

Network governance as an alternative policy response to managing infectious disease outbreaks: Lessons from Uganda's response to the COVID-19 crisis

Solomon Mwije 

Uganda Christian University, Mukono, Uganda

Correspondence

Solomon Mwije, Uganda Christian University, Mukono, Uganda.
Email: mwijesolomon@gmail.com

Abstract

Network governance is commended as one of the appropriate approaches to manage infectious disease crises, but knowledge of its implementation is still limited especially in nondemocratic contexts. This study adopted a qualitative case study design using secondary evidence to review how Uganda used network governance to manage COVID-19 crisis. Uganda used the Whole of Government and Whole of Society approaches to form core-periphery networks of government and non-government actors. It institutionalized task forces and subcommittees at national, district, and community levels to coordinate the COVID-19 response. Networks of actors contributed to the response through case surveillance and management, enforcement of measures, information sharing, social protection and community engagement, resource mobilization, supply chain management, and vaccination. However, the experiences varied across the country with challenges including consensus problems, mistrust, corruption, poor accountability, abuse of rights, and limited capacities especially in local governments. The study revealed that the effectiveness in handling infectious disease crisis might not greatly depend on the country's democracy but rather the government's ability to recognize the threats and adopt collaborative mechanisms to manage the crisis. Contextual understanding of such experiences may provide lessons that future

governments may consider when, not if, crises of such magnitude confront them.

KEYWORDS

complex wicked problems, COVID-19 response, democracy, network governance, Uganda

INTRODUCTION

Coronavirus disease (COVID-19) is one of the significant global health crises faced in the twenty-first Century (Piret & Boivin, 2021). By Mid-2022, World Health Organization (WHO) (2023) had confirmed over 579 million COVID-19 registered cases including over 6.4 million registered deaths worldwide. During the same period, Uganda had registered over 165,000 cases including over 3500 registered deaths according to John Hopkins University & Medicine (2023) and Ministry of Health (MoH) (2023). The COVID-19 crisis resulted in social, economic and political impacts disproportionately affecting developing countries (Bundervoet et al., 2022; Nyaruaba et al., 2022). In Uganda, the pandemic exacerbated the many socioeconomic, political, and psychological challenges that were already affecting the country (Bukuluki et al., 2020; Development Initiatives, 2020).

The crisis significantly escalated managerial challenges faced by single actors, increased the demand for services and goods, and forced governments to adopt collaborative governance for better response (Ansell et al., 2021; Haruna et al., 2022; Kim et al., 2020; Paquet & Schertzer, 2020). Large emerging challenges characterized by uncertainty require robust governance strategies with collective engagement of diverse actors that can share information to incrementally adjust toward better responses (Ansell et al., 2021; Head, 2022; Nohrstedt et al., 2018). Governments must strategically go beyond boundaries to adopt unconventional collaborative governance arrangements to efficiently respond to complex public health problems (Kickbusch & Gleicher, 2012; Ryan, 2022). Collaborative governance relates to processes of facilitating and working in multi-organizational, multisectoral, and multilevel arrangements to manage problems that cannot be managed by a single organization (Ansell & Gash, 2008; McGuire, 2006). Network governance is one of the collaborative governance approaches recommended for responding to complex public health problems (Kickbusch & Gleicher, 2012; Orteni et al., 2022). While growing literature proposes the use of network governance to manage infectious diseases (Kenis et al., 2019; Raab et al., 2020), there is a need to contextually explore how such collaborative efforts are organized and implemented.

This paper explores Uganda's use of network governance approach to respond to COVID-19 crisis. Despite Uganda's weak health and political systems, the country has been recognized as a role model in responding to COVID-19 crisis during its first year (Sarki et al., 2020; WHO, 2021a). However, there is limited understanding of the factors that contributed to Uganda's success in managing the outbreak, given its challenging institutional context. Evidence suggests that Uganda's weak health and political systems characterized by political instability, corruption, poor accountability, poor policy implementation, and fragile health system affect the country's ability to provide effective public health services (Bruckner, 2019; Khisa, 2015; Nabukeera, 2016). Furthermore, nondemocratic governments such as Uganda may encounter challenges with collaborative public management due to political regimes that restrict civil liberties by repressing collective action (Escribà-Folch, 2013; Katusiimeh, 2015). While

contextual evidence is still growing on whether democracy played a significant role in COVID-19 management (Boossabong & Chamchong, 2020; Cassan & Van Steenvoort, 2021; Chen, 2020; Engler et al., 2021), collaborative governance approaches can be used to manage public problems, even in nondemocratic nations as demonstrated by the learnings of Ryan (2022), Ulibarri et al. (2023). Therefore, exploring how Uganda utilized network governance to manage COVID-19 could contribute to the growing literature on the use of collaborative governance in nondemocratic governments in times of crisis.

In the following sections, the paper will describe the problem of COVID-19 and provide a theoretical explanation of network governance. Then, it will present the methodology and case study used. It will explain how Uganda utilized network governance to manage COVID-19 and discuss the results. Finally, the paper will highlight the strengths and limitations of the study and provide a conclusion.

