MakSPH virtual seminar 15th April 2020

Contextualizing the COVID-19 lockdown for Uganda

Panellists:
1. Prof. David Serwadda, DCEH, MakSPH
2. Dr. Elizabeth Ekirapa, HPPM, MakSPH

Chair: Dr. Geofrey Musinguzi, DCEH, MakSPH

Remarks by the Chair

- The Chair gave background remarks about the origin of the COVID-19 and how it was handled in the earlier days.
- He mentioned that the seminar is to draw a touch on how Uganda is responding to the COVID-19 Pandemic; Is there any way we can contextualize the lockdown to our realities?
- He went ahead and introduced the panelists and shared the ground rules for the meeting.

Remarks by Prof. David Serwadda

- Mentioned that he is not an expert on COVID-19 but has expertise in infectious diseases especially HIV. He also alluded on previous outbreaks i.e. SARS, MERS, Ebola and Cholera.
- Had 3 key points:
    - Cautiously optimistic that COVID-19 will not have a high mortality as previous pandemics.
    - Understanding of COVID-19.
    - Disease control of COVID-19 is based on the basic epidemiology principles which have successfully been used for other diseases including plague over 1000 years ago.
- The reasons to support his 3 points were:
    - We have a serology test for COVID-19. This test was discovered and approved for use within 2 weeks. In previous epidemics like HIV, it took 3 years to get the serology test. Background; 1st case reported on 27th December in China, WHO was alerted on 1st January 2020 and on 10th January 2020, full gene sequence was done and PCR test kit generated on 11th January 2020 and sent to Wuhan for diagnosis of COVID-19.
    - We have been able to have much more information about COVID-19 than previous pandemics. For instance, we know its symptoms, that asymptotic patients can spread the disease, preventive measures etc. in comparison to SARS it took more than 1 year to get the information we currently have. COVID-19 has spread but

there is a much greater attention for research for example there are clinical trials using combination of monoclonal antibodies to start in September 2020.

- Optimistic because the virus is somewhat much more pathogenic compared to others that affect humans. Has between 3 to 4% mortality rate and is much more infectious (Reproductive number = 3), SARS has Ro of 1. Ro of 3 is not as high as 15 for measles and 10 for mumps. This is not a very highly infectious disease. This means every individual can infect about 3 people.
- Disease control measures. Should Africa be doing something different / use other methods that are not from the West? The control measures we have are not necessarily European/western; early detection, quarantine, lockdown and social distancing have been renowned quarantine methods for such infectious diseases.
- Uganda's lockdown has been fairly reasonably effective in trying to flatten the curve so far in Uganda so that we do not have a runaway epidemic. There are however economic costs but it should be known that the economic cost of not doing it would be eventually much higher from the number of death and also direct disruption to the economy.
- The lockdown allows Uganda to buy time to manage the epidemic, maybe other tests will be available instead of using PCR, more PPE and more strategic plans. However, I do acknowledge there are economic losses but not as high as those that will occur if we did not have the lock down.
- Gut feeling – COVID-19 is not going to be as disruptive as other people (Western world, Bill Gates) think because of our young population and our leaders have been much more proactive and alert compared to leaders of the European countries. Even in HIV epidemic, leadership mattered a lot more. In regard to humidity and temperature, I am not backing up on it as mitigation measure.

Remarks by Dr. Elizabeth Ekirapa

- Thanked MakSPH alumni and leaders who are out there supporting MoH efforts.
- Contextualize means: Able to detect, treat, monitor COVID -19 cases early – which we are fairly doing well as a country.
- Negative effects on the level of development - Lost income (hotel, farm, tourism), reduced economic growth (national budget to become smaller may need 25 billion), reduced revenue collection (288 billion 2019/2020 to 350 billion2020/2021), increased poverty and household expenditure (household unable to meet their basic needs such as food).
- Acknowledged that Government had given out food but for those who have not received may be starving as we speak.
- Education sector – parents had just paid high sums of money to have S.5 students attend school only to have them back after month, some students may not be able to sit for final exams or perform as expected due to missed school days.

- Access to health services - we have issues of people failing to get their medication, we may have people dying of other diseases other than COVID-19.
- Positive effects: reduced expenditure on leisure, reduced transportation expenses, reduced crime rate due to curfew.
- Action taken on by government: Domestic arears by government, concessions on loan payments, delayed tax to URA, reduced bills for utilities (water, electricity)
- Measures to think about. (have we taken the right actions so far?)
    - Relaxing the transportation ban and allowing business that pose limited risks to continue such as fishing.
    - How can we reduce effects on the less risk groups like people in rural areas?
    - How do we plan to move these preventive measures to workplaces, day to day life after the lock down?
    - Full lock down in our hot spots like Kampala and other cities with cases versus partial lock down especially in districts without cases.
    - Long-term need to screen for COVID-19 at airports, events and crowded places.

