COVID TREATMENT QuickStart CONSORTIUM

Leveraging QuickStart-Established Resources to Support the Marburg and Mpox Outbreaks in Rwanda

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On September 27, 2024 the Rwanda Ministry of Health declared the country's first ever outbreak of Marburg Virus Disease (MVD) after cases were confirmed at a referral hospital in the capital city of Kigali and later at 7 out of 30 districts in the country. MVD, a highly contagious disease in the same family as Ebola, is highly virulent and often results in severe hemorrhagic fever with a high mortality rate ranging from 24% to 88%. Rwanda recorded 66 cases and 15 deaths, marking a case fatality rate of 22.7%, one of the lowest rates ever recorded globally. The outbreak was officially declared over on December 20, 2024. Infections were primarily concentrated among healthcare workers that made up over 80% of all infections. This unforeseen and uncommon outbreak highlights the need to ensure protection for vulnerable medical staff both during and between infectious disease outbreaks.

Rwanda's Ministry of Health, in collaboration with partners such as the WHO, Africa CDC, USAID, UNFPA and the Clinton Health Access Initiative (CHAI), among others, swiftly responded to the outbreak, focusing on aspects such as coordination, surveillance, testing, case management, vaccination, community engagement, and scientific research. Rwanda reactivated a multi-level incident coordination and management system with rapid response teams at national, provincial, local and health facility levels. Point of entry surveillance was also activated, including screening and isolation when needed, and door-to-door community education led by community health workers.

The scope of QuickStart's COVID-19 work in Rwanda aligned well with the MVD response needs and the team quickly became an essential element to the response. QuickStart's Rwanda work kicked off in 2022 with local support to the MOH provided by the CHAI Rwanda country office. Rwanda's QuickStart COVID-19 supported work was focused on:

- Establishing testing and treatment capabilities
- Strengthening patient management and follow up
- Supporting the surveillance program to transition from the pandemic response to the resumption of routine services
- Strengthening data management and reporting (including commodity supply management), supporting updates to the national electronic data system
- Developing tools for patients and healthcare workers on both COVID-19 and broader pandemic risk/awareness

At the request of the Rwanda government, the QuickStart team was called to join the MVD command post and pivoted from COVID-19 activities to provide critical HR and funding support to the MOH, including strengthening of surveillance tools, funding human resources involved in the response, and enabling rapid decision-making through evidence-based analysis.

Working hand in hand with the MVD coordination team, the CHAI team:

- Attended daily meetings to assess progress
- Analyzed daily reports and advise on key decisions, including the establishment of isolation centers, initiation of vaccination activities, scenario planning in case of outbreak persistence, and informing official communications circulated to the public
- Worked with the epidemiology team on forecasting
- Liaised with the digital health team generating daily reports to ensure that national surveillance systems were up to date with MVD data supported supply chain management, distribution and monitoring of vaccination uptake for healthcare workers.

QuickStart also supported a team of 20 doctors and 18 nurses dedicated to managing daily care of MVD patients at selected treatment centers. In addition, 5 laboratory experts were supported to lead MVD testing and sequencing activities at the National Reference Laboratory. In alignment with QuickStart activities that had taken place during the COVID-19 pandemic, CHAI staff supported the development of guidelines and standard operating procedures on continuity of services. Unlike the COVID-19 pandemic, routine health services in Rwanda continued as usual during the MVD outbreak. The QuickStart team played a key role in developing operating procedures that were shared with facilities to ensure safe service continuity while building the capacity and the protection of health care workers involved in the response.

In parallel to the Marburg outbreak, Rwanda had been managing a Clade 1b Mpox outbreak since July 24, 2024, with a total of 5,618 suspected cases and 82 confirmed cases. Similar to the MVD response, the command post was activated but mainly at the points of entry to the country. Screening was intensified at all boarders and high-risk groups including female sex workers and truck drivers were prioritized for vaccination. Under the leadership and guidance of MoH leadership and based on CHAI's support during the COVID-19 pandemic, CHAI was invited to join the task force responding to Mpox. The QuickStart team also played a key role in supporting Mpox response efforts by coordinating a donation of test kits and assisting with price negotiations for necessary diagnostics; supporting the coordination team, working on budget, projections and communication; supporting the vaccination of high-risk groups (prioritization, and cold chain management); providing laboratory experts to bolster testing and sequencing capacity; providing per diems to healthcare workers involved in the response and in community sensitization.

Despite the dual outbreaks, Rwanda's health system demonstrated resilience, maintaining routine health services without significant disruptions. This was made possible by the country's leadership, leveraging COVID-19 and QuickStart investments in systems, infrastructure, healthcare worker capacity and infection control protocols across health facilities as well as strong and coordinated partner support. The QuickStart initiative has established sustainable impact on Rwanda's ability to respond to health emergencies. Major achievements include providing access to COVID-19 oral antivirals, which were previously unavailable to most of those in need, maintaining momentum in the fight against COVID-19, and establishing robust data infrastructure for COVID-19 management that have been leveraged to respond to other outbreaks and preparedness. The project has left behind a skilled team of healthcare providers, empowered with the knowledge to test and treat COVID-19 at the primary healthcare level and equipped to respond to future outbreaks like Mpox and Marburg.

Moreover, these efforts have positioned Rwanda as a leader in pandemic preparedness, having recently secured a Pandemic Fund grant that will enhance the national pandemic preparedness and response plan using a One Health approach.

Rwanda's response to Marburg and Mpox underscores the importance of proactive leadership, partner collaboration, and sustained investments in health system resilience.