COVID-19 COMPLEXITY AND MANAGEMENT CONSEQUENCES

It is imperative to understand the nature of COVID-19 as a complex wicked public problem. Public policy problems are difficult conditions that require government interventions (Burstein & Bricher, 1997). The complexity and wickedness of public problems depend on the knowledge about their causes and effects and the difficulties in making management decisions (Head, 2022; Hoornbeek & Peters, 2017; Raisio et al., 2018). Therefore, complex wicked problems should not be treated as though they all possess standard features (Peters & Tarpey, 2019). For instance, larger emerging problems present themselves as chaotic, turbulent, or super-wicked because of their high level of complexity and wickedness which lead to a multitude of uncertainties, decision-making is of a high level or irrational because time is too limited, and the problem causers seek to participate in providing solutions (Auld et al., 2021; Head, 2022; Levin et al., 2012; Snowden & Boone, 2007).

COVID-19 was an emerging disruptive public problem that caused consistent surprises, unpredictability, and uncertainties about its causes, solutions, and effective governmental responses (Ansell et al., 2021; Auld et al., 2021; Paquet & Schertzer, 2020). The virus was adaptive with new variants, it required new types of vaccines, and the experiences varied among people, communities, and countries. Additionally, several countries did not immediately comply with the general global response mechanisms thereby posing greater challenges for managing COVID-19 (Engler et al., 2021; Hamisi et al., 2023; Sott et al., 2022; Yan et al., 2020). COVID-19 required high levels of collaboration and coordination among multiple actors since no single modalities seem to have had a definitive solution. Consequently, governments adopted new governance modalities like collaborations from within and outside governments to improve their response effects (Ansell et al., 2021; Head, 2022; Paquet & Schertzer, 2020). This paper focuses on network governance as a collaborative approach used by Uganda to respond to COVID-19.

NETWORK GOVERNANCE

Network governance theory suggests that conventional bureaucratic and hierarchical mechanisms of policy making and implementation may not be enough. Governments and organizations may rely on webs of coordinated networks to enhance effectiveness

(Jones et al., 1997; Kapucu & Hu, 2020; Kim, 2006; Klijn, 2008). A network is comprised of actors who develop a culture of trust, and are connected by common goals, clarified tasks, flows of information, shared resources, and social support (Kapucu, 2014; Kim, 2006; Provan et al., 2007; Sydow et al., 2016). These networks can be within governments or between governmental and nongovernmental actors (Sydow et al., 2016). The purpose of the network is to work together to achieve common goals, with members selected based on their relevance (Jones et al., 1997).

There is a realization that government agencies cannot single-handedly address complex wicked problems such as crises that need immediate action in the face of adversity (Head, 2022; Kapucu, 2014). In this scenarios, governments can rely on network governance to enhance effectiveness in managing the crises (Moynihan, 2009; Nohrstedt et al., 2018; Nowell et al., 2018). The COVID-19 crisis is an example of a situation where network governance was crucial in ensuring effective responses.

There is growing literature that network governance is increasingly being considered as an alternative public management approach to managing infectious disease crises (Ansell et al., 2012; Kenis et al., 2019; Raab et al., 2020). However, the nature of disease threats, the rate of infection, the geographical scope, the impacts, and the level of knowledge may determine the specific type of network governance to apply (Kenis et al., 2019; Raab et al., 2020). This article focuses on the core-periphery type of network governance. Kenis et al. (2019) argue that, all other factors being equal, the core-periphery network structure is particularly suited to managing complex infectious disease outbreaks crises, given its potential benefits of cohesion, stability, and network growth flexibility. This structure involves several organizations or agencies at different levels taking the lead or coordination responsibility for the network to achieve its goals. Nonetheless, effective network governance depends on the organization and management of network processes and actors (Provan & Kenis, 2008; Sydow et al., 2016). Against this backdrop, the paper explores a network of actors collaborating to manage the COVID-19 crisis in Uganda.

METHODOLOGY

The study adopted a qualitative case study design to scrutinize COVID-19 management in Uganda (Bryman, 2016). To achieve the results, a desk research study was conducted by means of qualitative evidence review of documents. Documents were searched on the Internet because of free access to a variety of published sources that contained relevant data (Booth et al., 2012; Wohlin et al., 2022). The search keywords included COVID-19, measures, guidelines, control, response, collaboration, governance, management, organizations, network, actors, stakeholders, contribution, Uganda. The search purposely focused on documents that contained information on the COVID-19 response information in Uganda. The documents included MoH reports, presidential address reports, documents from organizations such as civil society and development partners, and journal articles.

In the process of document selection, a purposive iterative process was used to check the title, abstract and full content was applied to determine if the document was relevant for study inclusion (Booth et al., 2012; Naderifar et al., 2017). In addition, the snowball technique was applied to locate relevant documents that were cited and referenced in relevant documents. The document identified through snowball

technique would be located to check its abstract and full content for study relevance (Wohlin et al., 2022). When a document was found to contain relevant information, it would be selected for inclusion in the study (Booth et al., 2012). Data extraction process followed and this was guided by the research objective (Wohlin et al., 2022). The focus was on data that described the COVID-19 response strategies COVID-19 in Uganda and how different actors collaboratively participated.

