

Prepare for pandemics now

Ambrose Otau Talisuna, a medical doctor and the Programme Manager Emergency Preparedness and Response, WHO, Africa Region, highlights major gaps exposed worldwide on preparedness

A novel coronavirus, SARS-CoV-2 that causes COVID-19, first reported in China, is currently devastating all parts of the world and the COVID-19 cases and deaths are an ever-moving target. On 22-23 January 2020, WHO's Director-General convened the International Health Regulations (IHR) Emergency Committee to advise him on whether the coronavirus outbreak constituted a Public Health Emergency of International Concern (PHEIC).^{1,2} At the first meeting, the Emergency Committee did not concede to determining a PHEIC, but decided to re-convene in 10 days. Based on the rapidly evolving information and epidemiological situation, the Emergency Committee re-convened on 30 January 2020. After further deliberation and on the advice of the Emergency Committee, the WHO Director-General declared the COVID-19 outbreak a PHEIC and accepted the proposed temporary recommendations for WHO and Member States.³

Assessing preparedness capacity

To respond to the increasing number of outbreaks, since 2016, the WHO Africa region has been assessing the availability of the IHR capacities using the mandatory state party annual report and the voluntary joint external evaluation.^{4,5} In 2017, 2018 and 2019 all 47 countries submitted their IHR annual reports. Further, 46 of 47 countries in the WHO Africa region completed the WHO IHR Joint External Evaluation (JEE).⁶ The JEE is a voluntary, collaborative, multi-sectoral process to assess 19 different capacities of a country to prevent, detect and rapidly respond to public health risks. The JEE helps countries identify the most critical gaps in their health systems. Of these countries, 30 have developed their national action plans for health security, which help to cost and prioritise necessary actions to enhance preparedness and response.⁷ There is significant overlap between the work these countries have achieved in strengthening their systems' resilience to epidemics, and the work being conducted in the context of the COVID-19 pandemic.

In February, in an effort to prioritise intervention measures to mitigate the spread of COVID-19 in the WHO Africa region, the Regional Office for Africa asked all 47 countries to conduct a COVID-19 preparedness self-assessment using a checklist across nine pillars of the global strategic preparedness and response plan, namely: country-level coordination; risk com-

munication and community engagement; surveillance; points of entry; rapid response teams; national laboratory system; infection prevention and control; case management and continuity of services; and logistics, procurement and supply chain management.⁸ Countries were grouped based on their scores: less than 49% meaning not prepared; 50-79%, limited preparedness; and over 80%, adequately prepared. The median overall COVID-19 preparedness score for the 47 countries was 66.8% (range: 28.2%–92.7%). Six countries were not prepared, 33 had limited preparedness and only eight countries reported that they were adequately prepared. The three pillars with the lowest scores were case management, rapid response teams and infection prevention and control.⁹

These assessment data demonstrate the need to strengthen country coordination systems for preparedness and response to COVID-19 and other outbreaks. In particular, there is a need to strengthen capacities for rapid detection and response, case management, and to support healthcare worker safety through the provision of IPC supplies. Moreover, support to major points of entry is needed to reinforce health measures for travellers, airlines and other conveyances. Critically important is the need to support countries to strengthen public awareness raising in the population and to strengthen risk communication and community engagement.

From the Spanish flu in 1918, during which around 50 million people died, to H5N1, H1N1, SARS, MERS, Ebola and now COVID-19, pandemics have had devastating impacts.¹⁰⁻¹⁵ The ongoing COVID-19 pandemic is still evolving and its consequences on in terms of lives lost and the global economy are likely to be immense.

We cannot predict which pathogen will cause the next pandemic, nor where it will occur, nor how dire the effects will be – but if humans and infectious disease pathogens co-exist, epidemics and pandemics will continue to occur. We need to act now, at local, national, regional and global level to protect our collective well-being for the future.

For our collective efforts in health emergencies, the West Africa Ebola epidemic from 2014 to 2016 really was a turning point.¹⁶ It triggered global and regional reforms to expand WHO's role from normative and technical work into operations.¹⁷ The reforms were aimed strengthen preparedness and readiness, taking an 'all-hazards' approach, and working collectively with partners.

Africa has to date defied model predictions on the number of deaths and cases due to COVID-19.¹⁸ It is

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still too early to say the continent is out of the woods. However, over the last couple of years, Africa has been responding faster and more effectively to emergencies. For example, the median time taken to detect outbreaks has reduced from 17 days in 2016 to four days in 2019, and the time taken to contain outbreaks reduced from a median of 418 days in 2016 to 40 days in 2019.¹⁹

We need to build on the lessons learned in outbreak preparedness and response and invest in research and innovation to improve our ways of working. Importantly, there is a need to strengthen (and not weaken) the WHO's capacity to play a coordinating role in preparing for and responding to health emergencies. The WHO's and other partners' actions, as well as those of the Member States, are guided by the IHR, an international law, which aims to save lives in epidemics and pandemics while avoiding disruptions to international traffic and trade.¹ All countries annually assess and report on their IHR capacities and in recent years we have introduced joint external evaluations by expert teams: 46 of 47 countries in the African Region have undergone this process and 30 have developed national action plans for health security to address the identified gaps.⁷ However, funding to implement these plans is a challenge. While countries and partners agree on the importance of preparedness, domestic and external funding for emergency response far outweighs investments in preparedness¹⁹ – and this results in a cycle of funding epidemic response rather than addressing the underlying causes of outbreaks and pandemics.

