TITLE: Impact of the COVID-19 response in Uganda on HIV-associated morbidity and mortality: Direct perspectives from healthcare workers

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INTRODUCTION

The COVID-19 pandemic has necessitated a global public health response, ultimately impacting usual healthcare delivery. This commentary discusses the impact of the response to COVID-19 on HIV care in Uganda. A review was conducted of literature and news articles as well as informal interviews with Ugandan individuals involved in the HIV-targeted healthcare system. These individuals include community members, peer supporters, and counselors involved in guiding people through the HIV-care continuum, and healthcare providers.

PRE-COVID-19 HIV CARE IN UGANDA

The HIV/AIDS epidemic in Uganda started in 1982 and swiftly intensified to have devastating effects.¹ With early recognition of HIV as a crisis in the country and an influx of foreign aid for disease prevention and treatment, Uganda was the first African country to reverse the course of the HIV epidemic in the mid-1990s.² Although remarkable progress has been made towards the UNAIDS Fast Track 95-95-95 targets, (which maintain as their goal that by 2030, 95% of PLHIV will know their status, 95% of people who know their status will access treatment, and 95% of people on treatment will have suppressed viral loads), the burden of HIV in Uganda continues to be significant with 3.28% of the population living with the disease.³ Barriers to the pursuit of nationwide HIV treatment include inaccessibility of quality healthcare in rural Uganda, stigma surrounding HIV, and the lifelong commitment of antiretroviral therapy (ART) requiring regular access to medications and continued follow-up. The national response to the HIV epidemic aims to provide robust testing initiatives with a direct link to treatment. The testing program has evolved to include centralized locations and mobile testing services to address geographic limitations and fear of stigmatization. As part of the treatment program, ART

is accessed free of personal charge by Ugandan people living with HIV (PLHIV),⁴ a mandate that is put into practice by government funding, international aid, and complex networks of drug delivery systems.

Figure 1. UNAIDS HIV/AIDS targets for 2030.

THE RESPONSE TO COVID-19 IN UGANDA

As COVID-19 reached Uganda in March 2020, President Museveni instituted a nationwide lockdown with a curfew.⁵ Borders were closed, as well as schools and non-essential businesses.⁶ Gatherings of more than five people were banned.⁷ Public transport was suspended and special government authorization was required for private vehicles.⁸ Throughout May and June, the lockdown measures were eased in parts of the country, allowing for opening of some businesses and resumption of public transport at half capacity.⁹ As of November 8, 2020, Uganda has reported 11,767 cases and 106 deaths, though the full impact of COVID-19 on healthcare delivery has yet to be determined.¹⁰

COVID-19 AND HIV CARE IN UGANDA

COVID-19 highlights Uganda's high endemic disease burden and a healthcare system that is insufficient in meeting its needs. Access to health services for HIV/AIDS, maternal health, and malaria is now difficult to maintain.¹¹ Unsurprisingly, many are concerned that these disruptions will undermine Uganda's progress towards the UNAIDS Fast Track targets.¹²

Diversion of Resources

The healthcare system has been chronically underfunded in Uganda, with only an estimated 6% of the GDP directed toward healthcare.¹³ Uganda has a nurse-to-patient ratio of 1:8, the worst in the region, and 55 ICU beds for its population of 40 million.¹⁴ Healthcare providers are being diverted to address COVID-19 and the workforce may be additionally stressed by illness, self-isolation, and lack of protective equipment. Increased demand on laboratory services is expected as basic supplies, reagents, and instruments for HIV viral load testing are diverted for COVID-19 testing.¹⁵

Lockdown Measures: Travel Restrictions & Social Distancing

A significant proportion of PLHIV rely on public transportation to access care. This reliance is driven by limited availability of HIV services and long travel distances.^{12, 16} Consequently, COVID-19-related travel restrictions and increasing levels of poverty have impacted access to ART and HIV care: "People have not been able to continue [... ART] because they could not travel to refill these drugs. Even now, public travel is very expensive and many cannot afford [it]" (Dr. Moses Olupot, Medical Intern).