Qualitative content analysis was used to reduce secondary data to meaningful aspects (Mayring, 2014). The analysis was based on deductive coding using predefined themes from the literature on COVID response strategies and measures (Federica et al., 2020; MoH, 2020a, 2021). The results are presented under three main themes: 1 presents network actors, 2 presents network functions and contributions of the actors under eight subthemes: leadership and coordination, case surveillance and management, enforcement of response measures, information sharing, social protection and community engagement, resource mobilization, supply chain management, and vaccination, and 3 presents the network's achievements and challenges.

CASE DESCRIPTION

Before COVID-19, Uganda was already grappling with social, economic, and governance challenges (Uganda Bureau of Statistics, 2021). The government recognized the potential for the pandemic to worsen these issues and established a COVID-19 response plan in 2020–2021 (MoH, 2020a), which was later revised as a resurgence plan to cover 2021–2022 (MoH, 2021). The plan involved multiple actors and outlined their responsibilities. On March 18, 2020, the president gave the first national address outlining alternative policy measures to address the pandemic (State House-Entebbe, 2020a). The Ministry of Health (MoH) issued guidelines for managing COVID-19 including wearing face masks in public, maintaining social distancing, avoiding hugging and shaking, washing hands regularly, and avoiding crowded places (MoH, 2020c). Other guidelines were specifically developed for different settings such as public gatherings, marketplaces, workplaces, health workers, quarantining places, public transport, and security agencies.

The government of Uganda established a swift and decisive COVID-19 response with the establishment of a preparedness and response plan even before the country registered a case. On March 21, 2020, Uganda registered its first COVID-19 case and the Ugandan government published “The Public Health (Control of COVID-19) Rules, 2020” Gazette Order to initiate the enforcement of guidelines (Republic of Uganda, 2020). Stricter measures were implemented including suspension of transport, nonessential movements of all people (lockdown and curfew), closure of all borders, schools, all public places, and regulation of social events to have small numbers of attendees, and so on (State House-Entebbe, 2020b). These measures were also enforced during the first and second waves of the pandemic in August–December 2020 and May–August 2021, respectively. On September 22, 2021, following the end of the second wave, some restrictions were eased, and others were maintained (State House-Entebbe, 2021). For example, after one of the longest (22 months) enforcement of full or partial school-closure worldwide, schools in Uganda started opening fully in January, 2022 (Datzberger et al., 2023). By mid-2022, Uganda had started vaccinations and registered fewer COVID-19 cases as it continued to manage the pandemic (MoH, 2023).

RESULTS

Network actors

As recommended by WHO, the government adopted Whole of Government (WoG) and Whole of Society (WoS) approaches to form a network of state and nonstate actors for an effective response to COVID-19 crisis (MoH, 2020a, 2020b, 2021). WoG approach is where public service agencies work collaboratively beyond their boundaries, while in WoS the work goes beyond government authorities to engage all other nongovernmental stakeholders (Ortenzi et al., 2022). Table 1 presents an overview of actors and coordination levels. Core networks of task forces were instituted at national and all local government levels to lead the response. The NTF was mandated to coordinate COVID-19 responses at the national level. The NTF worked closely with committees including SC, SAC, and IMT (MoH, 2020a, 2021).

Uganda's response to COVID-19 was planned in accordance with the decentralized structures of governance and health system. The NTF coordination and decision-making functions were devolved to regional and local government task forces (MoH, 2015, 2020b). At regional level, RTFs coordinated the five main regions (central, eastern, western, northern, and southern Uganda). At local government level, the DTFs coordinated response in their respective districts (Muhwezi et al., 2020). The DTFs also constituted DTF-SCs that coordinated various aspects of response. Committees included the security committee, resource mobilization committee, business fraternity committee, health response committee, welfare committee, constituency committee, district planning committee, and health management team (Muhwezi et al., 2020). DTFs and DTF-SCs constituted district political and administrative leaders, sectoral coordinators, members of parliament, district health teams, security organs leaders, local leaders, and development partners. At subcounty and parish levels, SCTFs and PTFs were mandated to oversee and support intersectoral collaborations and work with security organs to enforce guidelines in subcounties/town councils and parishes, respectively (MoH, 2020b; Muhwezi et al., 2020). At village/community level, VTFs were mandated to coordinate the response in their respective villages/communities (MoH, 2020b). Governmental actors from all ministries, sectors, and local governments were mandated to collaborate for COVID-19 response (MoH, 2020b, 2021; Muhwezi et al., 2020). The nongovernmental actors especially at local government level included individuals, households, churches, villages, schools, employers, professional groups, development partners, civil society, the private sector, academic, and citizens, among others (MoH, 2020b, 2021).

