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REVIEW

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A scoping review of the roles of stakeholders and coordination mechanisms for enhanced multi-sectoral and multi-level interventions in COVID-19 response in Nigeria

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Abstract

Background Collaboration among multiple stakeholders from different sectors requires a coherent coordination mechanism in implementing responses to public health emergencies such as coronavirus disease 2019 (COVID-19) to improve the effectiveness and efficiency of countermeasures against the pandemic. The paper describes multi-stakeholder roles and the coordination mechanisms that were used at different levels of government in the COVID-19 response in Nigeria.

Methods A scoping review of documents on COVID-19 was undertaken between March 2021 and October 2022. Databases including Google Scholar, PubMed, Medline and Google were searched using "COVID-19", "Nigeria", "response" and "government" as the keywords. We included articles published from 30 January 2020 to 1 October 2022. The literature was extracted into Excel spreadsheets and analysed using the adapted WHO framework for multi-stakeholder preparedness coordination.

Results A total of 173 documents were reviewed. The review revealed that various stakeholders (state and non-state actors) at national and sub-national levels played complementary roles in the implementation of different countermeasures to COVID-19 in Nigeria. The multi-sectoral response to COVID-19 in Nigeria was coordinated through the Presidential and State Task Force Teams. However, there were very weak linkages between and across different task forces. In addition, the expert and advisory committees at national and sub-national levels apparently functioned independently without lines of communication amongst them to encourage information sharing and learning. More so, the processes of coordination of different actors and their activities were fragmented and constrained by poor communication of policies among stakeholders, poor planning and contextualization of response strategies, lack of data for evidence-informed planning and lack of accountability.

Conclusions The coordination of multi-stakeholders and multi-sectoral response to COVID-19 at national and sub-national levels in Nigeria was weak. A systematic coordination framework involving multiple stakeholders working at varying capacities is needed for effective and efficient response during pandemics such as COVID-19, to reduce duplication of efforts, inequitable resource allocation and wastage of resources and time. It is recommended that a future systematic coordination framework and guidelines involve multiple stakeholders, including the private

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and non-health public sectors, working at varying capacities and levels, to ensure an effective and efficient response during pandemics.

Keywords Coordination, Efficiency, COVID-19 response, Multi-stakeholder collaboration, Multi-sectoral, Nigeria

Background

The declaration of coronavirus disease 2019 (COVID-19) as a pandemic in January 2020 was a clarion call to countries to take urgent and aggressive multi-sectoral countermeasures and actions against the disease [1–3]. As of 10 March 2023, the number of confirmed COVID-19 cumulative cases in African countries was 8 968 069, representing 4% of the infections globally. In the African continent, Nigeria ranked as the 11th country, with a cumulative number of confirmed COVID-19 cases of 26 664 [4].

In recognition of the risks associated with the pandemic, the Nigerian government began to implement countermeasures to contain the virus and reduce morbidity and mortality from the infection. These interventions were undertaken at all levels of care, including at the community level, using multi-sectoral interventions, so as to ensure a better response to the disease [5, 6]. The importance of developing partnerships with multi-stakeholders for better outcomes during a pandemic has been previously emphasized [7].

The development and implementation of the response strategies in Nigeria were also undertaken through robust multi-stakeholder, multi-sectorial and inter-governmental approaches with the overall aim of suppressing the transmission of the COVID-19 virus and mitigating the impact in Nigeria [6, 8]. Multi-stakeholder partnership in a pandemic is the interactive process whereby actors from diverse sectors or an organization with varied ideas team up to design and implement activities or actions for an effective pandemic response through the distribution of financial and non-financial resources, as well as risks and responsibility [9, 10].

However, the involvement of multi-stakeholders, especially those from the non-health sector, requires optimal coordination so that the benefits of such collaboration are fully harnessed. According to the WHO, multi-sectoral coordination is defined as a "deliberate collaboration between stakeholders from multiple and diverse sectors and disciplines towards the shared goal and enhanced health emergency preparedness and response" and whose effectiveness is largely influenced by several contextual factors including political, economic and social [11].

In an emergency response, multi-sectoral collaboration helps to maintain and establish a smooth information and decision-making flow as well as an effective working relationship between various entities [12]. In addition, multi-sectoral coordination can strengthen country ownership, accountability, stewardship of resources and organizational effectiveness around health emergency preparedness, readiness and response [12, 13]. Multi-sectoral collaboration in the public health emergency conforms to the core principle of the Alma-Ata Declaration, which recognizes the importance of the involvement of all related sectors' efforts in health promotion for effective health systems [14, 15].

Collaboration between stakeholders from different organizations or sectors has been reported to create mutually competitive advantages and values [16] and is effective in achieving better health outcomes [17–19]. However, one possible shortcoming of the responses and contributions from various stakeholders was that when not properly coordinated, the result will be inequitable and inefficient allocation of resources.

