# Package 'COVID19'

July 21, 2025

**Type** Package

**Title** R Interface to COVID-19 Data Hub

**Version** 3.0.3

**Description** Provides a daily summary of COVID-19 cases, deaths, recovered, tests, vaccinations, and hospitalizations for 230+ countries, 760+ regions, and 12000+ administrative divisions of lower level. Includes policy measures, mobility data, and geospatial identifiers. Data source: COVID-19 Data Hub <https://covid19datahub.io>.

**License** MIT + file LICENSE

**URL** https://covid19datahub.io

**BugReports** https://github.com/covid19datahub/COVID19/issues

**Encoding** UTF-8

**Imports** tools, utils, R.utils, data.table

**Suggests** RSQLite, wbstats (>= 1.0.0)

**RoxygenNote** 7.2.1

**NeedsCompilation** no

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**Repository** CRAN

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## Contents

covid19 *COVID-19 Data Hub*

## Description

Download COVID-19 data from https://covid19datahub.io

## Usage

```
covid19(
  country = NULL,
  level = 1,
  start = "2010-01-01",
  end = Sys.Date(),
  vintage = NULL,
  wb = NULL,
  gmr = NULL,
  amr = NULL,
  dir = tempdir(),
  verbose = TRUE,
  ...
)
```

## Arguments

| | |
|---|---|
| country | vector of country names or ISO codes (ISO 3166-1 Alpha-2 code, Alpha-3 code, or numeric code). By default, downloads data for all countries. |
| level | integer. Granularity level. 1: country-level data. 2: state-level data. 3: lower-level data. |
| start, end | the start and the end date of the period of interest. The data are subsetted to match this time range. |
| vintage | date. This parameter allows to retrieve the snapshot of the dataset that was available on the given date. This typically differs from subsetting the latest data, as most governments are updating the data retroactively. Available since 2020-04-14. |
| wb | character vector of World Bank indicator codes. See details. |
| gmr | link to the Google Mobility Report dataset, or TRUE. See details. |
| amr | link to the Apple Mobility Report dataset, or TRUE. See details. |
| dir | folder where the data files are to be downloaded. |
| verbose | logical. Print on progress? Default TRUE. |
| ... | backward compatibility, not used. |

## Details

Country-level covariates by World Bank Open Data can be added via the argument `wb`. This is a character vector of indicator codes to download. The codes can be found by inspecting the corresponding URL. For example, the code of the indicator "Hospital beds (per 1,000 people)" available at `https://data.worldbank.org/indicator/SH.MED.BEDS.ZS` is `SH.MED.BEDS.ZS`. The indicators are typically available at a yearly frequency. This function returns the latest data available between the `start` and the end date.

Mobility data by Google Mobility Reports can be added via the argument `gmr`. This is the link to the Google "CSV by geographic area" ZIP folder. At the time of writing, the link is `https://www.gstatic.com/covid19/mobility/Region_Mobility_Report_CSVs.zip`. As the link has been stable since the beginning of the pandemic, the function accepts `gmr=TRUE` to automatically use this link.

As of April 14, 2022, Apple is no longer providing COVID-19 mobility trends reports. If you have downloaded the data file previously, you can still use it by setting `amr="path/to/file.csv"`.

Refer to this webpage for the details on the data sources, and see the changelog for the latest news about the dataset.

## Value

`data.frame`. See the dataset documentation

## Note

We have invested a lot of time and effort in creating COVID-19 Data Hub, please:

- cite Guidotti and Ardia (2020) when using COVID-19 Data Hub.
- place the URL `https://covid19datahub.io` in a footnote to help others find COVID-19 Data Hub.
- you assume full risk for the use of COVID-19 Data Hub. We try our best to guarantee the data quality and consistency and the continuous filling of the Data Hub. However, it is free software and comes with ABSOLUTELY NO WARRANTY. Reliance on COVID-19 Data Hub for medical guidance or use of COVID-19 Data Hub in commerce is strictly prohibited.

## Source

`https://covid19datahub.io`

## References

Guidotti, E., Ardia, D., (2020), "COVID-19 Data Hub", Journal of Open Source Software 5(51):2376, doi:10.21105/joss.02376.

Guidotti, E., (2022), "A worldwide epidemiological database for COVID-19 at fine-grained spatial resolution", Sci Data 9(1):112, doi:10.1038/s41597022012451.

## Examples

```
## Not run:

# Worldwide data by country
x <- covid19()

# Worldwide data by state
x <- covid19(level = 2)

# Data for specific countries by county/province
x <- covid19(c("Italy", "US"), level = 3)

# Retrieve the data that were available on 15 May, 2020
x <- covid19(vintage = "2020-05-15")

# Download the files in the folder "data"
dir.create("data")
x <- covid19(dir = "data")

# World Bank data
wb <- c("gdp" = "NY.GDP.MKTP.CD", "hosp_beds" = "SH.MED.BEDS.ZS")
x  <- covid19(wb = wb)

# Google Mobility Reports
x <- covid19(gmr = TRUE)

# Apple Mobility Reports
x <- covid19(amr = "path/to/file.csv")


## End(Not run)
```

# Index