Exploring US COVID-19 Cases and Deaths

Our World in Data - Data Sets

H. David Shea

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Our World in Data (OWID) COVID-19 Data

This analysis uses the Our World in Data COVID-19 data sets. These are available at the *OWID GitHub site*.

Dataset Overview

Data Sets field descriptions

column	description
iso_code	ISO 3166-1 alpha-3 – three-letter country codes
continent	Continent of the geographical location
location	Geographical location
date	Date of observation
total_cases	Total confirmed cases of COVID-19
new_cases	New confirmed cases of COVID-19
new_cases_smoothed	New confirmed cases of COVID-19 (7-day smoothed)
total_deaths	Total deaths attributed to COVID-19
new_deaths	New deaths attributed to COVID-19
new_deaths_smoothed	New deaths attributed to COVID-19 (7-day smoothed)
total_cases_per_million	Total confirmed cases of COVID-19 per 1,000,000 people
new_cases_per_million	New confirmed cases of COVID-19 per 1,000,000 people
new_cases_smoothed_per_million	New confirmed cases of COVID-19 (7-day smoothed) per 1,000,000 people
total_deaths_per_million	Total deaths attributed to COVID-19 per 1,000,000 people
new_deaths_per_million	New deaths attributed to COVID-19 per 1,000,000 people
new_deaths_smoothed_per_million	New deaths attributed to COVID-19 (7-day smoothed) per 1,000,000 people
reproduction_rate	Real-time estimate of the effective reproduction rate (R) of COVID-19. See https://github.com/crondonm/TrackingR/tree/main/Estimates-Database
icu_patients	Number of COVID-19 patients in intensive care units (ICUs) on a given day
icu_patients_per_million	Number of COVID-19 patients in intensive care units (ICUs) on a given day per 1,000,000 people
hosp_patients	Number of COVID-19 patients in hospital on a given day
hosp_patients_per_million	Number of COVID-19 patients in hospital on a given day per 1,000,000 people
weekly_icu_admissions	Number of COVID-19 patients newly admitted to intensive care units (ICUs) in a given week
weekly_icu_admissions_per_million	Number of COVID-19 patients newly admitted to intensive care units (ICUs) in a given week per 1,000,000 people
weekly_hosp_admissions	Number of COVID-19 patients newly admitted to hospitals in a given week
weekly_hosp_admissions_per_million	Number of COVID-19 patients newly admitted to hospitals in a given week per 1,000,000 people

column	description
total_tests	Total tests for COVID-19
new_tests	New tests for COVID-19 (only calculated for consecutive days)
total_tests_per_thousand	Total tests for COVID-19 per 1,000 people
new_tests_per_thousand	New tests for COVID-19 per 1,000 people
new_tests_smoothed	New tests for COVID-19 (7-day smoothed). For countries that don't report testing data on a daily basis, we assume that testing changed equally on a daily basis over any periods in which no data was reported. This produces a complete series of daily figures, which is then averaged over a rolling 7-day window
new_tests_smoothed_per_thousand	New tests for COVID-19 (7-day smoothed) per 1,000 people
positive_rate	The share of COVID-19 tests that are positive, given as a rolling 7-day average (this is the inverse of tests_per_case)
tests_per_case	Tests conducted per new confirmed case of COVID-19, given as a rolling 7-day average (this is the inverse of positive_rate)
tests_units	Units used by the location to report its testing data
total_vaccinations	Total number of COVID-19 vaccination doses administered
people_vaccinated	Total number of people who received at least one vaccine dose
people_fully_vaccinated	Total number of people who received all doses prescribed by the vaccination protocol
new_vaccinations	New COVID-19 vaccination doses administered (only calculated for consecutive days)
new_vaccinations_smoothed	New COVID-19 vaccination doses administered (7-day smoothed). For countries that don't report vaccination data on a daily basis, we assume that vaccination changed equally on a daily basis over any periods in which no data was reported. This produces a complete series of daily figures, which is then averaged over a rolling 7-day window
total_vaccinations_per_hundred	Total number of COVID-19 vaccination doses administered per 100 people in the total population
people_vaccinated_per_hundred	Total number of people who received at least one vaccine dose per 100 people in the total population
people_fully_vaccinated_per_hundred	Total number of people who received all doses prescribed by the vaccination protocol per 100 people in the total population
new_vaccinations_smoothed_per_million	New COVID-19 vaccination doses administered (7-day smoothed) per 1,000,000 people in the total population
stringency_index	Government Response Stringency Index: composite measure based on 9 response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest response)
population	Population in 2020
population_density	Number of people divided by land area, measured in square kilometers, most recent year available
median_age	Median age of the population, UN projection for 2020
aged_65_older	Share of the population that is 65 years and older, most recent year available
aged_70_older	Share of the population that is 70 years and older in 2015
gdp_per_capita	Gross domestic product at purchasing power parity (constant 2011 international dollars), most recent year available
extreme_poverty	Share of the population living in extreme poverty, most recent year available since 2010
cardiovasc_death_rate	Death rate from cardiovascular disease in 2017 (annual number of deaths per 100,000 people)
diabetes_prevalence	Diabetes prevalence (% of population aged 20 to 79) in 2017
female_smokers	Share of women who smoke, most recent year available
male_smokers	Share of men who smoke, most recent year available
handwashing_facilities	Share of the population with basic handwashing facilities on premises, most recent year available
hospital_beds_per_thousand	Hospital beds per 1,000 people, most recent year available since 2010
life_expectancy	Life expectancy at birth in 2019