Comments, questions and answers

Question. **There has been an argument by World Bank that Tanzania seems to be responding more contextually to the situation because it is trying to balance the impact of the economy and the epidemic. The biggest public health challenge for most African countries may not be COVID 19 but consequences of measures that have been put in place. We have public health problems in Uganda like maternal health, infectious diseases and malaria. In Italy, the deaths were high because the infection went into the elderly population, are we sacrificing the young population? Should we be looking into other contextual measures to protect the elderly population instead?**

Response by Prof. David Serwadda – Having been involved in the response to the HIV epidemic, I am going to respond to this from previous epidemics. Countries that put in place proactive measures against the spread of the HIV did much better in the long run. We were dealing with an unknown disease and our only hope was to reduce the transmission of the infection. Countries that are proactive will be somewhat better off in the long run. As much as I am predicting a more optimistic view, which is about a year from now. We do not want to experiment by not doing the preventive measures that we know prevent the spread of air borne infections. If you are not proactive in your preventive measures, you will have a cost on loss of life. Dr. Elizabeth Ekirapa has not put a cost on the value of life. I am certain that Africa should not have done any different from what it is doing now. When you look at the Swedish experience, they bent their response on herd immunity, but the epidemic in Sweden has now bloomed. And they are thinking of lockdown very late. In any case the measures we put in place are very effective. For Tanzania, I bet World Bank will not be so enthusiastic about it in the next months.

Question: There are speculations that the lockdown may go for a longer period about 4 months and we may have waves of lockdown given we do not have sufficient data on COVID -19 infectiousness and seasonality. What is your take on that and do have any advice concerning this?

Response by Prof. David Serwadda – Lockdown is giving us time for other new technologies to come into play that will enable us to recalibrate our responses precisely. People are putting minds on the laser test which is a finger prick test better than PCR, with lock down we shall know where there are more infections, more localized and who is more susceptible and this enables to strategically prioritize our efforts, how to better manage lock down or reverse lock down. Lockdown might not be in place for a longtime because of the new technologies being invented that may be able to strategically reverse lockdown efforts, and therefore it is a short-term period, and I believe the economic impact may not be as huge as Dr. Elizabeth Ekirapa predicted. If you are taking a hit for 2 to 3 months that is not the same as having a lockdown for a year. During the HIV epidemic, many people thought the epidemic will hit the economy, but this didn't happen because Africa is an agriculture-based continent. In Uganda the service sector contributes only 10% to the total GDP. Tourism and production are going to be majorly hit but not the larger GDP of Uganda. The Agriculture sector is based on readily available human resources so the economic impact will be there but not as high as people think.

Question: Enforcing lockdown in slums has been difficult, what do you advice, do you have any ideas? What advise can you give to Government on social distancing in slums?

Response by Dr. Elizabeth Ekirapa - We need to do more sensitization so that people understand what this is and what it could mean for them. Everyone wants to be safe, if they understand better, we can have more positive response from them. Sometimes people in the slum have already been pushed to the wall and so if they resist it not because they don't want to cooperate. If you are going home and you do not have money to buy food, you can do everything you can to put food on the table. We need to have alternatives for example providing food which will make it easier for these communities to stay home, providing handwashing facilities and sanitizers through donors and NGOs. Congestion and social distancing may be more difficult because it calls for relocating them to a less congested place. The bigger issue is how we can improve the livelihood of such communities because even in the USA the Anglo-American countries are not able to have social distancing measures within their settings.

Response by Prof. David Serwadda - Social distancing has not been practical and feasible in Uganda. At a later stage, other factors are coming more in play and social distancing therefore is not something that is playing a huge part in COVID-19 prevention.

Question: How should we prepare markets and offices after the lockdown? What should we do?

Response by Dr. Elizabeth Ekirapa - It is all about all workplaces trying to see how best they can implement all COVID-19 preventive measures such as hand washing with soap, social distancing at work, and hand sanitizers. Institutions and organizations should as much as possible draw on the resources they have other than relying on the government. Government should ensure there is local production of sanitizers, masks, use of point of care tests and easily accessible medical centers for suspects of COVID-19

Question: COVID-19 transmission is mainly through the nose, mouth and eyes. Considering everyone as potential COVID-19 patients, as we get to the end of the lock down, would you recommend the use of masks and gloves?

