

NTD activities in Africa in the COVID-19 era: the need for a ‘hybrid’ approach in COVID-endemic times

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Executive summary

With the COVID-19 pandemic showing no signs of abating, resuming neglected tropical disease (NTD) activities, particularly mass drug administration (MDA), is vital. Not restarting them will not only enhance the risk of NTD transmission, but will fail to leverage behaviour change messaging on the importance of hand and face washing and improved sanitation – a common strategy for several NTDs that also reduces the risk of COVID-19 spread. This so-called ‘hybrid approach’ will deliver medicines to the poorest as well as provide support to mitigate against the transmission of the SARS-CoV-2 virus through water, sanitation and hygiene (WASH) interventions.

We believe that unless MDA and morbidity management activities resume, achievement of NTD targets as projected in the new WHO Roadmap (2020-2030) will be deferred, the aspirational goal of NTD programmes to enhance universal health coverage (UHC) jeopardised and the call to ‘leave no one behind’ a hollow one. Hence, we outline what implementing this approach, which aims to strengthen health systems, and facilitate integration and cross-sector collaboration, will look in the short, medium and long term.

We have described the world as being “assaulted by COVID” (Molyneux et al, 2020)¹. The term ‘post-COVID-19’ has been used to provide assurance the assault will end, the impact will be temporary, and a post COVID-19 world will emerge. It is now clear that COVID-19 is endemic globally and that the desired world will not emerge in the foreseeable future.

In the absence of a vaccine as effective as smallpox or polio, we will need to learn to live with the virus. At the time of writing, Europe is experiencing a ‘second spike or surge’ of infection with similar resurgence patterns in many countries, albeit on different scales. While the situation in some countries, like India is of increasing concern, in the African continent COVID-19 appears to be less of a public health risk than feared.

While we are hopeful that recent trends in Africa continue to stabilise or decline, global models have underlined the potential and disproportionate health impact of COVID-19 on low and middle income (LMIC) countries (Walker et al, 2020)². The longer-term economic implications for Africa have also been analysed in a United Nations Conference on Trade and Development (UNCTAD) report (2020)³, which predicts a reduction of 1.4 per cent of gross domestic product (GDP), with smaller economies being more severely impacted:

“Mainly a result of export adjustments affecting primary commodity exporters, and the attendant losses to tax revenue which reduce the capacity of government to extend public services necessary to respond to the crisis. Overall, this paper estimates a regional average of about 5 per cent in public revenue losses in Africa, with total merchandise exports contracting by about 17 per cent.”

Clearly, social consequences because of recessionary forces have the potential to adversely affect the most vulnerable. The concept of NTDs was developed because of the low level of

¹ Molyneux DH, Aboe A, Isiyaku S, Bush S. COVID-19 and neglected tropical diseases in Africa: impacts, interactions, consequences. *Int Health*. 2020;12(5):367–72.

² Walker et al., June, 2020 DOI: 10.1126/science.abc0035
(<https://science.sciencemag.org/content/early/2020/06/11/science.abc0035>)

³ (https://unctad.org/en/PublicationsLibrary/aldcmisc2020d3_en.pdf)

resource provided for conditions which disproportionately affect the ‘bottom billion’, given only 0.6 per cent of Official Development Assistance was devoted to interventions addressing these conditions, estimated to be afflicting up to two billion people (Hotez et al, 2009; Liese and Schubert, 2009)⁴⁵. As it has been predicted that COVID-19 will enhance global inequity particularly in LMICs, it is essential that NTD programmes, embedded in the poorest communities with recognised success over the past decade, remain on the health and development agenda given their key role in the Sustainable Development Goals (Bangert et al, 2017)⁶.

SARS-CoV-2, Africa and COVID-19

The speed of viral spread across the globe suggests the fundamental biological characteristics of SARS-CoV-2 are the same everywhere. It is biologically unlikely that in Africa SARS-CoV-2 has or will change its characteristics of infectivity, modes of transmission, or spectrum of clinical presentations – from asymptomatic at one extreme through to serious, life threatening and fatal outcomes on the other.