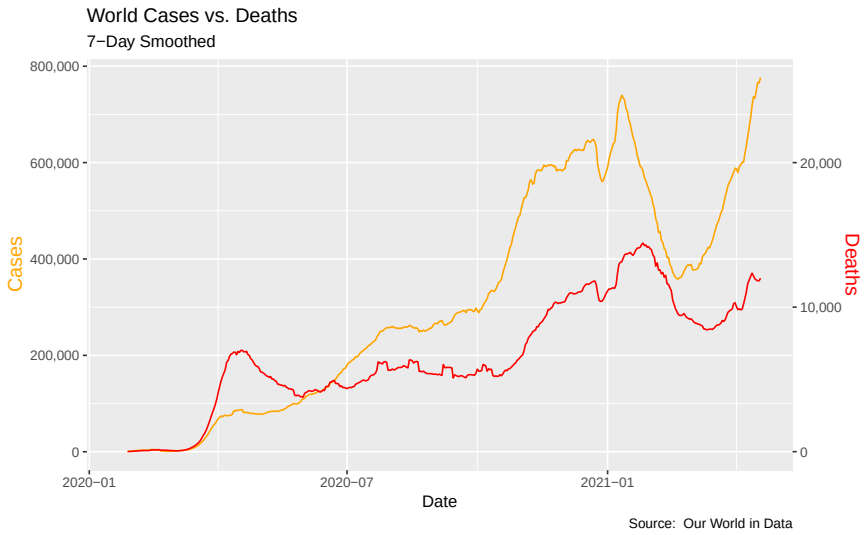
column	description
human_development_index	A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living. Values for 2019, imported from http://hdr.undp.org/en/indicators/137506