Another challenge we face in preparedness in Africa and across the world as COVID-19 has demonstrated is that most countries have weak health systems. A top priority for all countries should be to achieve universal health coverage (UHC) to protect people from financial hardship in seeking health care. The WHO has developed a UHC index to measure our progress.²⁰ Linked to this, there is a significant unmet need for healthcare globally. In Africa, for example, only one in three people have access to essential health services, and even among those who have access, less than half are using the available services because they are concerned about the cost, the quality, or because they live too far away or don't have time to seek care.

In the WHO Africa region, we see correlations between countries with weak health systems and those less prepared for emergencies.²¹

Long way to go

The COVID-19 pandemic has clearly demonstrated that all countries still have a long way to go. We need to continue implementing lessons learned from past outbreaks and current outbreaks to address new threats like COVID-19 as well as future threats. Finally, by being prepared for pandemics, we can limit their geographic spread and save lives. Preparedness is also a good investment: it contributes to building stronger systems in countries and to reducing the profound economic impacts of epidemics and pandemics. All countries need to act because, as COVID-19 has shown, a delay is very costly in terms of lives lost, communities devastated, and economics brought to a standstill.

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References

1. World Health Organisation. International Health Regulations (2005), Third Edition. <http://apps.who.int/iris/bitstream/10665/246107/1/9789241580496-eng.pdf?ua=1> (Accessed September 16, 2020).
2. World Health Organisation. Statement on the first meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV) (accessed September 16, 2020)
3. World Health Organisation. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)
4. [https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
5. World Health Organisation. The Joint External Evaluation Tool. https://www.who.int/ihr/publications/WHO_HSE_GCR_2018_2/en/ (accessed September 16, 2020)
6. World Health Organisation. State Party Annual Report Tool. <https://extranet.who.int/sph/news/ihr-self-assessment-annual-reporting-tool-spar-2018> (accessed September 16, 2020)
7. Talisuna A, Yahaya AA, Rajatonirina SC, Stephen M, Oke A., et al. Joint external evaluation of the International Health Regulation (2005) capacities: current status and lessons learnt in the WHO African region. *BMJ Glob Health.* 2019;4:e001312. doi
8. WHO, COVID-19 Preparedness checklist
9. WHO, Regional office for Africa. COVID-19 readiness dash board. <https://www.afro.who.int/health-topics/coronavirus-COVID-19>
10. Jeffery K. Taubenberger and David M. Morens. 1918 Influenza: the Mother of All Pandemics. *Emerging Infectious Diseases.* Accessed at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3291398/>
11. CDC. Highly Pathogenic Asian Avian Influenza A(H5N1) Virus (accessed at: <https://www.cdc.gov/flu/avianflu/h5n1-virus.htm#H5N1> .
12. CDC. First Global Estimates of 2009 H1N1 Pandemic Mortality Released by CDC-Led Collaboration. Accessed at: <https://www.cdc.gov/flu/spotlights/pandemic-global-estimates.htm>
13. WHO (2003). SARS (Severe Acute Respiratory Syndrome). Accessed at: Cause
14. CDC. Middle East Respiratory Syndrome (MERS). Accessed at: <https://www.cdc.gov/coronavirus/mers/index.html>
15. UNDP. Socio-economic Impact of Ebola virus disease in West African countries: a call for national and regional containment recovery and prevention. United Nations Development Group – Western and Central Africa. Nairobi, 2015; (www.africa.undp.org/content/dam/rba/docs/Reports/ebola-west-africa.pdf, accessed 26 February 2019).
16. Moon S, Sridhar D, Pate MA, et al.. Will Ebola change the game? Ten essential reforms before the next pandemic. The report of the Harvard-LSHTM Independent Panel on the global response to Ebola. *The Lancet.* 2015; 386: 2204-2221. doi: 10.1016/S0140-6736(15)00946-0.
17. Sands P, Mundaca-Shah C, Dzau VJ. The neglected dimension of global security — a framework for countering infectious-disease crises. *The New England Journal of Medicine.* 2016; 374: 1281-87.
18. Joseph Waogodo Cabore, Humphrey Cyprian Karamagi, Hillary Kipruto, James Avoka Asamani, Benson Droti, Aminata Binetou Wahabine Seydi, Regina Titi-Ofei, Benido Impouma, Michel Yao, Zabulon Yoti, Felicitas Zawaira, Prosper Tumusime, Ambrose Talisuna, Francis Chisaka Kasolo, Matshidiso R Moeti. The potential effects of widespread community transmission of SARS-CoV-2 infection in the World Health Organization African Region: a predictive model, *BMJ Glob Health.* 2020; 5(5): e002647.
19. Ambrose Otau Talisuna, Emelda Aluoch Okiro, Ali Ahmed Yahaya, Mary Stephen, Boukare Bonkougou et al., Spatial and temporal distribution of infectious disease epidemics, disasters and other potential public health emergencies in the World Health Organisation Africa region, 2016-2018. *Global Health.* . 2020 Jan 15;16(1):9.
20. Erondy, N.A., et al., Building the case for embedding global health security into universal health coverage: a proposal for a unified health system that includes public health. *Lancet.* 2018. 392(10156): p. 1482-1486.
21. Oppenheim B, Gallivan M, Madhav NK, et al. Assessing global preparedness for the next pandemic: development and application of an Epidemic Preparedness Index. *BMJ Global Health.* 2019; 4: e001157. doi:10.1136/bmjgh-2018-001157.