NETWORK FUNCTIONS AND CONTRIBUTIONS OF ACTORS

Leadership and coordination

The president and the task forces performed the leadership, oversight, coordination, and decision-making roles. Figure 1 shows a simplified chain of command and network coordination. The president used his constitutional powers to give directives on COVID-19 response measures. The cabinet and the parliament discussed and passed policy measures and legislations (Kadowa, 2020; Republic of Uganda, 2020; Rwengabo, 2020). The NTF oversaw response coordination and had an overall clearance on all response decisions at the national level (Kadowa, 2020; MoH, 2020a).

TABLE 1 Overview of network actors and coordination levels.

Network level and actors		Periphery	
Coordination level	Command and coordination entity (task forces)	Coordination subentities (task force subcommittees)	Other network actors in the response implementation process
National	National task force (NTF)	<ul style="list-style-type: none"> ■ Strategic committee (SC) ■ Scientific advisory committee (SAC) ■ Incident management team (IMT) 	<ul style="list-style-type: none"> ■ Cabinet (chaired by the president) ■ Parliament ■ Director General Health Services ■ Ministries, Agencies, and Departments ■ Development Partners
Region ^a	Regional task force (RTF)		
District	District task force (DTF)	<ul style="list-style-type: none"> ■ Health response committee ■ District Health Management Team Security committee ■ Resource mobilization committee ■ Business fraternity committee ■ Welfare committee ■ Constituency committee ■ District planning committee 	<ul style="list-style-type: none"> ■ Appointed officials ■ Resident District/City Commissioners (task force chairperson) ■ Local Council V Chairpersons ■ District Heads of Department ■ Chief Administrative Officers ■ Municipality Mayors, ■ District Police Commanders ■ District Internal Security Officers ■ Information/Communication officers ■ Local Council III chairperson ■ Gombolola Intelligence Security Officers ■ Subcounty chief ■ Assistant Community Development Officer ■ Health Assistants
Subcounty	Subcounty task force (SCTF)		<ul style="list-style-type: none"> ■ Civil Society Organizations ■ Security agencies (army, policy, local defense units) ■ Cross-border agencies ■ Agricultural extension workers, Health facility representatives ■ Village Health Teams ■ School representatives ■ Community-Based Organizations representatives ■ Neighborhood assemblies ■ Lower Local Leaders (religious and cultural leaders) ■ Private sector ■ Volunteers ■ Academia and researchers ■ Media ■ Citizens

(Continues)

TABLE 1 (Continued)

Network level and actors		Periphery	
Coordination level	Command and coordination entity (task forces)	Coordination subentities (task force subcommittees)	Other network actors in the response implementation process
Parish	Parish task force (PTF)	<ul style="list-style-type: none"> ■ Community development officers ■ In-charge of COVID-19 at health facility ■ Surveillance focal persons at health facility ■ Representative of the Village Health Teams ■ Health inspector 	<ul style="list-style-type: none"> ■ Local Council II chairperson ■ Parish chief ■ Planning Committee ■ Parish Intelligence officers
Village/ Community	Village task force (VTF)	<ul style="list-style-type: none"> ■ Local Council I chairperson ■ Parish Chief ■ Village Health Teams (Community Health Workers) ■ Community development officers 	

Abbreviations: CSOs, Civil Society Organizations; DGHS, Director General Health Services; DPs, Development Partners; DTFs, District COVID-19 Task Forces; DTF-SCs, District COVID-19 Task Force Subcommittees; LLLs, Lower Local Leaders; IMT, Incident Management Team; MDAs, Ministries, Departments, Agencies; NTF, National Task Force; PTFs, Parish Task Forces; RTFs, Regional COVID-19 Task Forces; SAC, Scientific Advisory Committee; SC, Strategic Committee; SCTFs, Subcounty Task Forces; VTFs, Village COVID-19 Task Forces; VHTs, Village Health Teams.

Source: MoH (2020a, 2020b, 2021), Muhwezi et al. (2020).

^aThe constitution of actors in the task forces was based on the decentralization structure which does not stipulate regional leadership. Therefore, RTFs comprised regional appointed officials.

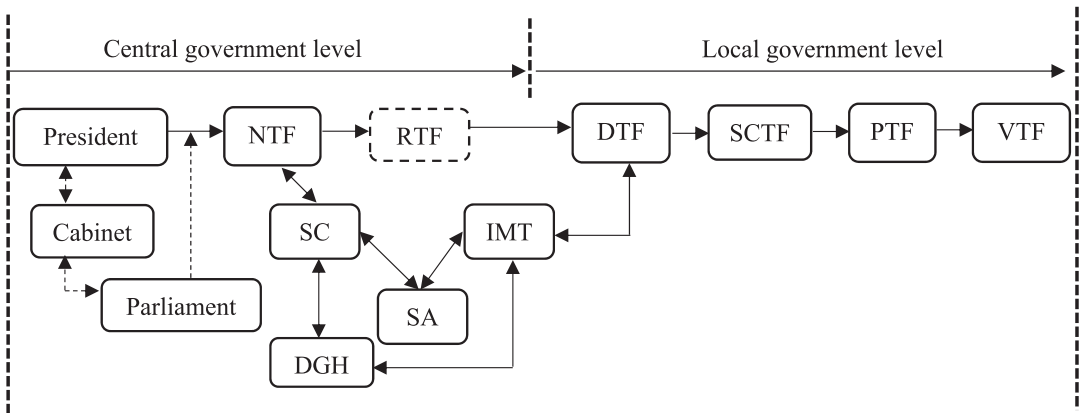


FIGURE 1 Chain of command and coordination.