The true prevalence of COVID-19 globally is likely to be much higher than published data, as reported by the analysis of several models (Giattino, 2020)⁷. Given the varied quality of surveillance, the extent and effectiveness of testing as well as the cause of death and the paucity death reporting, particularly in rural settings, the true situation is not known despite the suggestion that to date, COVID-19 has not impacted on Africa as might have been expected. Hence, we can say that the virus is now endemic and COVID-19 mitigation strategies will therefore become the new normal for all public health programmes, including NTD programmes. Daily new global confirmed cases are around 300,000, with India and the USA representing most of the new cases, followed by Brazil, Mexico and other South American countries but significant spikes are being detected throughout Europe with further “lockdowns” being considered (Johns Hopkins Coronavirus Resource Center- providing real time updates)⁸.

While confidence in case reporting remains a concern, a plausible explanation for why Africa has apparently seen a greater success in slowing the spread of the virus is due to a greater adherence to the recommended preventative practices. An example of this is shown in the **Ascend** programme, where MC Saatchi and relevant health governments have created appropriate country and sub-national specific health messaging through billboards, radio and TV slots in 11 countries.

There are also fewer super-spreader events documented. These events are often fuelled by increased travel during holiday periods and crowding in indoor settings like bars, restaurants, and indoor stadiums. Africa also has a much larger rural community than other countries – an advantage as most cases and local transmission have been primarily confined to urban areas.

⁴ Rescuing the bottom billion through control of neglected tropical diseases, *Lancet* 2009; 373: 1570–75

⁵ Official Development Assistance for health-how neglected are neglected tropical diseases? An analysis of health financing. *Int. Health*, 1, 141-147

⁶ The cross-cutting contribution of the end of neglected tropical diseases to the sustainable development goals. *Infectious Dis of Poverty*, 6:73 DOI 10.1186/s40249-017-0288-0

⁷ How epidemiological models of COVID-19 help us estimate the true number of infections <https://ourworldindata.org/covid-models>

⁸ <https://coronavirus.jhu.edu/data/new-cases> accessed 26th October 2020

However, the ability of national governments to retain high levels of ‘enforcement’/lockdown has probably reached a limit in terms of social acceptability given the economic impact. Governments across the globe are being pressed to ease the critical and necessary public health restrictions associated with lockdown primarily for economic and social reasons, in fear of greater economic damage but also because of potential social unrest as is currently occurring in Lagos, Nigeria.

NTD activities

Given this is a pandemic, the response to it must be global. Countries should be learning from the experiences of others. Much is often made of what LMIC can learn from health services and systems in high income countries but the response to the pandemic is an opportunity to re-address this flow of experience. Africa has well developed community health programmes that deliver to scale while engaging with their communities. As outlined above, NTD programmes have utilised the health messaging and behaviour change work that formed part of their portfolio to develop clear COVID-19 messaging. Nigel Crisp highlights, for example, that we should deal with health in rich and poor countries in the same way, not treating them as totally different, and suggests that instead of talking about international development we should talk about co-development where learning goes both ways; he adds community health programmes in Africa developed a community-based and directed approach to the treatment of NTDs – the principles of which are relevant to any health setting (Crisp, 2010)⁹.

Indeed, the protracted suspension of NTD activities, particularly MDA, will not only have a detrimental impact by enhancing the risk of NTD transmission, but will fail to leverage behaviour change messaging on the importance of hand and face washing and improved sanitation – a common strategy for several NTDs that also reduces the risk of COVID-19 spread (Molyneux et al. 2020; WHO,2019)¹⁰. It also misses the opportunity for NTD programmes to mitigate the spread of the virus amongst health workers, while building resilience in responding to future emerging infectious diseases and to alleviate possible secondary health impacts thwarting progress to UHC.

School-based NTD delivery programmes form an important part of NTD distribution strategies. While school openings have been staged over time in response to reduced COVID-19 risk, the large gathering of students and teachers increases the risk of transmission and enhances wider virus dissemination. If a policy decision has been made by national authorities to open schools it would seem logical for those involved with NTD MDA that distributing treatments in schools via social distancing methods can also reinforce COVID-19 prevention messages while house-to-house community distribution ensures children withheld from school are covered as well.