However, such collaboration requires better coordination and is usually challenging due to its demanding nature involving interactions of several factors such as severe resource shortages, multiple conflicts of interest of actors/stakeholders, divergent values and goals, high demand for timely information/data from responsible agency/institution and infrastructure interdependencies [20]. The complexity of several entities involved in pandemic response and the often-changing dynamic of such emergencies, which are often time sensitive, have been documented as one of the most challenging aspects in the coordination of emergency response [12]. More so, insufficient specifications on roles and responsibilities of different stakeholders across levels of government – federal, state and local – on coordinating emergency responses has been shown to lead to challenges in establishing context-specific and effective coordination mechanisms, leading to poor coordination, unclear lines of authority and information asymmetries [21].

Coordination of multiple stakeholders in collaborative relationships prevents the duplication of efforts, promotes the efficient use of resources and fosters a sense of responsibility among members of the partnering organizations in public health emergency response [22, 23]. More importantly, early actions and enhanced coordination mechanisms are critical to slowing down the spread of a pandemic.

Evidence from research describing the processes of coordination and managing multi-sectoral collaborations towards a better response to COVID-19 in Nigeria

is scarce. Available studies on COVID-19 in Nigeria have focussed mainly on the health, social and economic impact of COVID-19 and the lockdown measures and its policy implications [24–36]. Exploration of the roles of stakeholders and coordination mechanisms in enhancing multi-sectoral and multi-level interventions post-COVID-19 era is crucial for better governance, particularly in a resource-constrained country such as Nigeria. This is particularly important now as the world transitions into a "new normal", where lessons learned from the pandemic can inform future interventions.

The paper's focus on Nigeria's response to COVID-19 provides valuable insights into the challenges faced by low- and middle-income countries (LMICs) in coordinating multi-stakeholder responses. By analysing the strengths and weaknesses of Nigeria's response, the study highlights the need for a systematic coordination framework involving multiple stakeholders working in varying capacities. This scoping review examines the roles of stakeholders and coordination mechanisms in enhancing multi-sectoral and multi-level interventions in COVID-19 response, with a focus on identifying best practices, gaps and areas for improvement. It provides recommendations for strengthening stakeholder engagement and coordination mechanisms in future public health emergencies on the basis of the findings of this scoping review.

Methods

Study setting and design

We undertook a scoping review of grey and published literature to explore governments' response and coordination of COVID-19 response in Nigeria at different levels, which were federal, state and local government. This is because Nigeria, as a republic, runs three levels of government, which are the federal and semi-autonomous state and local government area (LGA) levels.

The scoping review was considered suitable for the study because of the paucity of analytical assessments on the coordination of COVID-19 preparedness and response in Nigeria. Our review was based on the York methodology, which included five stages, namely, identifying the research question; identifying relevant studies; selecting the studies for review; charting the data, and collating, summarizing and reporting results [37].

A literature review was undertaken through a perusal of official documents, websites and databases. The sources of grey and published literature included websites of Nigerian relevant sectors, media reports and journal articles published within the study time frame to ensure comprehensive coverage of all sources providing information related to the COVID-19 response in Nigeria. The review was performed by a team of independent health systems researchers between March and October 2022.

Documents search strategy and retrieval

The official government documents and websites including policies, strategies, guidelines, government orders and reports of meetings of expert committees retrieved through an intensive search on organizational websites of government and non-government agencies involved in the COVID-19 response in Nigeria. Specifically, the websites include government agencies such as the Federal & State Ministries of Health, National Centre for Disease Control (NCDC), Federal Ministry of Education and Presidential Task Force on COVID-19, as well as those of non-government agencies, such as UNDP, UNICEF, WHO-Nigeria, etc. These websites were included in the review to have reliable and up-to-date situational reports of COVID-19 response, access to unpublished official documents such as minutes of meetings and expert recommendations for COVID-19 response and policy documents that are only available in print.

For the media articles, news reports included the websites of government and private media. However, the search was restricted to the websites of radio stations, television stations, daily news agencies and online news agencies that are reputable for real-time reporting of factual information from across the country, and are influential or have large viewership or readership. These media include daily news publication agencies, online news agencies and radio stations.

We searched for the database of published journal articles through an electronic search, namely on Google Scholar, PubMed/Medline and Google for peer-reviewed articles published in Nigeria.

The search for official documents, media reports and journal articles published was performed between March 2021 and October 2022. The names and sources of documents and media agencies searched are included as supplementary material (Supplementary Material 1). We included articles published from 30 January 2020 (which was the date COVID-19 was announced as an International Public Health Emergency and when Nigeria commenced the implementation of the WHO recommendations for infection prevention and control) to 1 October 2022. The study used various combinations of the following keywords: COVID-19 OR (COVID, coronavirus); Nigeria OR (Enugu, Anambra); federal government OR (state government, local government); and response OR (policy, guideline, intervention, strategy, plan) for the search. Specifically, a comprehensive search item comprised a minimum of five keywords (Boolean operators) selected from the words listed above:

((COVID-19 OR COVID OR coronavirus) AND (Nigeria OR Enugu OR Anambra) AND ("federal government" OR "state government" OR "local government") AND (response OR policy OR guideline OR intervention OR strategy OR plan OR coordination)).