Example Data

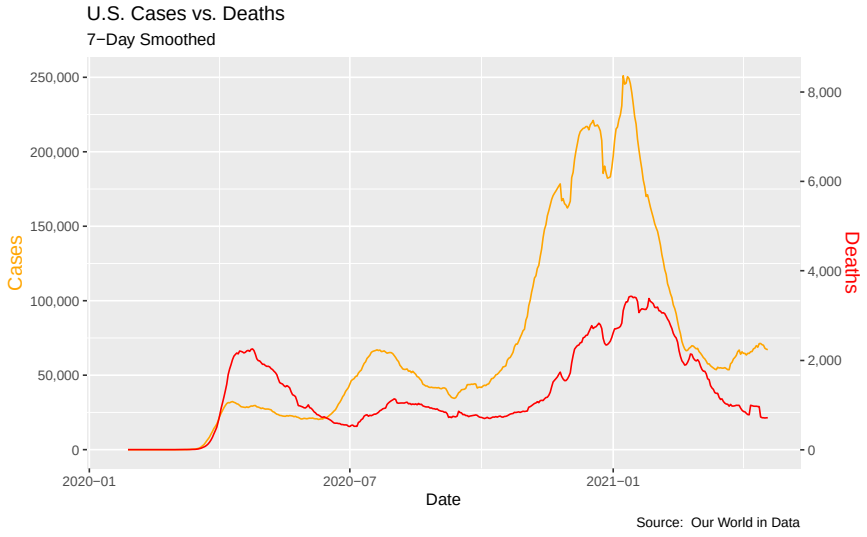
iso_code	[illegible]	[illegible]	[illegible]	[illegible]
JPN	Asia	Japan	2020-02-03	20 0 2.286 NA NA 0 0.158 0.000 0.018 NA NA 0 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N
MYS	Asia	Malaysia	2020-02-03	8 0 0.571 NA NA 0 0.247 0.000 0.018 NA NA 0 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N
MEX	North America	Mexico	2020-02-03	NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA 147 580 9.045 0.001 166 0.000 1.066 5.7 people tested NA NA NA NA N
NPL	Asia	Nepal	2020-02-03	1 0 0.000 NA NA 0 0.034 0.000 0.000 NA NA 0 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA tests performed NA NA NA NA N
OWID_NAM	North America		2020-02-03	15 3 1.286 NA 0 0 0.025 0.005 0.002 NA 0 0 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N
OWID_OCE	Oceania		2020-02-03	12 0 1.000 NA 0 0 0.281 0.000 0.023 NA 0 0 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N
PER	South America	Peru	2020-02-03	NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA 3 27 0.000 0.001 20 0.000 0.051 3.9 tests performed NA NA NA NA N
PHL	Asia	Philippines	2020-02-03	0 NA 1 0 NA 0.018 0.000 NA 0.009 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N
RUS	Europe	Russia		2 0 NA NA NA NA 0.014 0.000 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N
SGP	Asia	Singapore	2020-02-03	18 0 1.857 NA NA 0 3.077 0.000 0.317 NA NA 0 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA N