We consider that the full resumption of NTD interventions will not increase the risk of spreading SARS-CoV-2 given the use by government of risk assessment tools to recognise and mitigate risk using agreed standard operating procedures (SOPs), particularly when governments have made the decision to ease lockdown constraints, open schools, resume

⁹ Crisp N: Turning the World Upside Down – the search for global health in the 21st century; CRC Press, 2010

¹⁰ https://www.who.int/water_sanitation_health/publications/wash-health-toolkit/en/

other health services, allow movement via transport, and permit mass gatherings to take place.

Given the mitigation strategies being proposed by national NTD programmes as precautionary measures (e.g. facial covering for all community drug distributors, intensified handwashing practices, maintenance of physical distancing practices, etc.), the commencement of NTD programmes will have minimal risk in spreading the virus. The NTD platforms provide the opportunity to actively reinforce COVID-19 prevention practices via community distributors who have the influence and respect of their communities often distant from formal health facilities (Dissak-Delon et al 2017)¹¹. The continued suspension of MDA is not logical against this background. The NTD Modelling Consortium has projected the impact of suspension of MDA on transmission and the consequential delay in achieving the targets set in the new WHO Roadmap. The results indicate that interruption of MDA activities will have varying impacts on established targets depending on the duration of any treatment delays, the specific disease targeted, initial baseline prevalence and the history of effective MDA, in particular, coverage.

Looking forwards – a tentative time horizon

Next months (October to December 2020)

In the short term, unless MDA and morbidity management activities resume, achievement of NTD targets as projected in the new WHO Roadmap (2021-2030) will be deferred, the aspirational goal of NTD programmes to enhance UHC will be jeopardised, essential medicines will not be delivered to the poorest and 'leave no one behind' will become a hollow call. Any significant delay may require additional rounds of MDA or the consideration of twice-yearly MDA which will involve significant cost increases. Resumption of MDA with the necessary risk assessment process in place is showing that an important health intervention can be restarted at limited risk, and with potentially huge benefits.

Failing to complete MDA will deprive populations of essential drugs and, ironically, leaving them further behind! Sightsavers, as a key player in the NTD sphere, and prominent in the Accelerate and Ascend West and Central programmes, has already published documents on the COVID-19/NTD scenarios (Sightsavers, 2020)¹².

Sightsavers has also collaborated widely to develop Risk Assessment and Mitigation Action (RAMA) tools for national NTD programme managers and partner/donor representatives to assess together the specific risk of COVID-19 on the delivery of NTD treatments and to determine the overall risk of spreading the virus with specific mitigation measures in place.

With the RAMA tools we have shown the COVID-19 crisis need not allow the major health issues that confront poor and vulnerable populations to be forgotten. Indeed, the resilience of health interventions, exemplified by NTD projects, to manage and implement integrated disease control responses should be the model for progress. We, therefore, show a reassessment of the status of NTD activities to ensure that within the limits of practicable

¹¹ Adherence to ivermectin is more associated with perceptions of community directed treatment with ivermectin organization than with oncherciasis beliefs. PLoS Negl Trop Dis. 2017 Aug; 11(8): e0005849.

¹² <https://www.sightsavers.org/news/2020/06/water-sanitation-hygiene-strategies-tackling-covid-19/>.

safe approaches, activities can be reinstated. For example, in rural settings where MDA for NTDs has been a critical driver of success through strong community engagement, providing access ‘beyond the end of the road’ to many millions distant from formal health services. NTD/MDA and seasonal malaria chemotherapy (SMC) and immunisation programmes can work together to ensure the most vulnerable are not deprived of access to life-saving interventions.

