COVID-19 and NTDs: Implications for Ascend West

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Introduction

The world has been assaulted by COVID-19. Unpredictable changes in all sectors of economies and societies will manifest themselves over the coming months with impacts as yet unpredicted and unpredictable. There is no evidence that any country has been adequately prepared for the COVID-19 pandemic, so precisely predicted by Bill Gates in 2015 in his TED talk following the Ebola outbreak. The most robust health systems have become overwhelmed in countries which spend a higher proportion (around 2-3 per cent) of the GDP on health/medical care (Germany, France and Italy) compared with the UK. The impact of COVID-19 will be long term, initially from an acute medical emergency response via attempted mitigation, through to a phase of chronic acceptance of the situation as cases fall from a peak. The real impact of the societal costs will outweigh the initial medical costs of interventions (or preparedness that should have been done) but have major long-term impacts on the most vulnerable in society. The consequential mental health morbidity will place a huge burden on already overstretched services. Domestic violence and social stress will increase because of an economy in recession – if not depression – with high levels of unemployment. The likelihood of increased unemployment, particularly of the younger urban male population, could be a tinder box for violence. However, the situation in Africa could unfold in a different way and should be seen through a different lens.

It can be anticipated that the immediate and long-term consequences for Africa will, perhaps, be even more profound than elsewhere given the fragility of health systems and the unlikelihood that social distancing can be possible particularly in larger conurbations, where more than 40% of Africans live, or that social messaging imperatives can be expected in rural settings. The longer-term consequences could be felt for decades. At the time of writing urban Africa is probably four to six weeks behind Europe and the United States but has some limited time to initiate adequate mitigation policies such as social distancing and lockdown to stem the spread of this most infective and contagious virus. Such harsh enforced measures in South Africa have at the time of writing seemingly capped numbers of cases, albeit for the time being.

A view of the African context

The current recommended policies to reduce transmission – isolation, lockdown and social distancing – will be difficult to apply and indeed practice in many African settings. In addition, with the obvious impact of HIV and TB in sub-Saharan Africa, the former as an infection with a capacity to immunosuppress and TB as a predominantly respiratory condition, there will be serious implications for those carrying either or often both conditions, while the capacity of the health system to maintain anti-retroviral drugs (ARV) supplies could be impaired by COVID-19 impact on the wider health system. However, it might be possible that those on ARVs might have some degree of protection against COVID-19. However, there will be differential impacts on HIV in different parts of Africa.

Many of the NTD infections also have the capacity to immunosuppress and hence the likely more severe clinical presentations in COVID-19 victims with “underlying health issues”. Diabetes and chronic heart disease are prevalent in urban areas. In rural areas the widespread indoor use of pollutant cooking from wood smoke leaves many at risk with impaired particulate-derived respiratory insufficiency. The limited surgical provision will be

overwhelmed by hospitalised patients occupying bed space; many patients in need of specialist care in rural settings will be unable to access any medical care. Immunisation programmes are likely to be disrupted and the longer-term results of this are unpredictable in younger children (measles could potentially be resurgent). As in developed countries, medical/health staff will be at higher risk, therefore depleting already limited human resources.

The concept of true self-isolation in many African settings to reduce spread will not be possible. While behaviour change is notoriously difficult to message and implement, the need for rapidly disseminated and socially acceptable messaging needs to be developed as a matter of urgency. The use of m-Health dissemination of messaging and communication of cases (testing cannot be implemented in time) is required. An antibody (Ab) test might will be an essential tool downstream to determine the true exposure of individuals and populations. Such tests are coming on-stream but it is essential that the sensitivity and specificity of each is evaluated. The affordability of an Ab test, when available, given the huge demand from Western countries, will be less accessible by low- and middle-income countries, due to inability to pay.

A further downstream impact for the NTD pharmaceutical donors might be their ability to maintain drug manufacture at current levels given the complexity of supply chain of active ingredients for drug manufacture as well as the impact on production workforces in factories needing to divert resources to other potential COVID-19-related essential medicines.