Ugandans are now attending clinics within walking distance including lower level health centres and private clinics. Lower level health centres have inconsistent and insufficient supply of ART due to COVID-related disruptions in supply chains.^{17, 18, 19} “[PLHIV] have been asked to access their treatment from nearby [health] facilities of which some of these facilities have been reported to be experiencing drug stock outs [...] which has left people to miss out on their treatment.” (Sharifah Nalugo, Peer Supporter for children and young adults living with HIV). Meanwhile, private clinics are financially inaccessible to many and made worse by the drop in household income during the pandemic.¹⁶

Despite these challenges, the community is mobilizing to support PLHIV: “Many of the peer supporters have adopted to delivering of health services like [ART] and SRHR [sexual and reproductive health and rights] services to the people in communities, [...] us who can't afford bicycles, we have walked miles and miles in order to deliver the treatment for a patient” (Sharifah Nalugo, Peer Supporter for children and young adults living with HIV).

To restrict non-essential travel and gatherings, the Uganda Ministry of Health called for the temporary cessation of community mobilization for HIV testing and prevention services.²⁰ Although crucial for detecting and preventing new infections, especially in vulnerable populations, services such as mass mobile testing, pre-exposure prophylaxis, condom distribution, and health talks were cancelled or scaled back.²⁰ Social distancing measures have also made it difficult to deliver peer groups which play an important role in promoting uptake and adherence to ART: “I have failed to reach out to young people in rural areas to enable them access SRHR and HIV information due to social distance guidelines” (Lubangakene Godfrey Obua, Ambassador of the Young People Living with HIV)^{16, 21, 22}.

Food Insecurity

For some, the barrier to taking their medications is in accessing food.²³ Without food, patients may experience severe side effects from ART including nausea, vomiting, and dizziness, discouraging patients from taking their medications: “Most of our patients depend on earning received per day, so, those that could not work, did not have food on the table; those that did not have food on table missed doses, thereby affecting their adherence to ART.” (Christine Matama, Researcher and Public Health Specialist).

Stigma

COVID-related stigma has also proved to be a significant barrier in accessing care.¹² Patients are hesitant to use healthcare facilities: “most of them are scared of going to hospital and contracting COVID-19 from the hospital” (Timothy M.M., Physician).¹² Others are concerned that symptoms related to HIV-associated infections such as tuberculosis will be mistaken by the public for COVID-19 and cause further discrimination and potentially aggression.¹⁶

COVID-19 has also exacerbated stigma-related barriers surrounding HIV: “Some [HIV] patients had challenges of [unwanted] disclosure of their status in this period because they needed their drugs” (Catherine Kunihiro, Nurse). Our contacts described several ways in which HIV serostatus has been revealed, including disclosure to local leaders for permission to travel, door to door delivery of ART by health centres with branded cars, or having others pick up medications for them. From our interviews, we found that these challenges have been mitigated by arranging delivery of medications to PLHIV by other PLHIV.

Healthcare During A Pandemic: A Balancing Act

COVID-19 has presented Uganda with a difficult balancing act: preventing the high predicted direct burden of COVID-19 while mitigating the negative indirect effects of its pandemic response on routine health services. As Ignitius Asasira, a Makerere Medical School student states: “The COVID pandemic has done us a disaster. With no transport and poor health service delivery, most HIV patients have missed their [ART], most CKD patients that require dialysis have died, many heart failure and hypertensive cases have worsened as most of the concrete work force at hospitals was redirected to treating COVID cases.”

COVID-19 response measures exacerbated pre-existing barriers and created new challenges to healthcare delivery in Uganda, jeopardizing the progress made in HIV, TB, malaria, maternal health, and preventable childhood-diseases. Projections have shown that with six months of disruption to ART distribution, there could be 52,000 excess deaths due to HIV in Uganda in 2020.²⁴ Lapses in virological suppression and prevention are anticipated to result in increased community transmission and mother-to-child transmission, with some models predicting a 139% increase in new cases of childhood HIV in Uganda.²⁴ ART interruptions could also lead to widespread ART resistance, which would carry devastating long-term implications.

While these models and our contacts raise concerns for HIV care within Uganda’s current COVID-19 response, the pandemic containment and prevention measures were necessary and important. One model estimated 53,503 deaths over 18 months due to COVID-19 without restrictions.²⁵ Therefore, the central dilemma remains how to accommodate HIV care within those measures. The Ugandan response should continue to be dynamic, adapting to the changing circumstances and continuous influx of new information. Enhanced data collection and modelling can help achieve a better balance, allowing for contextual decision-making and appropriate prioritization of limited healthcare resources.

CONCLUSION

The challenge faced by Uganda is not unique. Health systems globally are struggling to address the pandemic while providing essential non-COVID-related care, with the additional stressors of fear, discrimination, restrictions on movement, and disruptions in global medical supply chains. The crisis should bring a renewed global sense of urgency to build resilient and equitable health systems, support long term healthcare reform, and commit to increased funding for health.

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