)
- On April 15, 2020, the German government and the federal states agreed to gradually reduce social distancing measures <https://www.bundesregierung.de/breg-de/themen/coronavirus/fahrplan-corona-pandemie-1744202> (in German)