

# Global COVID-19 Scorecard: Science, 1—Science Diplomacy and Equity, 0

Wherever you may be reading this: thank science. As you dress your children for school, commute, commune, worship or workout: thank science. As you plan a wedding, year-end celebrations, a trip, surgery, or dental cleaning: thank science. Our very survival is thanks to collaborative research and science that delivered safe, effective COVID-19 vaccines in record time.

So why is our collective pandemic response categorized as a “massive global failure”[1] that “puts the whole world at risk?”[2] The current COVID-19 scenario—despite vaccines—is a dangerous panoply of failed systems, inequities and inadequate social protections:

- **Millions dead:** Over 7 million reported COVID-19-related fatalities and an estimated 17.5 million excess deaths;[1]
- **Millions orphaned:** An estimated 10.5 million children orphaned due to COVID-19-related deaths;[3] in the United States, Black and Hispanic children lose a parent or caregiver at twice the rate of White children;[4]
- **Millions with long COVID:** An estimated one in eight people develop long COVID symptoms;[5]
- **Hundreds of COVID-19 variants:** Some 300 omicron sublineages now circulate,[6] alongside rising incidence of preventable diseases including cholera, malaria, and influenza, plus outbreaks of zoonotic diseases like monkey pox;
- **Millions pushed into extreme poverty:** An estimated 263 million more people pushed into extreme poverty due to COVID-19, rising global inequality, and inflation affecting prices of food and other basic necessities;[7]
- **Millions without vaccines:** While 75% of people in high-income countries are fully vaccinated, in low-income countries, the rate drops to a devastating 19%, with just 23% receiving even a single dose.[8]

These statistics reveal the backstory that led us to this syndemic crossroads: protectionist policies exposed gross inequities to life-saving commodities across and within countries; unprepared, inequitable and fractured health systems buckled under pandemic surges; the politicization of science paralyzed safe and effective health interventions, contributing to the infodemic and the preventable death toll; and the neocolonial approach to the Global South multiplied the effects of systemic violence heaped upon lesser-developed nations by the Global North, eroding the foundation for effective collaboration in the process. In short: a failure of equity-driven science diplomacy.

Most importantly, the disassociation of human health from planetary health, coupled with the denial of health care as a human right, continues to imperil everyone regardless of race, place or station.

The deadline for redacting this narrative is upon us—governments, policymakers, industry leaders and funders must harness the political will to prioritize an agenda of multilateral cooperation focusing on global health security, knowledge transfer, and full access to primary health care (PHC). Equity, transparency, clear public health messaging and an all-society, holistic approach—what the *Lancet* Commission terms “prosociality”[9]—must under-

pin actions designed to enhance human and planetary health. Without exception.

Claims that we’ve turned the corner on COVID-19—President Biden declared “the pandemic is over” and WHO stated the end of the pandemic is “in sight”—when more than one million people have died of the virus between January 2022 and this writing, are another failure of science diplomacy.[10,11] They erode trust in health authorities,[12] threaten current and future health interventions, fuel the North-South disconnect and further disenfranchise the most vulnerable, millions of whom still wait for life-saving vaccines.

Science makes clear the road map forward, but it still depends on political will. To build real global health security while addressing long-term COVID-19 ramifications—including clinical sequelae and adverse effects on mental health—requires rapidly scaled-up funding to support resilient, responsive health systems and action towards universal access. Needed are in-country capacity building; knowledge transfer around surveillance, contact tracing and follow-up during disease outbreaks; and shared examples of preventive, rather than reactive, health strategies.

Progress is too slow, but there are some indications that the pandemic’s darkness may lead to a new dawn: WHO, *The Lancet* and others argue for a new global health paradigm founded on, among other things, accessible, community-based primary care.[1,9,13] Even some in the United States are awakening to this imperative: the *Paul Farmer Memorial Resolution*, introduced in the US House of Representatives, is designed to curb preventable deaths by strengthening health systems; aligning funding with “local plans and priorities, not the development industry;” increasing US global health spending; and forging a more just and democratic global economy, including the power for poorer countries to decide for themselves how to allocate health funding from the World Bank and IMF.[14] Actions proposed in this resolution, known as ‘North Star,’ offer pragmatic guidance for coordinated initiatives to improve human and planetary health.

Sweeping corrections to international financial mechanisms beyond health are also imperative for confronting future global emergencies. The pandemic has left economies in near collapse and “stopped sustainable development in its tracks.”[15] Urgently required are aggressive investments in health systems imbued with an equity and gender focus, sustained support for comprehensive social protection programs, and private-public cooperation pegged to the interests of whole populations, not just individuals.

The litany of global threats now upon us—emerging, re-emerging and treatment-resistant diseases, the climate catastrophe and

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zoonotic spillover, not to mention worsening and entrenched inequities—argue for more science-based collaboration and more, much more, North-South funding. Barriers to collaboration including sanctions and economic protectionism are not only unjust and prejudicial to everyone's health: they are fossils from a bygone era, a bygone world.