The SC provided overall guidance on the national response and advised the SAC responsible for providing scientific evidence to both SC and IMT. The IMT primarily provided updates and alternative response options to SC (MoH, 2021, WHO, 2021b). MoH had an oversight role and took the technical lead in drafting and providing guidelines, and the DGHS assessed the overall implementation of the COVID-19 response plans and guidelines (MoH, 2020a). The task forces in regions, districts, and other lower local governments also had powers to make decisions, coordinate, enforce the response measures within local governments, and provide advice to the NTF (Africa Freedom of Information Centre, 2020; MoH, 2020b; Muhwezi et al., 2020).

Case surveillance and management

Case surveillance involved case alert management, contact tracing, quarantine, and case investigation at border entry points, in communities, health facilities, and laboratories. Case management involved improving management capacity, strengthening management facilities, strengthening case referral arrangements, and providing capacity for social support, including psychosocial support (MoH, 2020a, 2021). A system-wide testing and tracking approach was established where a national integrated surveillance and management process was followed as provided in the incident structure (Federica et al., 2020; MoH, 2020a). The NTF worked with SC and MoH to designate quarantine facilities and centers for case management (MoH, 2021). Contacts were traced when a positive case was identified. A home, institutional or geographical-based quarantine was recommended for mild and moderate cases, while critical, severe, and some moderate cases were referred to regional and national referral hospitals. The task forces coordinated and facilitated the surveillance process. For example, task forces within a district participated in the overall surveillance and contact tracing while working with health professionals, LLLs, and community members to conduct community-based case identifications and alerts (Muhwezi et al., 2020). Citizens established community neighborhood assemblies working with local task forces to enhance contact tracing, case alerts, and aided testing and self-isolation (Africa Freedom of Information Centre, 2020). Health professionals managed cases at facilities and quarantine centers, while security agencies helped enhance surveillance at borders and ports (Khisa, 2021; MoH, 2021). DPs and CSOs provided

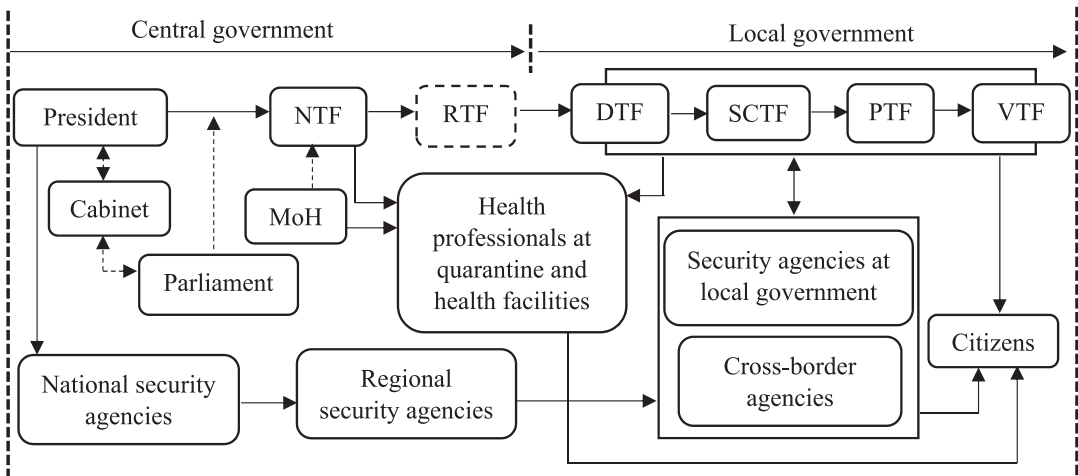


FIGURE 2 Enforcement of response measures.

additional support in patient care, such as psychosocial support and health worker training (WHO, 2020).

Enforcement of response measures

The Public Health (Control of COVID-19) Rules, 2020 Gazette Order provided specific actors with powers to make decisions and enforce them (Republic of Uganda, 2020). As illustrated in Figure 2, the president regularly instructed responsible actors on how to handle citizens who did not comply with rules and guidelines. For example, the president ordered that individuals that did not comply, primarily those who attempted to engage communities without going through the NTF, were considered opportunistic and irresponsible and would be arrested and charged with attempted murder (Banjwa, 2020). Local government task forces worked closely with security organs (primarily the Army, Police, and Local Defense Units), to enforce the COVID-19 response rules and guidelines across the country, including all country border entry points and ports (Katana et al., 2021; Nkuubi, 2020). Standard practices included patrols during lockdowns and curfews, roadblocks, and dispersing of people in congested gatherings (Khisa, 2021).