Response by Prof. David Serwadda - The role of masks was undervalued in the West and may have been a major error in control of the epidemic. The data on effectiveness of masks is mainly in hospital settings, and it does prevent acquisition of airborne infections but there is no conclusive data on their use in the community. In SARS we didn't have asymptomatic spread but have it in COVID-19 and therefore masks are much more important. The more your prevalence of COVID-19 goes up the more your asymptotic population goes up. The older population who are susceptible due to asthma, diabetes and HIV require these masks. With a mask you may be able to reduce your susceptibility to get COVID-19, but there is no measure to what extent, therefore we need community-based research to figure out this extent. I therefore support the use of masks among susceptibility population and areas where COVID-19 is high (hot spots). To meet the need of masks for both health workers and communities we need to look into local factories that will produce masks so that we do not have stock out for our health workers.

Regarding gloves, COVID-19 is not spread through abrasions of the skin as you see in Ebola. If you have touched a contaminated surface with COVID-19, with or without gloves, once you touch your face, you will get infected. People with gloves can become complacent and forget to wash their hands. Gloves therefore are not so important for prevention of COVID-19 in community but these are very much needed for the health workers who deal with patients.

Question: Public health notification order requires clinical officers to make a report of cases. Within our context we should be able to compile systematically, out the recorded 54 cases we have got, what are the signs, characteristics, are they asymptotic? It helps us to know Uganda's stratification of the disease, what is severe, mild, what would require identification and isolation. Do we have any information on the clinical profile and stratification by risk factors?

Response by Prof. David Serwadda – I am quite sure that the information does exist. Having this data is important we could have a different clinical profile. In HIV, Africa had a different clinical profile. This different profile could be very important for our settings. It enables us to stratify and

learn how this disease progresses in our context for future preparedness and give guidance to our frontline health workers. We therefore need to have our health workers knowledgeable on the clinical profile and stratification.

Response by Prof. Rhoda Wanyenze - Doing a more detailed analysis for the 55 cases will provide lessons we need to learn to inform the clinical management and this data can help refine the health education messages. We have been using data from elsewhere but with this information we can improve the case definitions for surveillance and clinical management by clinicians. Some analysis has been done on these cases but there is now a need to disseminate this analysis in a wider manner.

Response by Dr. Elizabeth Ekirapa – among the first 33 cases, they majorly presented with cough and fever, loss of appetite and sore throat. There were more males (22) than females (11), mostly between 19 and 60 years; 2 people above 60 and their infections were mild and 7 were scheduled for discharge.

Question: Do we have any adverse effects for the recovered COVID-19 patients? Do we have any aftermath effects on the respiratory system?

Response by Prof. David Serwadda - There is full recovery for people who do not have underlining illness although there are some reinfections. The reports are from people who have been on respirators as they have difficulty to breathe on their own because of their weak muscles, also this group is fairly sick and has other comorbidity which factors come into play. But with Ebola, the people who recovered had a higher mortality pattern than the general population. We have not seen anything like that for COVID-19 but let's watch the space.

Question: The index case in South Sudan was quite intriguing the person had a history of travel a month ago. As for Uganda, what is your take on asymptomatic cases that are likely to sprout in the future?

Response by Prof. David Serwadda - Basing on the HIV epidemic experience. The HIV case definition evolved after the ELISA testing became available. Therefore, the case definition becomes tighter as the serology test revealed other symptoms that were not known. Therefore, there is need for screening tests. As serology tests become available you are able to pick up symptoms that you didn't identify. For the asymptotic, the serology test may help us to refine a case definition for COVID-19. It becomes a laboratory test from clinical test. However, history of travel is going to very important in the future when screening for COVID-19.

Question: So far Uganda has had mild cases in terms of clinical manifestations. Should we expect this to be the norm, should be we safe because they are mild or we get worried?

Response by Prof. David Serwadda – 54 is a small number. Majority of people especially in the young age group don't have severe symptoms. Given that the infections have affected few people in Uganda the graph is skewed, however if the denominator increases, we may see different results.

Question: The government is to put up field hospitals in each district. Can you comment on opportunities, should we be putting up field hospitals or strengthen our existing facilities?

