



Fishmen in Dakar, Senegal
Credit: Camille Moirenc

As elsewhere in the world, the coronavirus pandemic poses major and multiple challenges to African countries, in terms of health but also political and economic responses. What is the current health situation? What are the continent's weaknesses but also its strengths?

We interviewed two of IFGR members, Hamed Semega, High Commissioner of the OMVS and Mirdad Kazanji, Director of the Institut Pasteur of French Guyana who has worked for more than ten years in Africa, to give us an overview of the situation.*

"No country can face this pandemic alone, which has suddenly imposed itself on us like a fatality. West Africa, like developing countries, will have difficulty coping with the exponential spread of this disease. We do not have a health system capable of dealing with such a scourge. However, no health system has proven itself capable of resisting such a level of spread." This is the conclusion drawn by Hamed Semega, High Commissioner, from Dakar, where are the OMVS' headquarters.

Should Africa prepare for the worst, as announced in mid-March by the World Health Organization (WHO), pointing to the continent's limited capacity in laboratories, beds and resuscitation equipment in hospitals?

Africa's health system is under-equipped and under-dimensioned. It could not cope with a massive influx of people infected with COVID-19, an epidemic which has already severely strained the more robust hospital sectors in Europe or the United States.

Implementing effective hygiene measures is also complicated when some inhabitants do not have access to water and lack basic products such as soap. The same problem applies to confinement, when the need to go out to work or eat outweighs the health imperative.

Finally, the risk is increased by the prevalence of other diseases on the continent. Chronic diseases such as diabetes, parasitic infectious diseases such as malaria, or bacterial diseases

**The Senegal River Development Organisation*

such as cholera or tuberculosis, as well as malnutrition, are very present. And the COVID-19 virus primarily affects the most vulnerable people.

The risks are great. Nevertheless, Africa appears to be relatively unscathed for the moment.

"If the virus spreads and takes hold in Africa, it would do far more damage than elsewhere," says Mirdad Kazanji.

Less impact in Africa?

Since the first case appeared in Egypt last February, the virus has spread to almost the entire continent (52 countries out of 54). Africa has 18,000 cases and just over 900 deaths recorded as of 17 April. The figures reported by the Ministries of Health in connection with the laboratories of the Institut Pasteur International Network are also quite low: Senegal has 350 confirmed cases and 3 deaths; Côte d'Ivoire, 742 cases and 6 deaths; Guinea, 477 cases and 3 deaths; Central Africa, 12 cases and 0 deaths...

The most affected country is South Africa with 2,783 cases and 50 deaths to date. Its population is vulnerable: of the 58 million inhabitants, more than 7.5 million are HIV-positive, 2.5 million of whom are not receiving antiretroviral treatment. There are also 300,000 tuberculosis patients and more than 3.5 million diabetics.

In megacities such as Johannesburg and Cape Town, population density is also conducive to the spread of the virus, especially among poor people living in slums. There are a million of them in Soweto.

In an attempt to stem the epidemic, South African President Cyril Ramaphosa has instituted strict containment for the entire population until at least 16 April and has deployed police and army to enforce this order in neighbourhoods.

If we try to understand why Africa is less affected, several factors come together.

- **Lower international and intra-continental mobility:** comparing the maps of COVID-19 presence and air transport flows around the world, the correlation is obvious. Faced with a virus that spreads rapidly from one country to another, Africa is, as a result, protected by lower trade with the rest of the world. South Africa, the most affected country, is also the country most open to international trade. Air and rail travel between African countries is also much less than on other continents.



- **Rapid and strong protection measures:** most African countries have taken the threat very seriously by anticipating their prevention policy and putting in place a mechanism to reduce the movement of their population by closing land and air borders. For Hamed Semega, these measures seem to have produced encouraging results so far, preventing the multiplication of imported cases. In many countries, the prohibition of public gatherings, particularly religious meetings, has also reduced the flow of new indigenous cases.

