



Data Article

Data regarding country-specific variability in Covid-19 prevalence, incidence, and case fatality rate



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ABSTRACT

This article contains data on country-specific variability in Covid-19 prevalence, incidence, and case fatality rate among the 238 countries globally. We used the World Health Organization worldwide Covid-19 tracking site to determine the number of confirmed Covid-19 cases, the number of fatalities attributed to Covid-19, and the case fatality rate for each of 238 countries. Using data from the United Nations Department of Economic and Social Affairs, we extracted key country-specific metrics with potential associations with Covid-19 including total population, land area, population density, percentage of residents living in urban areas, and median age. We extracted country-specific economic indicators from The World Bank Group Open Data database. All data were extracted on August 15, 2020. We developed consolidated data sets and calculated the country-specific point prevalence and incidence of Covid-19 and associated deaths. These data are associated with the article "Spatial Analysis of Global Variability in Covid-19 Burden". Data are stored in a comma separated value format and can be downloaded from the Data in Brief website.

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Specifications Table

Subject	Public Health and Health Policy
Specific subject area	Infectious disease
Type of data	Tables, figures, raw data
How data were acquired	Using the CDC worldwide Covid-19 tracking site [1], we extracted the number of confirmed Covid-19 cases, the number of fatalities attributed to Covid-19, and the case fatality rate for each of 238 countries. Using 2020 data available from the United Nations Department of Economic and Social Affairs [2], we extracted key country-specific metrics with potential associations with Covid-19 including total population, land area, population density, percentage of residents living in urban areas, and median age. We extracted country-specific economic indicators from The World Bank Group Open Data database [3]. All data were extracted on August 15, 2020.
Data format	Raw, analyzed
Parameters for data collection	Countries included in this dataset were listed within the CDC worldwide Covid-19 tracking site, the United Nations Department of Economic and Social Affairs, or The World Bank Group Open Data database.
Description of data collection	We developed consolidated data sets and calculated the country-specific point prevalence and incidence of Covid-19 and associated deaths. Non-normally distributed data were log-transformed, descriptive and correlational analyses were performed by a biostatistician (LM).
Data source location	238 countries.
Data accessibility	Unpublished summary data are available with this article and raw data are available as a supplemental file.
Related research article	Miller LE, Bhattacharyya R, Miller AL. Spatial Analysis of Global Variability in Covid-19 Burden. <i>Risk Management and Healthcare Policy</i> 13:519-522, 2020. doi: 10.2147/RMHP.S255793

Value of the Data

- Media headlines place great emphasis on the prevalence of Covid-19 among countries. This dataset combines global data from three sources to provide unique information related to country-specific Covid-19 prevalence, incidence, case fatality rate, and potential modifiers of these rates.
- This dataset can be used by public health officials to serve as a model by which Covid-19 incidence, which accounts for population variability among countries, might also be calculated and reported.
- These data may raise awareness of the high Covid-19 infection burden reported in less populated countries, inform and influence public health policy, and facilitate allocation of economic, social, and health resources to the most impacted regions.

1. Data Description

The data in this article consist of previously unpublished tables and figures derived from a global analysis of Covid-19 prevalence, incidence, and case fatality rate. The association of the relative Covid-19 burden with key country indicators is displayed in Fig. 1. Table 1 lists the top 10 countries with the highest total and relative Covid-19 infection and fatality burden. Key Covid-19 statistics are provided for the top 10 countries with the largest population (Table 2), highest population density (Table 3), largest land area (Table 4), highest GDP per capita (Table 5), highest median age (Table 6), and largest percentage of population living in urban areas (Table 7). Raw data from this analysis are available as a .csv file in the Data Supplement at www.journals.elsevier.com/data-in-brief.

