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Make universal health care a priority

World leaders and international donors must help to strengthen the health systems of the most vulnerable nations.

As the 2019 novel coronavirus continues its deadly rampage, the World Health Organization (WHO) is rightly drawing attention to the risks the virus poses to the poorest and most vulnerable nations — particularly in Africa.

As *Nature* went to press, more than 43,000 infections and more than 1,000 deaths had been confirmed. Soon, thousands of China's citizens will be returning to their jobs on the African continent after an extended new-year holiday. If the virus also reaches Africa, it could spread rapidly and undetected because health systems in many regions are too fragile and underfunded to cope.

As a result, the WHO has scrambled to equip 14 countries — including the Democratic Republic of the Congo, Ethiopia and Nigeria — with diagnostics, expertise and equipment to detect and contain the virus. The agency has also appealed for US$675 million to assist vulnerable countries — an amount that it estimates will last only until the end of April.

And yet, as donors start to provide emergency aid — the Bill & Melinda Gates Foundation was among the first with a $100-million pledge — it's hard to avoid the feeling of déjà vu. Infectious-disease outbreaks are often accompanied by such pledges to improve disease surveillance, and by promises to provide funds for drug and vaccine development. What is less forthcoming is sustainable funding for clinics providing community-level general medicine, and for medical and nursing education, as well as investments to sustain hospitals with supplies, electricity and running water.

These are all steps that would help countries to combat infectious diseases and improve overall public health — as WHO director-general Tedros Adhanom Ghebreyesus urged in a statement at the end of last month. Seven of the nations that the WHO will be helping scarcely have one nurse per 1,000 people, according to the most recent statistics from the World Bank. And more than 50% of the continent's 1.2 billion inhabitants lack access to essential primary care.

To be fair, a shift in outlook has already begun. In 2016, the World Bank and the Global Fund to Fight AIDS, Tuberculosis and Malaria committed $24 billion over three to five years for universal health care in Africa. And Rwanda's president, Paul Kagame, is leading an African Union task force to achieve measurable universal health coverage in all of its 55 member states, partly by committing to spending 5% of gross domestic product on health care.

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A temporary surge of assistance aimed at infectious-disease surveillance — as is happening now — might suffice in places where health systems are reasonably robust. But for the poorest countries with the weakest systems, even the best projects will struggle once these grants come to an end, as the case of Ebola shows all too well.

After the world's biggest Ebola outbreak ended in 2016, donors, including the US government and the World Bank, put more than $100 million into initiatives to strengthen health and disease-surveillance systems in the three countries that were worst hit — Liberia, Sierra Leone and Guinea.

But many of these initiatives are ending, and health care is showing signs of erosion. Since last summer, protests have been erupting in Liberia as the economy and the national health system have crumbled. Major hospitals are reported to lack life-saving drugs, and health workers and lab technicians say they have not been paid for months. Patients have been turned away from clinics empty-handed. This problem isn't specific to Liberia. In many of the poorest countries, staff in national health systems barely earn a living.

International donors have reasons for not providing long-term funding for salaries for public employees. One of their biggest fears is that in doing so they would become too deeply involved in the workings of government departments, which are often complicated organizations to navigate. Another worry is that donors could be perceived as telling sovereign governments what to do.

Clearly, finding solutions to these problems will not be easy, but donors must consider how their initiatives can help to strengthen national health systems for the long term. For example, they could ensure that the health workers being trained to handle patients suspected of having coronavirus are still employed at hospitals five years later. This might not seem like a priority in the middle of an emergency, but it will pay off handsomely down the line.

The march of the coronavirus reminds us yet again that world leaders and philanthropic donors pay attention to epidemics only when an infection is on their doorsteps. They must recognize that the time to think about the next epidemic is now.

When it's fine to fail

The history of metrology holds valuable lessons for initiatives to reproduce results.

Everyone's talking about reproducibility — or at least they are in the biomedical and social sciences. The past decade has seen a growing recognition that results must be independently replicated before they can be accepted as true.

A focus on reproducibility is necessary in the physical sciences, too — an issue explored in this month's *Nature Physics*, in which two metrologists argue that reproducibility