The resumption of these activities will have a dramatic impact, in particular, for SMC and children’s immunisation, decreasing risk of mortality in a group less vulnerable to the impact of COVID-19 and calm any knock-on effect to the current public health crisis. However, there will be increased costs associated with the resumption of MDA as well as increased costs of safer surgery to reduce COVID-19 risks. These are currently estimated to be of the order of 30 per cent – a cost that must be weighed against the benefits derived for those currently with vision impairment, stigma and disablement. The risk of epidemic measles outbreaks can be predicted if immunisation programmes are not speedily resumed with high mortality ensuing; outbreaks in several African countries with significant mortality were reported in late 2019 (WHO,2019)¹³. As we have already stressed, implementation of MDA by communities via community-directed distributors (CDDs) can be a platform for COVID-19 mitigation messaging while providing populations access to free medicines included on the WHO Essential Medicines List. CDDs have historically had a high proportion of women acting as MDA distributors, empowered by their own communities (Katabawa et al 2002)¹⁴.

Reassessment of country situations will be an ongoing process as COVID-19 continues to have an impact on Africa. The virus is now endemic, and governments will need to adapt and balance public health priorities with social, political and economic impacts. Suspending health programmes will have a greater detrimental impact on health than COVID-19 in the long term, particularly on children. Implementation of NTD and other programmes with their extensive community reach and engagement with vulnerable populations is compatible with COVID-19 control as articulated in previous Sightsavers documents (Sightsavers, 2020)¹⁵.

Programmes must learn to adapt strategies to COVID-19 and plan for the medium to long term. Sightsavers and partners will continue to articulate that MDA suspension blocks an opportunity for the delivery of major interventions relevant to the achievement of UHC – the distribution of essential medicines – which when managed safely can benefit and mitigate COVID-19 impact. This applies, particularly, to the most vulnerable individuals. Preventing access to surgery to address disabling conditions (e.g. trichiasis and hydrocele surgery) prevent the opportunity for the resumption of productive lives.

Six to 12 months

Countries and the global health community will have better appreciation of the real impact of COVID-19 on different regions, communities (urban, peri-urban, rural, migratory populations) and geographies of Africa and of the impact on the spread of the virus post any lockdowns. The impact of any reduction in immunisation programme coverage will become evident with potential increases in measles cases; similarly, it will be important to evaluate any change in malaria cases and under-five mortality. Greater coordination and cooperation between NTD

¹³ https://www.who.int/csr/don/26-november-2019-measles-global_situation/en/

¹⁴ Involvement and performance of women in community-directed treatment with ivermectin for onchocerciasis control in Rukungiri District, Uganda. Health Soc Care Community. 2002 Sep;10(5):382-93. doi: 10.1046/j.1365-2524.2002.00378.x.

¹⁵ <https://www.sightsavers.org/news/2020/06/water-sanitation-hygiene-strategies-tackling-covid-19/> and <https://www.sightsavers.org/programmes/ascend/>

and other programmes could be a positive impact of COVID-19 on the health system itself. The broader impact on the human resources of the health systems will also be evident and where the critical capacity is needed. 'Hotspot' countries and localities within countries at the highest risk will have been identified where specific mitigation measures might be necessary following any suspension of MDA. (Toor et al, 2020)¹⁶.

12 months and beyond

It is likely that the acute impact of COVID-19 will have passed but that the impact of political decisions will be clear and the new normal of a new endemic virus – the 'chronic COVID-19 pandemic' recognised. Given the fragility of many African health systems and the human resource and knowledge constraints, planning a way forward will be necessary. The NTD community has already built a strong foundation of skilled personnel within countries who can show the necessary leadership qualities to address this new environment. Such leaders can assert that failing to deliver interventions that address the needs of the poorest is contrary to human rights law, is unethical, and fails to recognise their benefits in COVID-19 mitigation. The NTD community reach and the 'beyond MDA' supplementary interventions (hand/face washing/limb care, sanitation) are powerful COVID-19 mitigating factors readily applicable and presently receiving donor support.

Summary

What we do not know

- The true case numbers of COVID-19 in Africa and the excess deaths associated with COVID-19. Given the variable quality of surveillance, the extent and effectiveness of testing as well as the cause of death and the paucity death reporting, particularly in rural settings, the true situation is not known despite the suggestion that to date, COVID-19 has not impacted on Africa as might have been expected
- How rapidly COVID-19 will spread given the different national responses to easing lockdown and in different African eco-geographies – one size is unlikely fit all scenarios
- What impact the focus of health authorities on COVID-19 will have on those most vulnerable in Africa, particularly children under five years of age (U5) if programmes are suspended or delayed with potential increases in U5 mortality. Polio eradication activities, malaria chemotherapy programmes, immunisation programmes and NTD programmes demand an equal case for speedy resumption of activities
- If there will be a different impact given median age of African population (circa 19) being lower than in Europe (45); for example: will there be higher proportion of asymptomatic carriers compared with Europe?