Information sharing

Fundamental to the COVID-19 response, the information-sharing process involved all communication processes regarding risks, behavioral change, social and resource mobilization, and enforcement measures (MoH, 2020a, 2021). Figure 3 provides an overview of downward and upward information sharing. In terms of upward information flow, the information from communities moved through respective local government task forces to the NTF. The NTF worked with established committees and teams to make recommendations which were forwarded to the president, cabinet, and parliament for final centralized decision-making (MoH, 2020a, 2020b). Regarding downward information sharing, the president of Uganda conducted a series of nationwide addresses on the COVID-19 status and response measures through

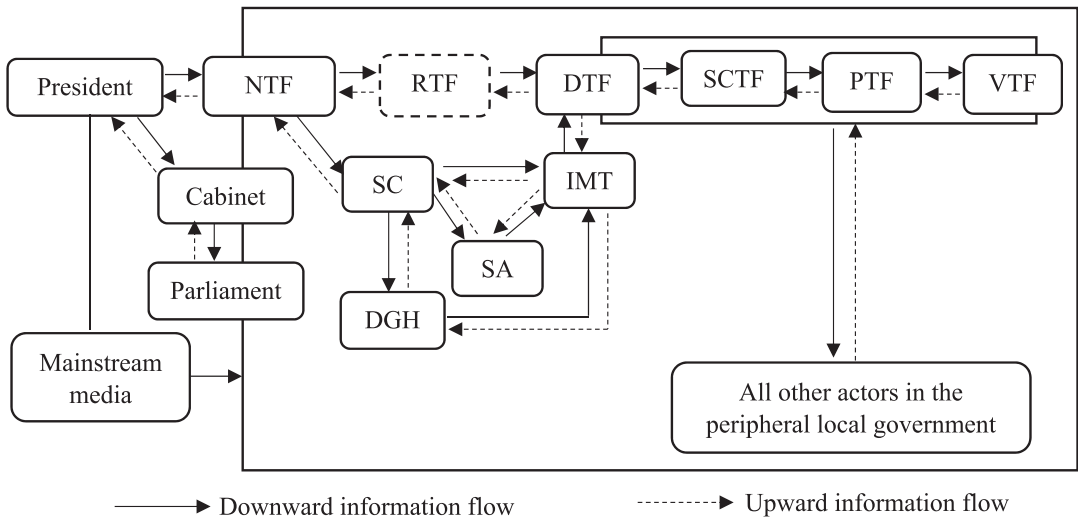


FIGURE 3 Overview of information sharing.

mainstream media. All television and radio stations were mandated to broadcast the presidential address. Different stakeholders also used the media outlets to share information on experiences with COVID-19 and its impacts in specific areas. MoH, SC, and health professionals provided disaggregated data on COVID-19 cases, effects, and interventions (MoH, 2021; Rwengabo, 2020). Task forces coordinated risk communications, social mobilization activities, and information on the enforcement of measures (Africa Freedom of Information Centre, 2020; Muhwezi et al., 2020). DPs and CSOs were critical in providing technical information, training for capacity building, and sensitizing communities (Kabagenyi et al., 2022; WHO, 2021b). VHTs and LLLs were essential in providing information to households on preventive and control measures, and information on COVID-19 cases to relevant community-based actors (WHO, 2020b).

Social protection and community engagement

Social protection and community engagements focused on communicating COVID-19 response measures and addressing the pandemic impacts (MoH, 2020b, 2021). The social protection aspect involved the delivery of health and social services to the vulnerable and affected populations. The NTF coordinated social protection and community engagement interventions at the national level, while local government task forces coordinated interventions within their respective districts (Banjwa, 2020; Muhwezi et al., 2020). The government worked physically and virtually with all network actors to facilitate community- and home-based care interventions (MoH, 2020b, 2021). VTFs were mandated to register all vulnerable and at-risk community members who were then provided relief in the form of food such as maize and beans from the government (Banjwa, 2020). DPs and CSOs facilitated mobilization and sensitized communities, and provided social services including gender-based and domestic violence psychosocial services, sexual reproductive health services, mental health services, and so on (Oroma, 2021; WHO, 2021b). Citizens supported each other within families and across households in communities.

Resource mobilization

The President of Uganda mobilized all national and international stakeholders to contribute anything they could toward COVID-19 crisis response. He referred to the mobilization as the “war of wananchi,” meaning “people's war” against COVID-19 (Banjwa, 2020). The president established a committee for the national response fund to COVID-19 and it was responsible for national mobilization and allocation of resources (Office of the Prime Minister, 2020). Individuals, households, communities, national and international development partners, CSOs, and private sector entities responded to the president's call positively. Contributions were in the form of cash and in-kind donations such as food, vehicles, protective gear, and equipment, among others (Banjwa, 2020). In addition to the supplementary budget approved by the parliament, DPs such as WHO, the World Bank, and embassies provided relief packages, capacity-building resources, loans, and grants (Office of the Auditor General, 2021; WHO, 2020, 2021b).