The overall picture and impact on the already fragile African health systems, together with the longer-term implications for NTD elimination and control, will be unclear for many months, perhaps even years, but it is appropriate to envisage and plan for various scenarios. Many partners and actors in the NTD space will be impacted by COVID-19 in terms of their operational activities. Research organisations and institutions are temporarily closed and unable to undertake project funded work for at least several months; field studies and drug distribution is suspended; travel has been stopped or extremely limited; pharmaceutical company priorities have been reappraised; national governments, already short of health resources, will be overwhelmed by demand; political instability because of on public unrest is a possibility; and food insecurity will increase, dependent on COVID-19's impact on rural populations in Africa. West Africa, for example, is approaching the rainy season and planting will be possible before any large-scale impact on agricultural activity; however, the effect on the harvest three months from April might be potentially serious if COVID-19 becomes established in remoter communities.

In late March, the END fund circulated information on the impact even at this early stage of the pandemic on programmes:

> "In many countries, schools – a common delivery platform for mass drug administration programmes we support – have closed to try to mitigate the spread of the virus. In many places, surveys, surgeries, treatment campaigns, trainings and key meetings have been delayed. Regardless of any local challenges, we are supporting our partners to follow effective government and WHO guidelines, and we will adapt to best support our partners during these challenging times."

Ascend and COVID-19

Ascend West works in 13 West and Central African countries: Benin, Burkina Faso, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of Congo, Ghana, Guinea, Guinea-Bissau, Liberia, Niger, Nigeria and Sierra Leone. It is appropriate to consider categorising these countries in considering the COVID-19 context. The infection will have a different impact given their different geographies, economic situations, population size, and health systems. Some countries have NTD programmes with a long history of success to date, while others can be categorised into those most at risk of COVID-19 impact given their relatively weak health systems, limited capacity, difficulties of access or insecurity and fragile governance.

A collapsed health system will have potentially catastrophic consequences for the short to medium term on all health activities while economic stagnation and recession will make the poor even poorer as economies collapse. While it is prudent to plan for the worst-case scenario, the climatic factors may be relevant if COVID-19 is less likely to survive high temperatures on surfaces. However, given that in West Africa the wet season is approaching this hope may not be justified. Further to this, around 40% of the total population live in urban or peri-urban settings where social distancing and good hygiene is either physically impossible or extremely difficult, the former not being compatible with local cultures.

In urban areas there is a significant proportion of individuals with chronic heart diseases and diabetes as a result of the demographic changes in recent years, with a higher level of vulnerability in older adults. However, the overall clinical impact may be less given the high proportion of the population being younger than in Western societies.

Whereas traditionally in emergencies countries have appealed for UN, bilateral or charitable sector support, it is likely because of the Global nature of the crisis that these traditional sources will not have the liquidity to support low- and middle-income countries due to their own needs to provide social and economic support to their populations. The economic impact for countries heavily dependent on traditional financing through loans will be serious, as their inability to repay interest could result in defaulting on debt and their economies falling into recession. Recently, the IMF has granted debt relief to several Ascend countries for six months: Burkina Faso, Central African Republic, Chad, Democratic Republic of Congo, Guinea, Guinea-Bissau, Liberia, Niger and Sierra Leone. This will provide at least some immediate financial breathing space for the short term.

On the downside, for the health sector, the decision by US president Donald Trump to suspend support for WHO will have potentially serious consequences for Africa with the WHO regional office and country offices emasculated. Countries depend on technical advice, leadership and support – both technical and financial – which might be impacted downstream. The USAID support for Expanded Special Project to End NTDs (ESPEN) could also be withdrawn.

Ascend country categorisation-one size doesn't fit all: a regional impact assessment

High-population countries

Côte d'Ivoire, Ghana and Nigeria

With large and high-density populations in large coastal cities/mega cities and with relatively strong health systems, these countries have some comparative advantage in terms of human resource capacity. However, traditionally there is a huge amount of in-country travel and migration (rural-urban-rural, particularly with the coming planting season) often in crowded vehicles and with extensive road transport networks, which suggests the virus will spread fast to all areas perhaps generated by a panic to return home.

In Ghana all universities are closed. The Ghana Health Service provides regular updates on its website **ghanahealthservice.org/COVID19/**. The President of Nigeria issued a presidential directive on 30 March "locking down" Lagos, Ogun State and Abuja (FCT). Lagos Port remains open but for how long this and other crucial West African coastal ports can effectively operate must be a consideration. **COVID19.ncdc.gov.ng/resource/COVID-19_REGULATIONS_2020_20200330214102.pdf**

However, the rapid actions in Ghana and Nigeria with attempts at contact tracing may mitigate impact at least in the short term.

Clearly even in the more developed economies, there will be a significant impact on the local economies. With the falling oil price, Nigeria in particular will lose significant revenue, which may take years to recover from if the projected global recession bites post-COVID-19 and oil prices remain at low levels during a long global economic recession, which seems inevitable.