Exploratory Data Analyses

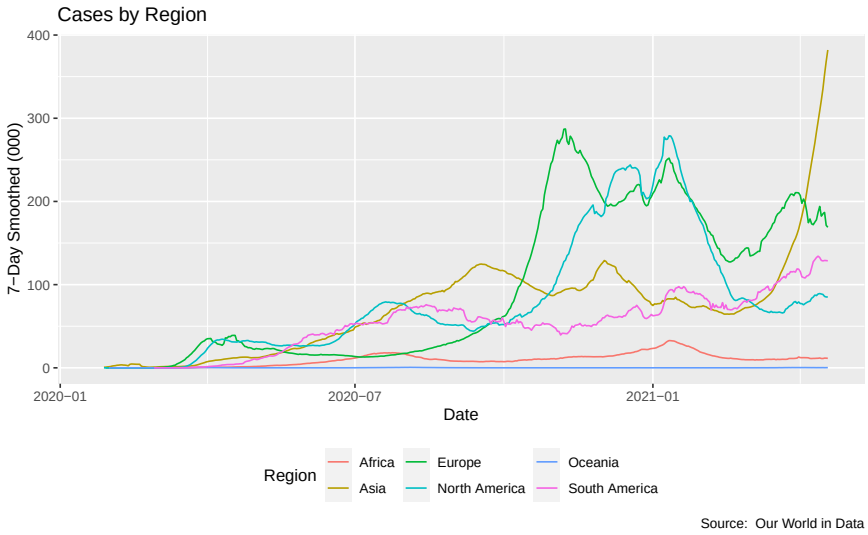
World Cases versus Deaths

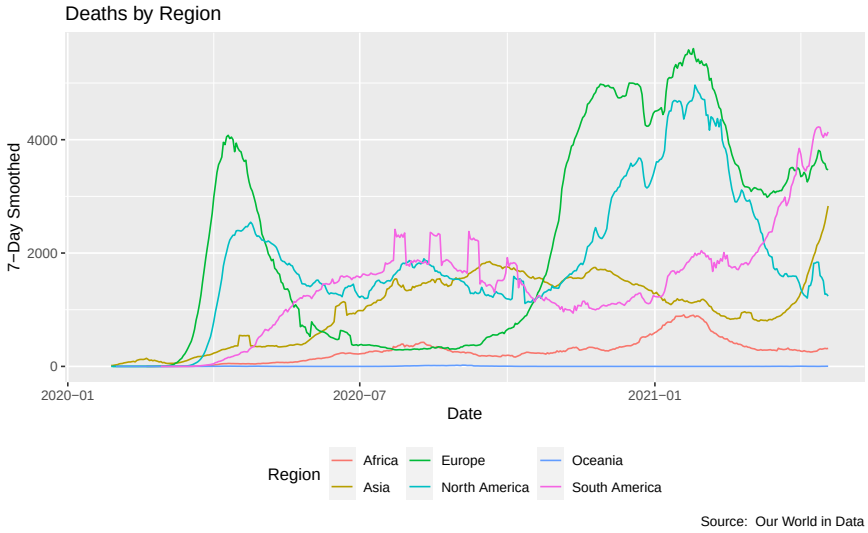


US Cases versus Deaths



Global Regions

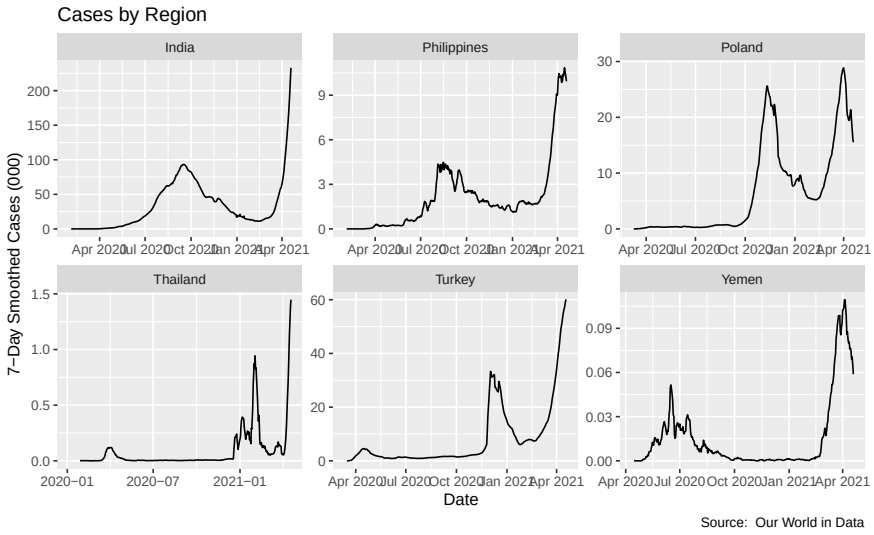




Current Problem Areas

Countries with Highest Change in Cases Over the Past Month

location	date	cases_change	deaths_change
Yemen	2021-04-19	1.79	1.54
Thailand	2021-04-19	1.58	1.16
Philippines	2021-04-19	1.44	1.24
Turkey	2021-04-19	1.44	1.21
India	2021-04-19	1.32	1.13
Poland	2021-04-19	1.32	1.26



Highest Change in Deaths Over the Past Month

location	date	cases_change	deaths_change
Yemen	2021-04-19	1.787065	1.535957
Ukraine	2021-04-19	1.265762	1.332153
Venezuela	2021-04-19	1.228128	1.298045
Ethiopia	2021-04-19	1.312377	1.281451
Brazil	2021-04-19	1.169302	1.279861
Poland	2021-04-19	1.323379	1.263919