# COVID-19 DATA in HARVARD DATAVERSE

NIH Webinar on Sharing, Discovering, and Citing COVID-19 Data and Code in Generalist Repositories April 24, 2020 Mercè Crosas, Ph.D. University Research Data Management Officer Chief Data Science and Technology Officer, IQSS Harvard University

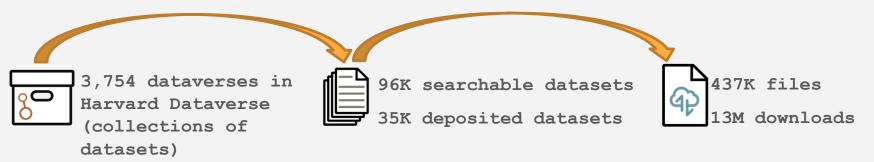
Picture of Barcelona public health professionals by Samuel Aranda for The New York Times



#### Dataverse



- Dataverse is an open-source software with a growing, active community
- Harvard Dataverse is one of the 56
  Dataverse repositories world-wide
- Open to all research domains
- Researchers can deposit for free
- New data curation services (fee-based)



#### COVID-19 Datasets in Harvard Dataverse

- 50 COVID-19 datasets with 2,043 data files deposited since February 7
- Total of **48,471 downloads** by April 23
- Include datasets on: COVID-19 statistics, social science studies to evaluate the effectiveness of government measures, survey data, Twitter data, gubernatorial responses, replication data for preprints

#### Example of COVID-19 datasets in Harvard Dataverse

POPULATION

COUNCIL

**HARVARD** Dataverse

India (1)

Add Data 👻 Search -

COVID-19 Research & Evaluations (Population Council)

Harvard Dataverse > Population Council Dataverse > COVID-19 Research & Evaluations

Partnering with national health ministries and other government agencies in sub-Saharan Africa, South Asia, and Latin are conducting COVID-19 public health and social science research to produce relevant and timely evidence to suppor evaluating the effectiveness of prevention and mitigation measures, and assessing longer-term health, social and econd

Search this dataverse	Q Find Advanced Search	Respondir
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indigenous (1)	White, Corinne; Zamora, Ramón, 2020, "COVID-19-related knowle municipalities in Guatemala", https://doi.org/10.7910/DVN/30WUC	
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Geographic Coverage Country / Nati		
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#### Responding to the **COVID-19** Pandemic

Our Research

The Population Council is producing relevant and timely evidence to help control the spread of coronavirus, evaluate the effectiveness of prevention measures, and assess immediate and longer-term effects of the pandemic.

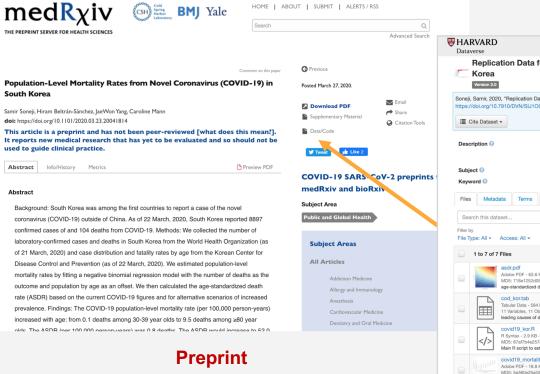
Search

DONATE

News & Views

Events

### Example of COVID-19 replication data



Abstract

Abstract

#### **Replication Data + Code**

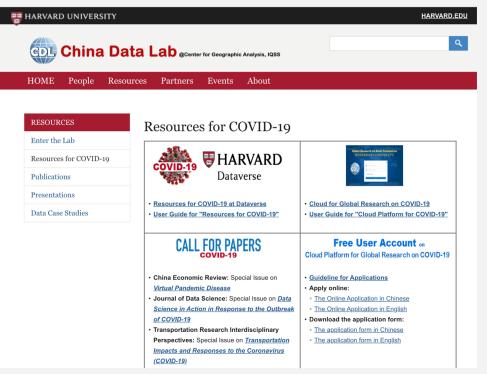
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Replication Data for: Popul	ation-Level Mortality R	ates from N	ovel Coro	navirus (C	OVID-19) in So	outh	
Soneji, Samir, 2020, "Replication Data for: Popula				Korea",	Dataset Metrics	9	
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#### Most popular dataset in Harvard Dataverse in 2020