Côte d'Ivoire, which has around 200 cases (all derived from a single case who returned from Italy), has suspended road transport from Abidjan except for essential supplies. In Ghana and Côte d'Ivoire there could be potential impact on coffee and cocoa production with resultant decline in economic revenues and foreign exchange earnings.

Post-conflict/Ebola countries

Liberia, Sierra Leone, Guinea

These post-conflict Ebola countries (except Guinea) shared the impact of Ebola and might be best equipped to deal with an emergency response given their recent experience and human health resources who have skills for dealing with 'critical care' of Ebola cases with high infectivity and the understanding the personal protection equipment (PPE) requirements. Whether the needed resources and latent capacity could be mobilised in time is not known. Sightsavers country offices can advise, but the necessary MOH and WHO country coordination will be necessary. Liberia and Sierra Leone, in different ways, have made good progress in addressing NTDs post conflict and published impact reports on the success in Sierra Leone of the NTD programme. Significant data on the health system was published by Pose in a report from the Overseas Development Institute in 2014 pre-Ebola. A Pdf can be forwarded and is available on ODI website.

Benin, Burkina Faso, and Niger

Two landlocked Sahelian countries have had longstanding NTD programmes supported by SCI and Liverpool since 2001 and several NGDOs. There is experienced local capacity on NTDs in Niger and Burkina Faso but both are confronted with problems of insecurity as jihadist groups are presenting the government with serious problems, particularly in Burkina Faso. Political stability is fragile and COVID-19 could be a further tipping point for these countries preventing any future growth in the foreseeable future.

The impact of climate change and drought will be even more pervasive in the Sahel, similar to the conflict between pastoralists and sedentary farming communities in northern Nigeria. Imports will be curtailed, with the likely problems coming from the coastal ports bringing supplies hundreds of kilometres to major inland centres, in particular oil.

There are also refugees from Mali and internally displaced camps in Burkina Faso, created in response to several years of jihadist activities. It is possible that these extremist groups will further destabilise these countries' governments by exploiting the COVID-19. Such camps in the Sahel have the least chance of COVID-19 mitigation, given the crowded nature of such environments, existing pressure on medical services, limited and far from adequate sanitation/washing facilities, as is predicted in the Middle East (Syria, Lebanon andTurkey). There are currently over 700,000 internally displaced persons in Burkina Faso: see **reliefweb.int/report/burkina-faso/burkina-faso-conflict-COVID-19-echo-daily-flash-30-march-2020** for latest update.

The number of confirmed cases of COVID-19 in Burkina is 207. Among those, two cases were reported in the Centre North region, which hosts 50% of the internally displaced persons camps. The country is seeking to address this crisis and humanitarian organisations responding to the displacement crisis are adapting their operations in attempts to slow down the spread of the virus.

By definition, these settings have no provision for coping with another 'super emergency' – an emergency already existed pre-COVID-19. Food and medical supplies to such camps will be reduced and/or stopped. The supply chain from the coast will be disrupted and food security compromised particularly over the coming months with potential price rises further impoverishing the poor.

CAR, Chad and DRC

These countries will pose the biggest challenge. Effectively landlocked, with weak health systems, populations are difficult to access and are already behind the NTD curve for different reasons. There is limited human capacity and insecurity prevails in many parts of CAR and DRC. Currently Chad has isolated groups of infected individuals in two provinces following movement of Chadians from Cameroon, which had over 200 reported cases as of 2 April. Ebola is still smouldering in eastern DRC-Ituri and Nord-Kivu.

Guinea-Bissau

The country has a small population, weak health system severely limited human resources. It is difficult to categorise in terms of common response and it is dependent on country office to provide a perspective. At present, Guinea-Bissau has only a handful of COVID-19 cases.