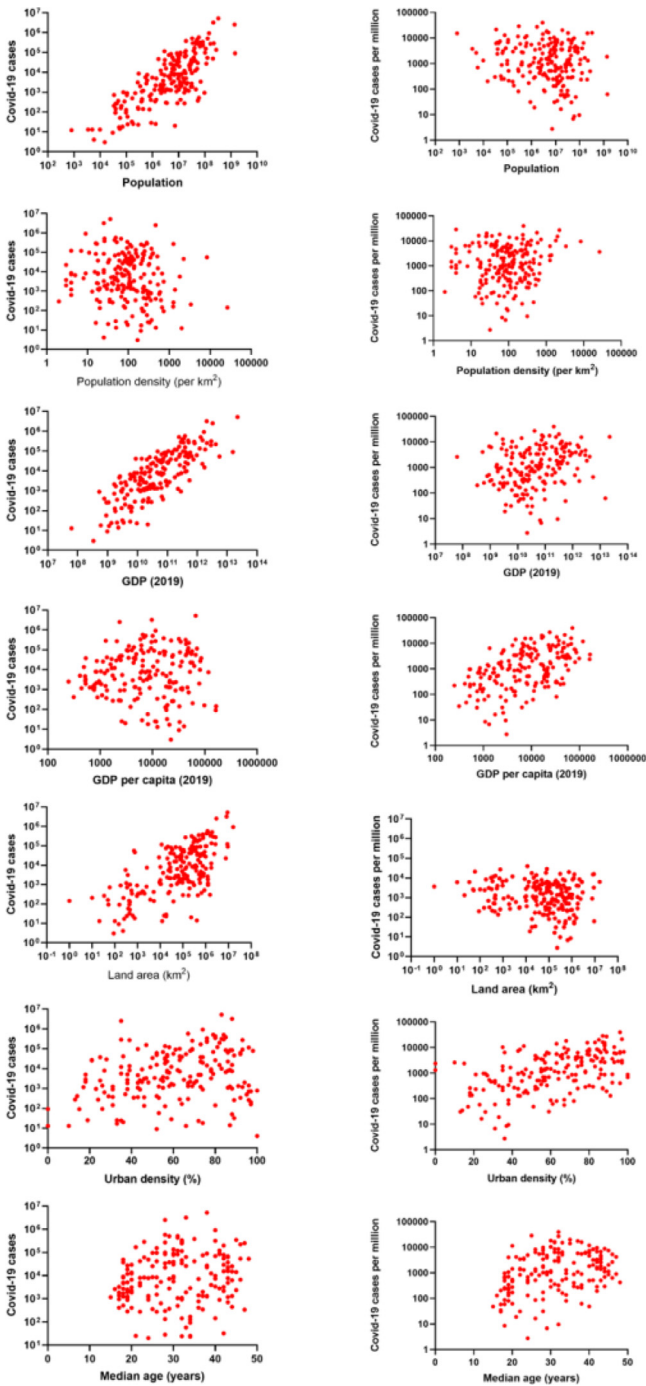


Fig. 1. Association of relative Covid-19 burden with key country indicators. Countries with less than 30,000 population were excluded from the urban density analysis due to poor estimate precision. Data current as of August 15, 2020.

Table 1
Top 10 countries with highest total and relative Covid-19 infection and fatality burden.

Country	Covid-19 cases	Country	Covid-19 cases per million
United States	5,203,206	Qatar	39,754
Brazil	3,224,876	French Guyana	28,622
India	2,526,192	Bahrain	27,064
Russia	917,884	San Marino	21,190
South Africa	579,140	Chile	19,989
Peru	507,996	Panama	18,181
Mexico	505,751	Kuwait	17,605
Colombia	433,805	Oman	16,203
Chile	382,111	United States	15,720
Spain	348,285	Peru	15,407

Country	Fatal Covid-19 cases	Country	Fatal Covid-19 cases per million
United States	165,995	San Marino	1,238
Brazil	105,463	Belgium	857
Mexico	55,293	Peru	778
India	49,036	Andorra	686
United Kingdom	41,358	Spain	613
Italy	35,234	United Kingdom	609
France	30,275	Italy	583
Spain	28,640	Sweden	573
Peru	25,648	Chile	541
Iran	19,331	United States	502

Table 2
Key Covid-19 statistics for top 10 countries with largest population.

Country	Population (millions)	Covid-19 cases	Fatal Covid-19 cases	Per capita rate, per million	Per capita fatality rate, per million	Case fatality rate
China	1,439	89,695	4,708	62	3	5.2%
India	1,380	2,526,192	49,036	1,831	36	1.9%
United States	331	5,203,206	165,995	15,720	502	3.2%
Indonesia	274	135,123	6,021	494	22	4.5%
Pakistan	221	288,047	6,162	1,304	28	2.1%
Brazil	213	3,224,876	105,463	15,172	496	3.3%
Nigeria	206	48,445	973	235	5	2.0%
Bangladesh	165	271,881	3,591	1,651	22	1.3%
Russia	146	917,884	15,617	6,290	107	1.7%
Mexico	129	505,751	55,293	3,923	429	10.9%

Table 3
Key Covid-19 statistics for top 10 countries with highest population density.

Country	Population density (per km ² land area)	Covid-19 cases	Fatal Covid-19 cases	Per capita rate, per million	Per capita fatality rate, per million	Case fatality rate
Monaco	26,337	143	1	3644	26	0.7%
Macao	21,645	19	0	18	0	0.0%
Singapore	8358	55,580	27	9500	5	2.6%
Hong Kong	7140	51,256	23	9419	4	2.5%
Gibraltar	3369	205	0	6085	0	0.0%
Bahrain	2239	46,052	168	27,064	99	0.4%
Holy See	2003	12	0	14,981	0	0.0%
Maldives	5572	22	10,308	41	6	0.9%
Malta	1380	1175	9	2661	20	0.8%
Bangladesh	1265	271,881	3,591	1651	22	1.3%

Table 4

Key Covid-19 statistics for top 10 countries with largest land area.