HARVARD Dataverse	Add Data 👻	Search 👻	About Use	r Guide Support	Sign Up Log	In	
Data (China Data Lab)							
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1 to 4 of 4 Files					Ł Download -		
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Countries-Deaths.tab Tabular Data - 92.8 KB - Apr 21, 2020 - 57 Downloads 89 Variables, 251 Observations - UNF:8:GAVHNB4IUHu4+oVcRol/Awr== Updated April 18, 2020	al File Format (MS Exc lelimited a Format ole Metadata	cei Spreadsneet)					
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Published on February 20 5,466 Downloads 8,293 Page Views From China Data Lab

## **Resources for Novel Coronavirus Global Research**



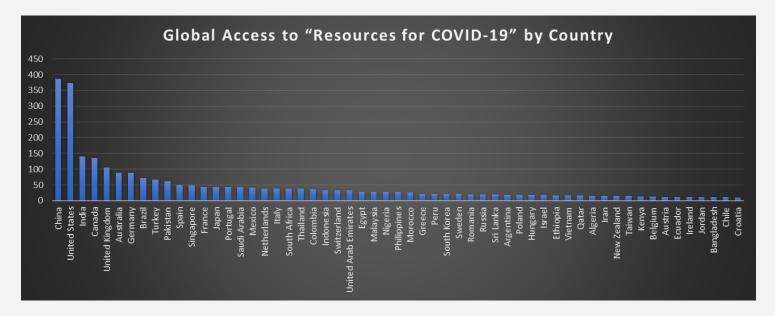
 Part of a larger NSF IUCRC "Spatial Data Lab" project

- Focuses on COVID-19 data and analytical tools (GIS, Statistics)
- Enables access to cloud computing resources
- Facilitates creating, sharing analytical workflows
- All datasets published in Harvard Dataverse
- Datasets include: China census, socio-economic data, China, US, and Global daily COVID-19 data, health facilities, policies and regulations, climate, population mobilities.
- Datasets updated weekly

Credit to Wendy Guan, Tao Hu (IQSS, CGA, Harvard University)

#### Resources for Novel Coronavirus Global Research

- "Resource for COVID-19" dataverse has had more than 30,000 downloads
- Over 130 countries have accessed the datasets



Credit to Wendy Guan, Tao Hu (IQSS, CGA, Harvard University)

## Making European Union COVID-19 Datasets FAIR

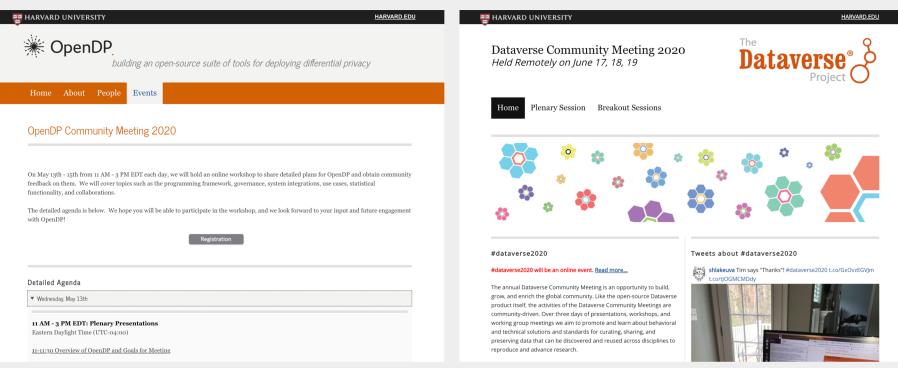
- In the European Union coronavirus datasets mostly not shared as FAIR data
- Some countries (Italy, Austria) publish their data on GitHub, without persistent identifiers
- Most countries share the official statistics as PDFs, sometimes with incorrect or missing data points
- In Spain and the Netherlands all data collected and processed by volunteers and shared on GitHub
- It's a big challenge to force official institutions to translate all their variables from the national language to English and use the same codebook for all countries to make data interoperable
- Slava Tykhonov from DANS-KNAW created an European COVID-19 data hub and archive with FAIR datasets in the Harvard Dataverse, updated daily: <u>https://dataverse.harvard.edu/dataverse/covid-19-eu</u>

Another interesting initiative that started collecting and processing coronavirus data through Harvard Dataverse is <u>CoronaWhy</u>, a global distributed organization, mobilizing volunteers and community partners to address the current challenge through data science, AI, and knowledge sharing.

#### Thanks and Upcoming Events

**OpenDP Community Meeting, May 13-15, 2020:** Session on Differential Privacy to Explore and Analyze COVID-19 sensitive data

#### **Dataverse Community Meeting, June 17-19, 2020:** Session on Global COVID-19 Data Sharing



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