WHO interim guidelines for NTD programmes

WHO recently released this statement:

www.who.int/neglected_diseases/news/COVID19-WHO-interim-guidance-implementation-NTD-programmes/en/

> "The COVID-19 pandemic has prompted almost every country to implement unprecedented public health measures. WHO continues to provide guidance to Member States to assist them to respond quickly and confidently to this emergency. A range of public health measures are being implemented that include hand hygiene, respiratory etiquette, and practicing physical distancing.
>
> Consistent with these public health measures, particularly physical distancing, **WHO recommends that community-based surveys, active case-finding activities and mass treatment campaigns for neglected tropical diseases be postponed until further notice.**
>
> However, support for (1) prompt diagnosis, treatment and care of neglected tropical diseases for patients presenting to healthcare facilities, and (2) essential vector control measures, should continue wherever possible, as these are critical interventions.
>
> WHO also encourages local health authorities **to use existing NTD platforms, surveillance mechanisms and WASH/health education opportunities to support implementation of COVID-19-related measures, as appropriate.**
>
> WHO is in the process of producing more detailed guidance, which will be shared in due course. Recommendations will be updated on a regular basis to reflect the evolution of the pandemic."

Adapt expertise to be an effective response (Flexing)

Countries will follow these WHO guidelines and hence NTD MDA-related activities in all countries that Sightsavers supports will be suspended allowing redeployment of formal ministry of health-employed health staff to focus on COVID-19 mitigation and response. However, NTD programmes, perhaps uniquely, have relied on the periphery on volunteer CDDs and many thousands have been trained since the mid 1990s. While there is naturally some attrition in CDDs, those with past experience could be recruited back to assist in messaging and community response to COVID-19. This is a significant, and possibly unique, cadre of human resource at the periphery of the health system and beyond who have the confidence of their local communities and their rapid mobilisation. If provided with essential COVID-19 information, they could be a strong mitigating factor, particularly in rural areas which could be eight to 10 weeks behind the curve.

The key question here, as an example of adapting/flexing expertise, is: can the information be created, socially and culturally nuanced to the huge numbers who need it and then rapidly disseminated to the periphery? Can whatever materials that are needed be produced on

time (printing resources in a lockdown situation) and who will pay? There will be a need in this context to assess the reach of communication systems and cell phone usage. Mobilisation of the volunteer group will be essential if formal health staff are out of service due to COVID-19, therefore Sightsavers' cell phone network has a key role to play here.

The huge CDD network established by Sightsavers (as well as other NGDOs), given their access to mobile/smart phones, can be utilised rapidly and effectively to assist in surveillance to plot the expected dissemination of COVID-19. This is an example of how the existing NTD volunteer system can be deployed within days so rural areas in particular are ahead of the curve and can initiate mitigation if feasible.

A further consideration for near-term planning will be to maintain relations with national authorities that are overwhelmed by the need for crisis management, where resources are already at the limit, and many health systems that are dependent on external financing. Sightsavers has built the requisite good and trusted relations with national health ministerial staff, but such staff are likely to be redeployed to address the pandemic. Any staff attrition, for whatever reason, will impact on re-establishment of relations with new staff following the acute COIVD-19 emergency.

In contrast, in the case of Ebola, although there was a slow response from WHO at national level, the scale was manifested by the high case fatality rate, and because it posed a threat to Western societies, sufficient emergency funding was made available and support was mobilised from many sources. This will be much less likely to happen with COVID-19 given the global impact of the virus and the likely needs for every country in Africa (and globally). Traditional donors will be unable to provide support. Hence the need for 'flexing' in the context of DFID commitment to NTD programmes. Human resources and expertise are in place to fill what can be predicted to be a significant vacuum.

Mitigate impact via Ascend

Mitigation in the African setting is anticipated to be more difficult. Immediate response in the context of our programming should be to suspend all surgeries, in particular trichiasis surgery, as the surgeon/specialist nurse will be in close contact with the upper airways, with high consequent risk. Hydrocele surgery, although less risky, will involve anaesthesia, placing the anaesthetist at risk. Adequate personal protection equipment (PPE), if affordable given the global shortage, cannot be expected to be available within the programme countries to effectively mitigate transmission given the global demand, at least in the short term. For this reason, any procedures should be suspended. However, given the Ebola outbreak, it will be worth exploring the availability of PPE in Liberia, Sierra Leone and Guinea, which can be resurrected and modified if feasible via WHO guidelines.

A concern which might need consideration downstream is that trichiasis and cataract surgeries and anaesthesia for hydrocele, which involve close contact with patients, could be compromised in the long term. This is because the extent of presence of asymptomatic carriage in the population is as yet unknown. If an antibody test becomes available, it might be prudent to consider, at least initially, expecting a positive test before any close contact intervention to protect those staff in close contact with patients.