¹⁶ Predicted Impact of COVID-19 on Neglected Tropical Disease Programs and the Opportunity for Innovation Clin Infect Dis. 2020 Sep 28;ciaa933. doi: 10.1093/cid/ciaa933. Online ahead of print.

- Will the different ‘underlying health conditions’ in Africa compared with more developed societies, have a different clinical impact on COVID-19 patients given the potentially high level of undiagnosed diabetes and hypertension in urban areas?
- Are people with disabilities – people with visual impairments, hearing impairments, physical disabilities, and mental health conditions – being considered within the COVID-19 response?

None of these unknowns preclude the known benefits of resuming safety assured NTD activities. The benefits of delivering donated essential medicines to the poorest outweigh the risks given the hybrid benefits to the elimination and control of NTDs on the one hand, and mitigation against the COVID-19 chronic pandemic on the other given the commonalities of impact on transmission WASH associated interventions and behaviours.

The knowns

- COVID-19 will behave biologically in the same way in Africa as elsewhere around the world in terms of infectivity and modes of transmission; MDA activities can resume as soon as possible with the requisite safety measures in place for distributors and communities following risk assessment. We will follow various mitigating measures, including WHO guidance that at least one metre social distancing is recommended, although national policies may recommend two metres
- There will be increased costs to deliver MDAs safely as well as to carry out surgeries. More time will be needed so resources may need to be redeployed
- NTD programmes address the most vulnerable, disadvantaged and those with disabilities-the so called ‘bottom billion’. MDA prevents chronic disabilities as well as providing other synergistic health benefits; hence, resumption of activities is a health as well as a development pre-requisite in the broader context of the sustainable development goals (SDGs)
- Where many traditional systems are distance-based, NTD programmes reach beyond the ‘end of the road’ via community-based volunteer personnel with a proven track record of delivery – resources all of which can be harnessed now
- NTD MDA in the COVID-19 era will provide an opportunity to enhance efficiencies through better inter-programme coordination. Particularly with malaria and immunisation programmes
- A principle of public health and medicine is to ‘do no harm’ and ‘leave no-one behind’. These tenets have been jeopardised by a failure to resume MDA safely and suspend morbidity management as both platforms can enhance a country response to the COVID-19 pandemic
- The value of other NTD interventions (intensified handwashing practices, sanitation, safe water provision) which reduce transmission of both COVID-19 and NTDs are compatible health messages

Conclusions

COVID-19 is now an endemic infection to which all health programmes will be required to adapt against a background of uncertainty for the foreseeable future.

We consider the additional risks of resuming NTD interventions in areas where routine health services are ongoing can be mitigated, negating additional risk. In doing so we must be reassured that programmes and activities do no harm, requiring risk analysis and investment in mitigation measures, despite increasing costs, given the biggest cost driver will be additional time of human resources required. This is borne out by the ongoing risk assessment and mitigation actions (RAMA process).

NTD programmes offer an opportunity to reinforce COVID-19 response through health-impact messaging. The NTD community and Sightsavers must grapple with this because any increased costs offer potentially wider impact through 'hybrid' interventions and thus could be more cost-effective. Such an approach facilitates the overall aim to strengthen health systems, facilitate integration, and promote cross-sector collaboration.

Having initiated COVID-19 flex in endemic Ascend West countries we are better informed about the new context within which NTD interventions will reside. The situation will evolve over time, unpredictably and according to country circumstances. This evolution will not be driven by the biology of the virus but by national policy responses to mitigate impact while recognising that stemming COVID-19 transmission will be dependent on behaviour change and identification of where more rigorous measures are required.

We work with partners in low and middle income countries to eliminate avoidable blindness and promote equal opportunities for people with disabilities.

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