Supply chain management

According to Muhwezi et al. (2020), the NTF collaborated with the MoH and other task forces to effectively distribute resources for the COVID-19 response. The lower-level task forces registered individuals and households that were at risk in their respective jurisdictions, then provided the list to the higher-level task forces that made decisions on the supply and distribution of required goods and services (Muhwezi et al., 2020). DPs such as the WHO worked with MoH and other agencies to facilitate the importation of essential health goods such as protective gear, equipment, and vaccines (WHO, 2020). The government contracted private sector actors to manufacture, procure or supply goods and services such as protective gear such as masks and sanitary goods such as sanitizers (Office of the Auditor General, 2021). Companies also adopted e-Commerce mechanisms to supply goods and services. The army also participated in the distribution of relief goods and manufacturing and distributing health goods (Khisra, 2021). Citizens, especially entrepreneurs, also engaged in the supply chain through innovative projects to make and sell health goods and services.

Vaccination

The president urged task forces and other actors to mobilize for vaccination. The MoH had a central mandate to implement the COVID-19 vaccination plan. Working with the SC, the MoH designated vaccination centers and engaged in the national-wide mobilization for vaccination (Kabagenyi et al., 2022; MoH, 2021; WHO, 2021b). MoH and other actors mobilized citizens and health professionals to administer vaccines at health facilities and in communities. DPs and CSOs also helped with the mobilization of communities and sensitization for vaccination uptake (WHO, 2021b). Some CSOs and private sector organizations mobilized and mandated their employees to get vaccinated at workplaces and other designated centers (MoH, 2021). Health providers worked with VHTs to sensitize communities on vaccination. Citizens also mobilized each other for vaccination. In addition to the vaccines recommended by WHO, the president also endorsed and encouraged the citizens to take a local herbal medicine (COVIDEX) to treat COVID-19 and boost their immunities (Anguyo et al., 2022).

NETWORK ACHIEVEMENTS AND CHALLENGES

Much as Uganda registered several achievements in its response to COVID-19 crisis, it also met some challenges in the process. The establishment and institutionalization of the task forces at national and local government levels to work with a range of all other actors created the best avenues for effective response at all levels (MoH, 2021; Muhwezi et al., 2020). There was effective coordination and resource mobilization through the network at the national level. For example, by April 2020, the network had mobilized more than 3.5 billion Uganda shillings (about \$945000) toward resources needed for the COVID-19 response (Office of the Auditor General, 2021; Rwengabo, 2020). Actors supported each other through mobilized social capital, and the strengthened relationships improved the response to the outbreak.

However, the experiences varied across the country. Too many network actors, especially at local governments (periphery), created coordination and consensus problems (Muhwezi et al., 2020). There were dependence and autonomy tensions among network actors. There was also poor management of local government task forces and mismanagement of COVID-19 relief resources (Banjwa, 2020; Nathan & Benon, 2020). The Auditor General established that there was no accountability for about 1.318 billion Uganda shillings (about \$35600) allocated for the COVID-19 response (Office of the Auditor General, 2021). Corruption and mismanagement of resources caused mistrust among the network actors, especially citizens. Citizens also lost trust in the government because of discrimination and abuse of human rights through use of violence to enforce response measures (Katana et al., 2021; Nkuubi, 2020). Some actors' values and interests did not align with the network values. For example, the contracted private sector organizations profited off the pandemic by supplying substandard services and goods for the COVID-19 response (Initiative for Social and Economic Rights, 2021). The government's limited capacity to provide the vaccines and citizens' hesitancy to get vaccinated challenged the efforts to promote vaccination (Kabagenyi et al., 2022; MoH, 2021). The divergent perspectives on the crisis and multiple decision-making processes negatively affected some COVID-19 response processes.

DISCUSSION

This study aimed to explore Uganda's use of network governance to manage COVID-19 crisis. The results revealed that Uganda performed well in handling COVID-19 because of collaborative mechanisms. The president encouraged collaborations among network actors and highly enforced restrictive measures. This showed that while nondemocratic governments such as Uganda may not usually prefer collaborative governance approaches (Escribà-Folch, 2013; Katusiimeh, 2015; Ryan, 2022; Ulibarri et al., 2023), when confronted with large complex wicked problems they can rely on multiple actors for a common national goal. The study findings relate to the evidence that effectiveness of managing COVID-19 did not depend on country's democracy, but rather on the state leadership's ability to take the crisis serious and effectively use collaborative mechanisms (Boossabong & Chamchong, 2020; Chen, 2020; Engler et al., 2021; Greer et al., 2021; Sharma et al., 2021; Yan et al., 2020). Additionally, countries with previous experiences with infectious diseases also relied on their experiences to implement better response approaches (Frieden, 2021; Kim et al., 2020; Sharma et al., 2021). Uganda's success in handling COVID-19 could also be associated with its success in handling other

infectious diseases such as Ebola and human immunodeficiency virus (HIV) (Aceng et al., 2020; Ryan, 2022). Therefore, as stressed by Raab et al. (2020), the importance of such an ex-ante knowledge, capabilities, and capacities for crisis response that network actors possess should not be overlooked.