Country	Land Area (million/km ²)	Covid-19 cases	Fatal Covid-19 cases	Per capita rate, per million	Per capita fatality rate, per million	Case fatality rate
Russia	16.4	917,884	15,617	6290	107	1.7%
China	9.4	89,695	4708	62	3	5.2%
United States	9.1	5,203,206	165,995	15,720	502	3.2%
Canada	9.1	121,234	9015	3212	239	7.4%
Brazil	8.4	3,224,876	105,463	15,172	496	3.3%
Australia	7.7	22,743	375	892	15	1.6%
India	3.0	2,526,192	49,036	1831	36	1.9%
Argentina	2.7	276,072	5428	6108	120	2.0%
Kazakhstan	2.7	119,781	1433	6379	76	1.2%
Algeria	2.4	37,664	1351	859	31	3.6%

Table 5

Key Covid-19 statistics for top 10 countries with highest GDP per capita.

Country	GDP per capita (USD)	Covid-19 cases	Fatal Covid-19 cases	Per capita rate, per million	Per capita fatality rate, per million	Case fatality rate
Monaco	164,823	143	1	3644	26	0.7%
Liechtenstein	162,444	91	1	2387	26	1.1%
Luxembourg	117,725	7405	122	11,829	195	1.6%
Bermuda	98,387	159	9	2553	145	5.7%
Macao	95,726	149	8	2458	144	5.6%
Switzerland	85,585	37,580	1,714	4342	198	4.6%
Ireland	82,058	26,995	1,774	5467	359	6.6%
Norway	80,908	9850	261	1817	48	2.6%
Iceland	78,598	1983	10	5811	29	0.5%
Qatar	70,810	114,532	190	39,754	66	0.2%

Table 6

Key Covid-19 statistics for top 10 countries with highest median age.

Country	Median age	Covid-19 cases	Fatal Covid-19 cases	Per capita rate, per million	Per capita fatality rate, per million	Case fatality rate
Japan	48	53,577	1085	424	9	2.0%
Italy	47	252,809	35,234	4,181	583	13.9%
Martinique	47	336	16	895	43	4.8%
Germany	46	222,828	9231	2,660	110	4.1%
Portugal	46	53,783	1772	5,275	174	3.3%
Greece	46	6632	223	636	21	3.4%
Hong Kong	45	4512	70	478	62	2.5%
Spain	45	348,285	28,640	7,449	613	8.2%
Slovenia	45	2369	124	1,140	60	5.2%
Lithuania	45	2352	81	864	30	3.4%

2. Experimental design, materials, and methods

Using the CDC worldwide Covid-19 tracking site [1], we extracted the number of confirmed Covid-19 cases, the number of fatalities attributed to Covid-19, and the case fatality rate (death rate among those diagnosed with Covid-19) for each of 238 countries. Using 2020 data available from the United Nations Department of Economic and Social Affairs [2], we extracted key country-specific metrics with potential associations with Covid-19 including total population, land area, population density, percentage of residents living in urban areas, and median age. We extracted country-specific economic indicators from The World Bank Group Open Data database

Table 7
Key Covid-19 statistics for top 10 countries with largest population living in urban areas.

Country	Percentage of urban population*	Covid-19 cases	Fatal Covid-19 cases	Per capita rate, per million	Per capita fatality rate, per million	Case fatality rate
Réunion	100%	776	5	867	6	0.6%
Belgium	98%	78,417	9936	6766	857	12.7%
Bermuda	97%	159	9	2553	145	5.7%
Cayman Islands	97%	203	1	3089	15	0.5%
San Marino	97%	719	42	21,190	1,238	5.8%
U.S. Virgin Islands	96%	704	9	6742	86	1.3%
Uruguay	96%	1409	37	406	11	2.6%
Qatar	96%	114,532	190	39,754	66	0.2%
Sint Maarten	96%	263	17	6134	397	6.5%
Guam	95%	494	5	2927	30	1.0%

* Minimum 30,000 population.

[3]. All data were extracted on August 15, 2020. We developed consolidated data sets and calculated the country-specific point prevalence (total cases at a point in time) and incidence (total cases per capita at a point in time) of Covid-19 and associated deaths. Non-normally distributed data were log-transformed, descriptive and correlational analyses were performed by a biostatistician. The data utilized in the related research article were extracted on March 19, 2020. Due to the rapidly evolving nature of Covid-19, here we provide updated data current as of August 15, 2020.

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Declaration of Competing Interest

None.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.dib.2020.106276.

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