Sightsavers also works on the inclusion of people with disabilities in development programmes. There is an increasing recognition that COVID-19 has specific impacts on this population group, both through lack of access or even denial of access to health services and also through social distancing, undermining the critical support services they require to secure even their basic needs and to benefit equally from COVID-19-focused programmes. Sightsavers will be working with others to highlight these problems and urges governments to incorporate these issues within their COVID-19 response planning, including the specific needs of personal assistants.

Hand hygiene and the requisite WASH approaches are a significant component of any NTD programme and needs reinforcing, and this could be an ideal opportunity to maximise impact of this strategy for NTD transmission control. However, the costs and provision of soap will be a potential problem and, as elsewhere, cleansing materials will be at a premium. The expansion of the WASH messaging provides an opportunity for the WASH and BCC approaches (with an added impact on diarrhoeal diseases). Perhaps programmes can engage with the soap manufacturers (as the LF programme did in Ghana many years ago) either to provide free soap (unlikely) or at a reduced price. The wider use and availability of soap would also increase the limb washing regimens for those with lymphodoema. Given the dominance of Unilever, particularly in Nigeria and Ghana and possibly other African countries, Sightsavers' contacts with the company could be explored, although Unilever operates in those countries as independent entities.

In addition, the inability to maintain community and school-based MDA distribution will be compromised as the potential impact on the human resource base could be profound. There is a likelihood of attrition of school teachers with potential exposure to many children who may have not practised social distancing and hand hygiene.

Elimination targets

The acceptance by the executive board of WHO of the new road map and the expected endorsement by the World Health Assembly in May (presumably postponed or cancelled or conducted virtually), and the presentation of it in Kigali in July, can expected to be placed on hold. However, at this stage it is difficult to anticipate the potential impact of COVID-19 on the aspirations of the road map. WHO/NTDs has planned regular appraisal of progress but the immediate impact will certainly, as per WHO advice, place MDA activities on hold with downstream impact on targets, and potentially creating a window when transmission of infections will increase. This might be mitigated by increased impact of social messaging re: WASH and BCC, if implemented and sustained over the COVID-19 acute phase. These are all factors which, if implemented, will impact on transmission even without MDA in particular for trachoma, lymphatic filariasis and soil-transmitted helminths.

There is, therefore, a need to have regular reappraisals of the impact on Sightsavers programmes where elimination targets have been defined on a country-by-country basis dependent on the impacts discussed above. The time frame for these assessments will only become clear over the coming months and possibly only at the end of the year. Aspirations for elimination as an endpoint may have to be reassessed when the many factors in play are better understood and can be evaluated.

Conclusion

The situation is evolving daily. We are looking at a moving target and one which will not subside in the near term. We will need to adapt to a “new normal”. However, as always, the poorest countries and communities are likely to be the ones least able to cope. The NTD project has an opportunity to react and provide countries with support within the framework of adapting its approaches in ways which assist the response to COVID-19 in some practical ways outlined in this paper, as well as emphasising the wider value of interventions beyond MDA and the existence of a huge volunteer resource. It must be remembered that the CDDs more than 20 years ago demonstrated their flexibility to embrace other health interventions for the communities beyond the end of the road such as Vitamin A distribution, bed nets and family planning.

The strength of the Sightsavers country teams, with UK-based support from HQ, provides the organisation with a comparative advantage. Sightsavers enjoys the confidence DFID has in its capacity to deliver, the outreach capacity to rural communities, its experience in training staff and volunteers at all levels provides an opportunity to impact on COVID-19 mitigation and response through its diverse skills, expertise and repute. Adaptation of roles, flexibility and evolution of approaches based on lessons learned on an ongoing basis will be key, as well as the capacity of senior management to provide focused leadership.

The key points/recommendations of the “think piece” regarding the position are:

- Immediately utilise mobile cell phone technology at the peripheral to act as a COVID-19 surveillance system for national authorities

  Stress value of the CDD volunteer network as an untapped and available resource

- Ramp up the WASH messaging as a part of the country response to send COVID-19 messages re hand washing/hygiene which is integral to NTDs; explore soap donations via local actors and producers

- Assess the risks in short term and longer term to surgery to staff in close contact with patients and ensure downstream availability of necessary PPE and assess feasibility of Ab testing

- Reassess elimination targets within national plans for NTDs

- Recognise that within Ascend countries the impact and capacity will be different

- Explore the latent capacity for critical care support in post-Ebola countries and PPE availability

- Seek to utilise the potential of antibody testing for staff and wider groups to assess the post-acute phase spread, thus evaluating risk to future activities.

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