- **A particular resilience:** Africa is a resilient continent that has survived many scourges for a long time, such as cholera, Ebola (present for a long time and reappeared in 2014 during a new epidemic in West Africa that caused more than 15,000 deaths), Lassa virus in Sierra Leone or Marburg hemorrhagic fever and monkey pox virus... The authorities have learned from these epidemics and the populations are psychologically prepared. Mirdad Kazanji gives the example of the health cordon installed around villages to isolate them as soon as there are cases. In Benin and Congo, such systems were quickly set up to deal with Covid-19.

- **A young population:** 40% of the African population is under 15 years old. This age pyramid is favourable when we know that the youth seems to be more resistant to the virus. In 2015, only 3.5% of the population will be over 65 years of age (i.e. 1 person out of 28) and life expectancy will not exceed 60 years (*source: UN*).



A woman wears a protective face mask in a market, in Lagos, Nigeria.

Credit: ISRAEL OPHORI/EPA/MAXPPP

- **A protection already acquired?** Finally, Mirdad Kazanji suggests as a hypothesis, which requires some verification, the protective effect of certain previous treatments, vaccines or infections. Chloroquine is one possibility. This molecule is already widely used in Africa for the treatment of malaria. And several countries (Morocco, Algeria, Tunisia, Senegal) have opted for treatment with hydroxychloroquine to treat the least serious patients. It is showing initial satisfactory results, reducing the viral load at the beginning of the infection and thus allowing faster recovery.

The BCG vaccine would also perhaps have an important role in the therapeutic treatment of COVID-19 ([see the previous interview](#)). Widespread in Africa, this vaccine could mitigate the 'immunological storm' - a hyper-inflammatory phenomenon resulting from a disproportionate immune response to the virus - which often leads to fatal consequences.



These observations would be consistent with the protective effect of the vaccine, noted in children, against respiratory infections that go beyond the only disease targeted, tuberculosis. Large-scale clinical studies have already been launched to support these hypotheses, in Australia, the Netherlands and France, by the Institut Pasteur of Lille. The first results of the French trial could be available within three to four months.

Remain vigilant and mobilized

Nevertheless, the situation remains very fragile. The WHO has just warned of an increase in the number of cases and deaths over the past week.

The containment and isolation of the declared positive cases must be maintained and the inhabitants must not relax their efforts. African music stars are mobilising to alert and raise awareness among the population, to the warrior cry of *Daan Corona – Fight the Corona* in Wolof - in Senegal for example! In these countries where the influence of marabouts and healers is great, it is important to hammer out health instructions. Just as it is important to limit the purchase of fake medicines sold on the markets.

Rapid mass screening is one of the keys to success in this challenge. **The Institut Pasteur in Dakar has set itself the goal, together with the British company Mologic, of bringing inexpensive, locally manufactured tests on the market by June to diagnose people with Covid-19 in just ten minutes.** But not all countries have these capacities.

“There is room for hope, but we must remain very vigilant and, above all, mobilized in the fight against the scourge.”

Hamed Semega

Cooperation between African countries in the field of health is therefore another essential response to the crisis. There is a real culture of regional collaboration, to assess, exchange techniques, share knowledge, training, etc., which has already proved its worth in the case of yellow fever or Ebola epidemics. The aim is to facilitate diagnosis, but also to regularly monitor how the virus behaves, to understand the chains of transmission and the dynamics of the epidemic in order to adapt diagnostic tools and management and achieve better control.

For many African health professionals, it would be a serious mistake to think that the disaster has been averted.

Is Remdesivir a new treatment for the Covid-19?

Remdesivir, a drug usually used to control the Ebola virus, is believed to have a beneficial effect in patients with severe forms of Covid-19, according to recently published results of a first clinical trial. This trial was conducted in several countries (United States, Europe, Canada and Japan) with hospitalized patients with a severe condition. The treatment duration was 10 days. Of the 53 patients whose data were analyzed, clinical improvement was observed for 36 patients, e.g. 68% of the 53 patients.

Source: « Compassionate Use of Remdesivir for Patients with Severe Covid-19 », article published in the American newspaper, The new England journal of Medicine –April 10, 2020

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