The results also show that when managed well, the core-periphery network governance can be an appropriate approach to respond to infectious diseases as suggested by Kenis et al. (2019). Uganda's quick institutionalization of task forces and subcommittees created better avenues for coordination and collaboration of networks of actors at all government levels. The study case affirms assertions that goal-oriented coordination structures and capacities are crucial in network governance of crises (Christensen et al., 2016; Nohrstedt et al., 2018; Raab et al., 2020). While core-periphery networks may effectively help to manage crises (Kenis et al., 2019; Nowell et al., 2018), collaborations may encounter challenges such as poor coordination, lack of commitment, distrust among actors, divergent actor values and interests, manipulation by the powerful (Ansell & Gash, 2008; Christensen et al., 2016). Therefore, mandated networking may facilitate alignment in cases where actors' goals, values, and interests are divergent (Segato & Raab, 2019). For example, in Uganda's case, task forces and government entities were mandated to comply and work together by any necessary means to achieve the network's goal. When using network governance to respond to a crisis, multiple members create coordination difficulties, authority is shared and contested, and thus, trust building, goal consensus, actor competences, regulations, coordination capacities become critical predictors of the network's effectiveness (Christensen et al., 2016; Moynihan, 2009; Nohrstedt et al., 2018; Provan & Kenis, 2008). Trust, consensus and strong coordination capacities between the core and peripheral networks were essential for responding to COVID-19 crisis in Uganda. The national task forces and committees defined response measures that the local government task forces, subcommittees, and other actors implemented.

The success or failure of public policy implementation is often determined by the street-level-bureaucrats, despite the structure and functions defined by core authorities (Thomann et al., 2018; Tucker et al., 2022). This is because the periphery actors are responsible for managing and delivering the final service or goods. Lack of commitment and compliance with the network goals can cause failures. Uganda's case highlights the failures caused by poor allocation of resources, lack of commitment, consensus, corruption, and mismanagement of resources. Therefore, the capacity and limitations of individual actors should be considered when building a strong network for crisis management. Multiple actors make a network as a "whole" but considerations need to be made regarding the variations in perceptions and capacities of each actor in the whole network. Some potential and active actors may be confused and thus require clarification, others may not have resources and lack leadership roles, knowledge, and skills, or may not know how to work in relationships and build trust (Ansell & Gash, 2008; Christensen et al., 2016; Nohrstedt et al., 2018; Weber & Khademian, 2008). Results revealed that not all actors understood their responsibilities and the capacities needed for the COVID-19 response. Even with specific COVID-19 response guidelines, some actors needed collective capacity and consensus building for effective networking and fulfillment of responsibilities. Building individual capacities of relevant actors is essential for effective networking and fulfilling responsibilities rather than focusing on the network as a whole.

STRENGTHS AND LIMITATIONS

This paper contributes to the growing literature on contextual understanding of how nondemocratic governments use collaborative governance approaches to manage complex public crises. The study establishes that managing infectious diseases may not greatly depend on the level of democracy but rather the government's ability to adopt and implement collaborative mechanisms effectively. The key study limitation is the use of secondary data only. Thus, the author recognizes that there could be missing data on some actors, their contributions and the challenges met. This may affect data quality and representation (Wickham, 2019). Therefore, to address this limitation, further research using primary data collection methods, may help to further identify other actors, their experiences, and contributions to the network governance of COVID-19.

CONCLUSION

The present study aimed to examine Uganda's response to COVID-19 through the lens of network governance. Uganda relied on core-periphery networks, which involved task forces and subcommittees at the national, district, and community levels. Multiple actors within government, civil society, private sector, and community were mobilized by the president and government agencies to participate in the efforts to address the pandemic. This collaborative approach encompassed coordinating, case surveillance and management, enforcing response measures, sharing information, community engagement, resource mobilization, and vaccination efforts. Nonetheless, the study found that several challenges hindered collaboration, including consensus problems at the local government level, mistrust, corruption, poor accountability, abuse of human rights, and limited implementation capacities. Considering the ongoing and potential future infectious disease outbreaks, a contextual understanding of the varying experiences in managing infectious diseases is critical. The study demonstrates that the effectiveness of managing a health crisis does not depend solely on a country's democracy but on leadership's ability to recognize the crisis's magnitude and implement collaborative mechanisms to manage it. Uganda's response to COVID-19 offers lessons that future governments may adopt when faced with crises of similar proportions.

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ORCID

Solomon Mwije  <http://orcid.org/0000-0002-5403-7074>

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AUTHOR BIOGRAPHY

Solomon Mwije is a lecturer at the School of Social Sciences at Uganda Christian University. His research interests include development evaluation, community-based monitoring, gender and development, public health policy and interventions, maternal and child health, and a general critical understanding of local institutions and poverty reduction interventions. He is currently working with a team on “Conspiracy Beliefs and COVID-19 vaccination hesitancy in Uganda” project.

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