Response by Dr. Elizabeth Ekirapa - Field hospitals will be useful to us in places where we do not have room for expansion and isolation especially if life goes back to business as normal. So, if we have a spike in cases, our facilities will be overwhelmed. You will find that the beds in these facilities are occupied most of the time and in case of an emergency, the space required could not be provided. Building field hospitals in each different district would be too much. Preferably we should build some field hospitals at the regional referral hospitals and in the hot spots like Kampala. However, it also presents an opportunity to strengthen the existing facilities in the 153 districts and expand these facilities. It also presents an opportunity to improve our services like ICU beds, which are 123 ICU beds with 16 of these in Kampala. This means if we had a widespread outbreak a lot of the regions would not be able to handle patients in need of intensive care services. This is an opportunity to strengthen surveillance, increase our testing facilities countrywide. An opportunity to increase local production of masks and ventilators.

Question. What should be the role of Makerere in the immediate aftermath of the outbreak?

Response by Prof. David Serwadda - The Dean did expound on what Makerere is doing. Many staff, alumni and students involved in this response. My call to action would be training of public health students in disease outbreak investigation, train more researchers, we need to have more disease outbreak training fellowships to increase preparedness for these epidemics, more training laboratory facilities. We also need research to address the many available research questions – there are a lot of research questions to which Makerere should be responding. Makerere Research and Innovation Fund had a meeting this morning by Zoom and all COVID -19 calls are to be reviewed as and when we get the proposals. We also agreed to divert all RIF funding towards answering the many questions on COVID-19 response. Release of money for other programs has been paused to support work around COVID-19 response.

Question: Why are recovered patients not subtracted from the cases?

Response by Prof. David Serwadda - We don't subtract individuals who have recovered. Cases are cumulative over a period of time.

Question: The Adjumani case had no history of travel. Are there cases that are asymptomatic in our community and they are continuing to spread COVID-19?

Response by Prof. David Serwadda – it is possible once you have had contact with an asymptomatic case that had a travel history even in-land travel. What is not very clear if you are truly infected and asymptomatic what is the percentage risk you pose to the community.

Response by Dr. Elizabeth Ekirapa - We have asymptotic cases in Uganda constituting about 50% of the cases.

Question: The messages out in the community are not addressing myths and yet there are people who think it is a punishment from God.

Repsonse by Prof. David Serwadda – There are also many myths about the disease and therefore the ministry has to come up to recalibrate their health education messages to control these myths. The media has also amplified these myths and therefore the government must look into it.

Question: Are there people who develop immunity from COVID_19 after recovery?

Response by Prof David Serwadda – some countries like Sweden and UK had gambled with herd immunity. Let some people get infected and herd immunity will sort of burn out the disease. There are immunization programs for Influenza that work on this principle. There is good evidence to suggest that once you are infected you may get a less strain or not affected. But for COVID-19 we have cases of reinfection. There are some cases however for re-infection but sometimes immunization does not work 100 %, instead it could result into mild symptoms on re-infection. A trial is however required to confirm this.

Question. In Italy and Netherlands they have some false negatives? Are we safe in Uganda?

Response by Prof. Rhoda Wanyenze -The PCR tests we are using in Uganda are German made and validated by WHO, they are the best available and are also being used in Europe. UVRI had suggested other test kits but they haven't been approved yet but there are some others being used in other countries. We are going to track and see what is going on in Uganda especially that the possibility of false negatives has been raised elsewhere. There is a lot of data coming in from virologists and immunologists and there are many other kits in the pipeline i.e. PCR and antibody tests. We are looking forward to having a seminar on diagnostics and how these can be enhanced in Uganda and invite the virologists and immunologists.

Question: Can we have the fellows in the next discussion and also the MPH alumni and officers who are involved in contact tracing.

Response by Prof. Rhoda Wanyenze (Dean, MakSPH): We are looking forward to having this forum as a platform for the COIVID-19, to strengthening the response with members from the National Task force and scientific advisory group. Fellows and MPH alumni who are at the frontline should be invited to enrich the discussion. This forum should contextualize COVID-19 so that people who know about Uganda and Africa can take lead in this response, it is depressing to see people who have been in Africa for a few months make decisions for Africa. We need more people who know Africa to strengthen the response so that we have a different narrative.

A lockdown is temporarily. It is like you are driving a car and you see an obstacle like a child crossing the road, and you suddenly brake because you have an epidemic that is huge, and people are dying and it hits you and you what to stop and find out a way forward, you strengthen your contact tracing, expand your surveillance, and prepare for care and look ahead and say how can I move forward. How well you look forward depends on the science you bring on board before you

accelerate again. Through research you can use this data to inform how you go forward. We hope to bring all stakeholders come on board i.e. laws and other economists and we strategize to defeat COVID-19.

Thank you very much to the panellists, Chair and attendees for such an engaging discussion.

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