In contrast, a new global health paradigm calls for multilateral science solidarity emphasizing in-country development and production to empower lower- and middle-income countries (LMICs). This would liberate LMICs from exploitative international policies that prioritize the interests of foreign governments and industry over their own needs and criteria. Promoting LMIC self-reliance also requires technology transfer, regulatory expertise including harmonizing standards across regions, and overhauled intellectual property and patent statutes that promote, rather than obstruct, health and well-being.


Failure to promote such LMIC scientific independence carries dire consequences, warns former PAHO director Dr Carissa Etienne: “our health and economies are dependent on the production, availability and equitable access to pharmaceutical products, vaccines, medical supplies and diagnostics...and Latin America and the Caribbean has been found wanting.”[16] Dr Etienne points out that there are exceptions; Cuba is one of them, as a delegation of international experts discovered on a recent visit to better understand the country's COVID-19 vaccine development and vaccination strategy.

Following three days' discussions and site visits with Cuban researchers, developers and regulators responsible for producing several safe, efficacious vaccines (including one with potential as a universal booster), the delegation issued its report recommending above all that “multilateral and bilateral mechanisms for health promotion and pandemic prevention should actively engage Cuban scientists in dialogue, academic exchange and joint research.” During their visit, the group of US, Caribbean and African scientists interacted with investigators from Cuba's decades-old biotech industry that produces novel biologics and 8 of the 11 vaccines included in the country's childhood immunization program. They also heard from Cuban public health experts on the national vaccination strategy that relied on the strengths of the island's primary healthcare facilities and professionals to vaccinate 90% of the population by mid-2022. This rated included 97.5% of children over the age of 2, making Cuba the only country to achieve such high vaccination rates in children this young so early in the pandemic. Such high vaccination compliance and the potential for pediatric immunization to blunt infection rates in the general population were of particular interest to the delegation, which recorded its findings and recommendations in the full Technical Report and its Executive Summary we publish in this issue.

A community-based universal model, like the one Cuba introduced almost 40 years ago, has proven advantageous in disease detection and control, strengthening public trust in and compliance with health measures, and improving overall population

health. This issue's interview with Dr Ileana Morales, Director of Science & Technological Innovation in Cuba's Ministry of Public Health, explores how the country harnessed science and the strengths of its health system to confront the pandemic even in perilous economic times.

Training health workers from the community, for the community, has shown to be especially effective in LMICs, particularly when coupled with strategies recognizing health care as a human right. [9,17] The late Dr Paul Farmer, our second interview in this issue, was dedicated to such a ‘pro-poor,’ rights-based strategy. From rural Haiti to Rwanda and even the United States, the physicians and health workers he trained, the communities he supported and the patients he served are his legacy. Codifying this legacy is up to us.

In sobering and sad news, **MEDICC Review** offers its condolences to family, friends and colleagues of Dr F. Douglas Scutchfield, who died in May. A physician and champion of preventive and community-based medicine, ‘Scutch’ was founding director of San Diego State University's Graduate School of Public Health and founding dean of the University of Kentucky School of Public Health. In addition to many awards and scholarly publications, he was founding co-editor of the *Journal of Appalachian Health* and served on the Editorial Board of **MEDICC Review** since its inception as a peer-reviewed journal. He will be sorely missed by us all. 

## The Editors

## NOTES & REFERENCES

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### In Memoriam Carmen Landau MD (1977-2022)



*Dr Carmen Landau (fourth from right, in back) celebrates graduation day at the Latin American School of Medicine, Havana, 2007.*

As this issue of **MEDICC Review** was finalized for publication, we received tragic news about the sudden death of family physician Dr Carmen Landau, among the first US graduates

from Havana's Latin American School of Medicine (ELAM), class of 2007. Following graduation, Dr Landau completed her residency at the University of New Mexico's Department of Family and Community Medicine and became a staff physician at Southwestern Women's Options in Albuquerque, New Mexico. Her community of local and migrant women relied on Dr Landau not only to provide quality care, but also to defend their right to safe abortions, without stigma.

In a prescient 2015 article for our journal ([Under the Cover of Night: Abortion Across Borders](#)), she decried laws that obligate women to follow often dangerous routes to fulfill that right: "Restrictive abortion laws in many US states and countries force women into these 'ranks of the desperate,' endanger their lives and violate their rights. Why must they pay such a price?"

Dr Landau's solidarity with and commitment to the most vulnerable went beyond her service to low-income and disadvantaged women in New Mexico: she died in Puerto Rico on October 16, 2022 while helping victims of Hurricane Fiona.

Dr Landau was a force for change who embodied the right to compassionate, science-based health care upon which ELAM was founded. The editors of **MEDICC Review** offer our deepest condolences to Dr Landau's family, friends, colleagues and community of patients. She is survived by her husband and two children.