

World view



By Edouard Mathieu

Pandemic data matter more than fancy dashboards

Governments and international organizations should commit to transparent COVID data until the pandemic is declared over.

Rich countries are now winding up intense COVID-19 vaccination campaigns, de-emphasizing public-health interventions and reporting data less frequently, even with three billion people still unvaccinated. I worry that governments and organizations responsible for crucial data-gathering efforts will fail to focus on what's truly needed to navigate out of the pandemic.

When the pandemic first surged in 2020, a few people at Johns Hopkins University in Baltimore, Maryland, took the initiative to start counting each country's confirmed cases and reported deaths. Meanwhile, Our World in Data, a data publisher in Oxford, UK, started painstakingly assembling country-by-country data on testing. I quit my job at a digital-services company to join that effort.

Data publishers – whether they are national governments, international organizations or online publications – should make a frank commitment to provide the public and researchers with transparent data on the pandemic until the World Health Organization (WHO) declares that it is over, and the WHO should coordinate this effort.

There are huge inequalities in data reporting around the world. Most of my time over the past two years has been spent digging through official websites and social-media accounts of hundreds of governments and health authorities. Some governments still report official statistics in low-resolution images on Facebook or infrequent press conferences on YouTube – often because they lack resources to do better. Some countries, including China and Iran, have provided no files at all.

Sometimes, it's a lack of awareness: government officials might think that a topline figure somewhere in a press release is sufficient. Sometimes, the problem is reluctance: publishing the first file would mean a flood of requests for more data that authorities can't or won't publish.

Some governments rushed to launch pandemic dashboards, often built as one-off jobs by hired contractors. Civil servants couldn't upgrade them as the pandemic shifted and new metrics and charts became more relevant. I started building our global data set on COVID-19 vaccinations in 2021, but many governments didn't supply data for weeks – sometimes months – after roll-outs because their dashboards couldn't accommodate the data. Worse, they rarely supplied underlying data essential for others to download and produce their own analyses. (My team asked repeatedly.)

Over and over, I've seen governments emphasize

Governments emphasize making dashboards look good over making data available.”

making dashboards look good when the priority should be making data available. A simple text file would do. After all, research groups like mine and citizens with expertise in data-visualization tools are more than willing to create a useful website or mobile app. But to do so, we need the raw material in a machine-readable format.

There are many good examples of governments making their data available for others to make visible. The open-access GitHub repositories of the Malaysian and Chilean governments are prime examples of how to do this. Where governments haven't done it, volunteer groups have stepped in: the Sledilnik project in Slovenia, the COVID LIVE and CovidBase websites in Australia, and the COVID Tracking Project in 2020 in the United States are heroic efforts.

Such organizations have taken on this job for the past two years, but the world should not rely on a private university to tally the pandemic's death toll or announce when 60% of the global population is vaccinated. The WHO should collect and aggregate national figures into an international data set.

Yes, this will take a (modest) commitment of resources. More than that, it will take agility. In an ever-evolving situation, it's impossible to produce useful data if it takes six months to add or update a data field. Our team added a metric for boosters in August 2021, as soon as countries such as Israel rolled them out. The WHO still doesn't track them.

Great shifts are possible. After making a concerted effort over the past decade, the World Bank now publishes some of the best open-access, clean and reliable data sets on global development. The WHO could have a similar role for the world's public-health data.

The WHO and international health leaders can do more to encourage a holistic approach to managing long-term pandemic data. That would allow national authorities both to keep counting cases, hospitalizations and more, and to become better at doing so. Many essential data are still unavailable. The distinction between hospital admissions directly due to COVID-19 and cases detected incidentally is now crucial as the latter fraction increases. But few countries supply those breakdowns.

Another bigger problem is the lack of all-cause mortality data. Without that, it is impossible to know the true toll of the pandemic. When we look at the rare all-cause mortality data available across Africa – in Egypt and South Africa, for example – the death toll seems much higher than headline figures suggest.

National and international authorities and the public have relied on online publications – including media organizations and Our World in Data – to track pandemic metrics and make sense of all the data. But those authorities, too, bear a responsibility, especially to countries that would otherwise fly the rest of the pandemic blind and be too quickly forgotten by rich countries that are eager to move on.

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