EXPERIENCES FROM THE FIELD

RESILIENT HEALTH SYSTEMS TO OVERCOME CRISES

The current Covid-19 crisis in Africa is unfolding differently than it has in Europe, yet its secondary effects are just as dire. In order to handle this and other such crises – events that are nothing new for the continent – it will be vitally important to formulate an approach to emergencies that can be integrated into long-term health system development plans.

TEXT BY / GIOVANNI PUTOTO / DOCTORS WITH AFRICA CUAMM

THE DIRECT AND INDIRECT IMPACTS OF COVID-19

Covid-19 in Africa is unlike earlier epidemics there. There are numerous differences compared with the way the disease has spread in the West: firstly in terms of timing, as the virus began to affect Africa only after sweeping through China and Europe, and secondly in epidemiological terms, since – at least for now, and despite the undercount of the true number of cases – the degree of infectiousness and severity seen on other continents has not yet been seen in Africa. The pandemic in Africa is also different from a political perspective, as it has spurred the continent's 54 nations to adopt a heterogenous range of containment measures, with unpredictable repercussions for public order, including riots, and for the overall stability of societies and governmental institutions.

The pandemic's secondary effects are clearly cause for concern. One of the most worrisome is people's reduced access to and use of primary health services. A typical risk during emergencies, especially epidemics, is for essential prevention and treatment services to be neglected, suspended, deferred or even halted altogether, with the morbidity and (preventable) mortality burden from common diseases ending up generating more damage and victims than the outbreak itself. Covid-19 is expected to lead to the deaths of around 1.5 million under-5 children due to missed vaccinations and interruptions in treatments for common diseases such as malaria, pneumonia and diarrhea, as well as some 60,000 maternal deaths due to untreated complications. There are already signs of deteriorating health conditions in diabetics and patients with chronic infectious diseases like tuberculosis and HIV/AIDS, due to problems both in terms of access to services (patient-led) and failures due, for example, to drug supply disruptions (system-led). And this is occurring against a backdrop of recession and inflation, rising food insecurity (with 250 million more people estimated to be at risk of hunger) and extreme poverty (with 120 million more expected to be pushed into poverty). We risk a very real and very grim scenario involving rising social inequalities and major setbacks in the progress made vis-à-vis the health-related Millennium Development Goals.

LESSONS LEARNED FROM EBOLA

How can crises like these be managed? It is helpful to think back to 2014, during the Ebola outbreak in Sierra Leone. Pujehun District, where CUAMM was active, with its 360,000 inhabitants, single hospital and 75 health centers, was the first district to be declared Ebola-free by the authorities. Forty-nine cases of the disease were identified and isolated as the entire health network continued to operate, offering both routine services for mothers and children and emergency ones (hospitalizations, C-sections, etc.). Prenatal checkups, deliveries and obstetric emergency care continued to be provided, with the number of some services in terms of coverage and absolute terms actually *rising* compared with the pre-Ebola situation, in contrast with a 23% drop in the national average. How did the district health system hold up? Or, using the current buzzword, why did it prove so "resilient", so able to absorb the shock of the outbreak and to adapt and transform itself to it?

Here are some of the key underlying factors:

- *Good governance*: The district's health authorities proved able to respond to the outbreak quickly and to coordinate activities effectively;
- *Management of local staff*: Staff were asked to handle a wide range of tasks, from protection to training to supervision to off-hour shift incentives, single issues that, focused on collectively, helped to allay the fear of infection, assuage anger about the death of three co-workers, and keep strikes and protests to a minimum;
- *Implementation of hygienic and personal protection measures in the hospital and the peripheral health center network*: The systematic use of "low-tech" practices such as handwashing with sodium hypochlorite, the correct management of hospital waste, use of the limited number of personal protection items, and other such measures enabled people to understand the benefits of all of these practices and measures even during non-crisis periods;
- *Community engagement*: An effective campaign carried out by local leaders, indigenous associations, and the media helped frightened, wary community members to understand the dangers they were facing and to adapt necessary new behaviors (such as "Don't touch me" social distancing, handwashing, the suspension of traditional funeral rites, cooperation with contact-tracing, etc.), thereby also maintaining their trust in local health facilities and workers;
- *Data management and operational research*: Managing the data on the use of routine health services (maternal and child care, TB, HIV/AIDS, etc.) was of vital importance. With

the support of the Bruno Kessler Foundation in Trento we were able to reconstruct the chain of infection starting from the index case, to measure transmission times and the basic reproduction number (R0), and to assess the effectiveness of outbreak containment measures (isolation and contact-tracing). Our operational research (five published works), carried out with local and international partners, enabled us to test ideas, check out hunches, and answer questions from different perspectives – epidemiological, organizational and policy-wise;

