UNIVERSITY OF BIRMINGHAM

THE INSTITUTE FOR GLOBAL INNOVATION

Living with the pandemic
Event series

Lower and middle income countries (LMICs)

Post-event summary

Participants

- Professor Hisham Mehanna (Chair)
- Professor Dominique Moran (Co-Chair)
- Professor Adam Cunningham
- Professor Justine Davies
- Professor Stefan Krause

Background to the series

The spread of COVID-19 is one the biggest challenges the global community has faced, and our research teams have a key role to play in the fight against it, to reflect on its impact on all aspects of our lives and to learn lessons from it and from past pandemics.

The Institute for Global Innovation at the University of Birmingham has therefore organised a series of webinars, where experts consider the different issues surrounding the pandemic.

The session on lower and middle income countries was first broadcast on 21 May 2020. You can watch the event in full by clicking here.

Global health

Professor Davies focused her comments on sub-Saharan Africa, but noted that some comments could be applied to other settings.

Current statistics for African countries show that the case fatality rate is very different for different countries:

- South Africa (2%)
- Ghana (0.49%)
- Rwanda (0%)
- Sierra Leone (6%)

Why is there such a difference between countries? It could be down to measurements, but there are good test and trace systems in place in these countries and there is no lack of competency, so taking measurements is not a problem. All these countries had firm lockdown measures, so you can probably rule out different control measures.

Perhaps the fact that some of these countries have quite young populations could explain the difference in fatality rates. Furthermore, warm climates may moderate the effects of COVID-19, but we don't know for sure.

What is troubling is that BAME people seem to be more susceptible to COVID-19 than white populations, which is very troubling for the African continent. However, in countries like the UK, BAME susceptibility may be driven by other factors such as poverty.

Professor Davies highlighted the problems of maintaining social distancing in shanty towns, such as those outside Cape Town in South Africa. However, she noted that since South Africa banned alcohol during lockdown, instances of violent crime and domestic abuse have declined massively.

In many LMICs, there is a real challenge around people in the susbsistence economy. For these people, the money the earn one day is used to buy food the next. If they are unable to work then they cannot afford to eat. This is particularly challenging where there is no money available from the state to support vulnerable people in these situations.

African countries may have been better prepared for the current pandemic, given their prior experience with Ebola. This may have had the effect of increasing population compliance and improving systems and responses. However, if the virus takes hold in these countries then we could see healthcare systems struggling. Sierra Leone provides a good case study for why this may be the case:

- Population of 7.5 million people
- Only three hospitals have piped O2
- Just one ventilator in the entire country
- 1.4 healthcare workers per 10,000 people (44 is recommended)

Water and sanitation

Professor Krause and Professor Davies both spoke about the difficulties of effective handwashing when water supplies are scarce or of poor quality. According to UN figures (2018), over two billion people on earth

live in countries experiencing high water stress. This crisis is expected to intensify in the coming years, with the Global Water Institute estimating that 700 million people could be displaced by intense water scarcity by 2030.

Where there is water scarcity you have competing demands placed on the supply. For example, you may need water for cooking or drinking rather than handwashing.

Some of the things we can do to reduce water insecurity for hand washing include:

- Ensuring source water protection
- Developing recyclin and re-use of domestic wastewater
- Improving infrastructure and technological solutions
- Promoting behaviour change
- Valuing water
- Prioritising vulnerable groups
- Providing alternatives to handwashing, i.e. hand sanitisation that doesn't need water

Developing a rapid test for COVID-19

The risk associated with COVID-19 is not evenly spread across the population. Age and co-morbidities, such as obesity or cardiovascular conditions, increase the risk - and BAME communities also seem more susceptible. If we are to end the lockdown then we will need tools to find out what's happening with the virus in our communities. To control risk, we need to know who has been infected.

There are currently two types of tests for COVID-19:

- Tests that detect if you have an active infection
- Antibody tests that tell us if you have been infected in the past. These tests take time to develop, so they are not particularly useful early on. But they are useful in detecting whether you have had the virus. These tests work by detecting antigens (proteins) within the virus.

Professor Cunningham and his colleagues are currently working to simplify an antibody test so it can be deployed effectively in LMICs. The aim is to create a test similar to a pregnancy test that can be transported and used easily.