- *Organizational innovation*: It gradually became clear that In the aftermath of the outbreak it would be necessary to review intervention strategies and to help pregnant women with complications and children with complex cases to access hospital services by way of an innovative call system for ambulance and motorcycle transport. Once the emergency phase was over, this organizational model spurred the setting-up of a national emergency/urgency system that now offers around-the-clock service in all 14 districts of Sierra Leone, thanks to a fleet of 90 ambulances.

Although it was a very trying time, our experience with Ebola left us with many ideas and lessons learned, both human and professional, bequeathing CUAMM with a valuable framework vis-à-vis the strengthening of health systems in Africa, as our work in other countries shows. Yet that valuable experience is still not enough.

EMERGENCY AND DEVELOPMENT: AN INTEGRATED APPROACH

We need to go further, galvanized by the lessons of the Covid-19 pandemic. Africa is constantly being hit by emergencies: 2019 alone saw 21,600 episodes of armed conflict, 96 infectious disease outbreaks and 89 natural disasters. Many of these took place in so-called "fragile" nations, where both the poverty and the health situation are extreme. One such example is Capo Delgado Province, in northern Mozambique, currently enduring terrorist attacks, broad-based insecurity, population flight, and outbreaks of Covid-19, measles and cholera.

It is both shortsighted and counterproductive for local and international actors to take either an "either/or" approach (i.e., emergency *or* development) or a purely reactive one (i.e., intervening only after an emergency). The traditional conceptual parameters that draw dividing lines between emergency, rehabilitation and development, or line them up one after the other, are outdated and impracticable. Things need to change and evolve.

Strengthening a health care system and making it resilient, if we can consider this one of the current pandemic's potential lessons, must involve taking on and embracing every dimension of an emergency and attendant shocks: from the ex-ante readying of the system (something that is dangerously lacking today) through management of the initial phase of the crisis and the broad-based consequences thereafter, up through the recovery and learning phase.

IN MOZAMBIQUE

A three-pronged approach to the fight against Covid-19: working with institutions and decision-makers; giving ongoing assistance to communities; raising awareness and providing information.

TEXT BY / GIOVANNA DE MENEGHI AND EDOARDO OCCA / DOCTORS WITH AFRICA CUAMM

The first case of Covid-19 in Mozambique was found on 22 March 2020. Since then, CUAMM has worked at multiple levels to support the population as it works to respond in an effective manner to the outbreak. At the institutional level, CUAMM is collaborating with local health organizations and is part of the network of technical groups of the Ministry of Health for Epidemiological Surveillance and Case Management, as well as of that for Community Health and Advocacy. In this capacity we have taken part in formulating nationwide strategies, operational flow charts, guidelines and tools.

At the community level, CUAMM has adapted its interventions to guarantee the safety of both its own staff and the local population, at the same time ensuring the continuity of services. Providing information to communities and raising awareness in both urban and rural areas have been vitally important activities, made possible thanks to an extensive network of around 500 local activists. Their support has also made it possible to carry out preventive activities at health points as well as in local markets and youth centers. Radio ads, videos and songs have been produced in a range of dialects, and messages have been broadcast from loudspeakers mounted on cars to reach those living in the most remote areas. CUAMM has also worked with village health committees to identify and refer suspected cases of infection, establishing valuable partnerships, including one with local religious authorities, who allowed us to use their minaret loudspeakers to disseminate virus-prevention messages.

In terms of our health interventions, in addition to providing training to community activists on the prevention of Covid-19 infection, we developed a procurement plan for the purchase of personal protective equipment (PPE) for CUAMM staff, as well as for the hospital and health centers that we work with. We also purchased ten hospital tents, each with an eight-bed capacity, which will be set up outside several key health centers, to be selected together with local health authorities; they will be used for pre-triage activities.

Currently (22 June 2020) the situation in Mozambique is thus: the cities of Nampula and Pemba have been declared locations with community transmission. CUAMM is working to help contain the outbreaks, supporting the epidemiological surveillance activities carried out by health authorities in the Provinces where we are active; shortly we will begin organizing community-based surveillance activities.

This is the lens through which Doctors with Africa CUAMM's Covid-19-related interventions should be viewed. We have signed new agreements with the United Nations Humanitarian Response Depot (UNHRD); thanks to this partnership, CUAMM will now not only have access to warehouses in Brindisi, Dubai and Accra to stock our own materials and facilitate the logistics of dispatching them to the field, but will also be able to obtain basic necessities (tents, personal protective equipment and so on) using more efficient procurement procedures endorsed by the Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO). Another important step is our agreement with the World Food Program which, thanks to its network of humanitarian flights, enables CUAMM staff to travel inside Africa despite the suspension of commercial flights. These agreements will remain operative even after the Covid-19 crisis comes to an end. In the field, our goal is to secure the 23 hospitals where we are active and to train their staff, especially in infection prevention and control (IPC); to support community awareness-raising activities; to ensure the continuity of primary health services to the greatest extent possible; and, finally, to provide the country's ministries with technical assistance for the development of guidelines, protocols and flowcharts. We have also launched new lines of research.

Given the challenges that Covid-19 and other potential crises will continue to bring to us and the African communities we work with, these are important steps towards increased transparency and efficiency.

Things have rarely been as uncertain, and possible options as unclear, as they are today, so a great deal of humility and a healthy dose of realism are called for. But the challenge must be met head on; the core of our profession, CUAMM's very calling, is to be at our African partners' sides so they will not have to face this umpteenth challenge unaided.

IN SOUTH SUDAN

In South Sudan, whose human development index value positions it at 187 out of 189 countries and territories, the Covid-19 pandemic is "a crisis on top of a crisis".

TEXT BY / CHIARA SCANAGATTA / DOCTORS WITH AFRICA CUAMM

As of 21 June 2020, the number of confirmed cases had reached 1,892, although given the limited number of tests administered (10,038) the actual figure is likely higher. With a dearth of specialized medical and personal protective equipment, qualified staff, and the infrastructure necessary to ensure adequate hygiene standards, the country's health system is unable to provide the services needed or to prevent health facilities from becoming the centers of new outbreaks. Due to the population's failure to adhere to necessary preventive behaviors and the growing social stigma associated with the disease, it is impracticable to ask those with asymptomatic or mild cases of the disease to manage their illness at home. Routine health service supply and demand are also at risk; concerns about this new disease coupled with reduced mobility and limited financial resources are negatively affecting access to and use of non-Covid-19-related services. The principal pandemic response center in South Sudan is Rumbek State Hospital, where infection prevention and control measures such as waste management, hand-washing and toilet use have all been bolstered. Hospital staff have been trained on Covid-19 identification and prevention, and supplied with basic protective materials. A 15/20-bed-capacity isolation area has been set up and equipped with oxygen concentrators, pulse oximeters and Continuous Positive Airway Pressure (CPAP) machines, and a triage system adopted; everyone who arrives for outpatient services is checked at the hospital's entrance. In the first 40 days, 10,723 individuals were examined; 886 of them were then assessed more thoroughly, and 663 went on to have a checkup with a doctor. Four of the latter were tested for the virus, with the swabs being sent to Juba. Since no community isolation and control system was yet in place, the patients were kept in isolation inside the hospital while waiting for their results. In a month's time, nine such cases (5 confirmed and 4 suspected) were found. The next step will be to certify the hospital's laboratory to do its own testing using the GeneXpert system that has recently been enabled for Covid-19 testing and is already being used in the HIV/TB division. CUAMM also supports the Covid-19 response strategy through non-clinical activities such as community awareness-raising via radio broadcast and the training of staff in primary health facilities, both public and private, and of village health workers. Finally, the data gathered during screening and in the isolation unit are valuable sources of information for health authorities as they seek to get an idea of the local situation of the pandemic in order to address it as effectively as possible.