The eligibility of articles or documents for inclusion was determined by a quick review of summaries, lead paragraphs or abstracts to determine whether mention was made of issues related to roles of state and local authorities and other stakeholders; processes of coordination and/or collaboration between federal, state and local authorities; and those documents that were written in English.

Following the review of the titles, summaries/abstracts and detailed examination of the studies, this review thus included articles describing or analysing the processes of coordination of COVID-19 response in Nigeria on the basis of significance, detail level and relevance to the research question. The flowchart showing the process of article selection for this review is shown in Fig. 1. Overall, 173 documents comprising 51 articles and 122 media reports were selected and included for review.

Data extraction and analysis

Data were extracted verbatim from source documents and were performed by six individual reviewers using excel spreadsheets; two separate spreadsheets were used to extract information from documents and media reports and pasted into corresponding cells of the spreadsheets. Each spreadsheet contained sections for recording information on the roles and contributions of the stakeholders/actors in the COVID-19 response, processes of coordination of COVID-19 responses/interventions and linkages that exist between stakeholders. Data from documents and media reviews were merged for corresponding themes/sections in Word files. The Word files of these merged data from each reviewer were used as the transcripts for data analysis.

The extracted data were collated, summarized and synthesized using a thematic approach, which allowed data from various sources to be systematically organized and analysed. Themes were developed inductively from the research questions and from recurrent topics that emerged from the transcripts. Table 1 highlights the themes in the coding framework.

Results

The results are presented according to the key themes explored as described in the data analysis section (Table 1).

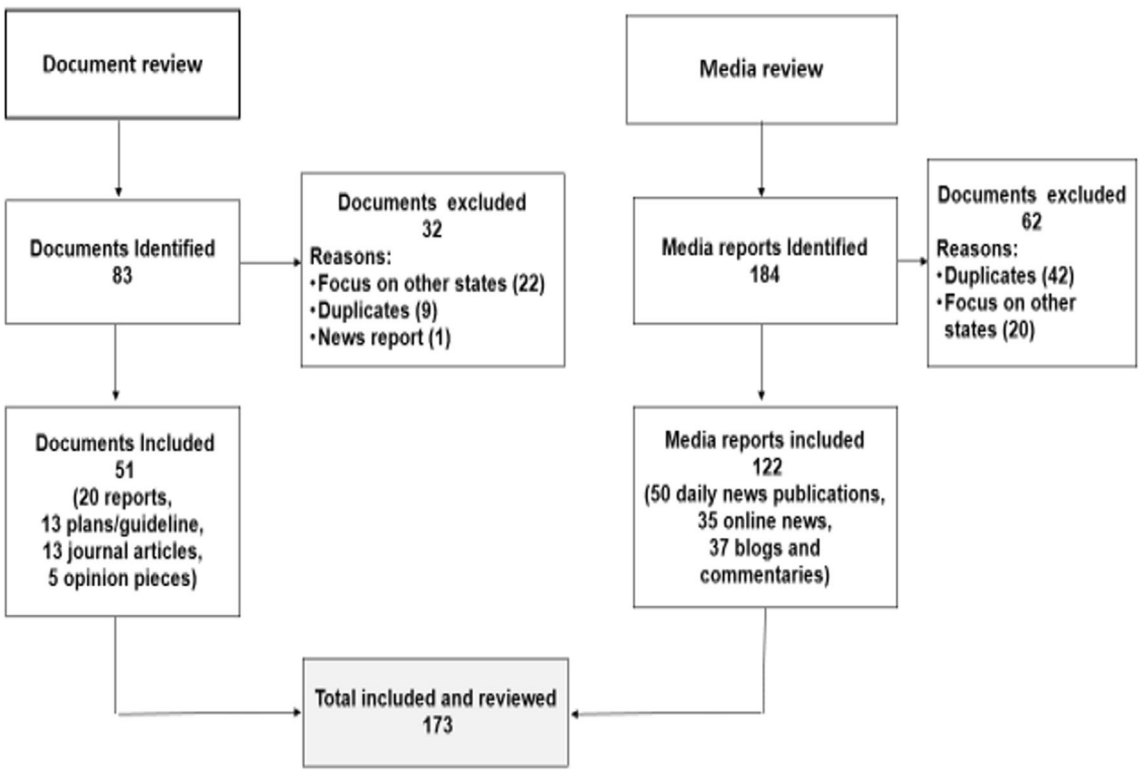

Fig. 1 Flowchart showing the process of documents and media reports included in the review

Table 1 Coding framework used in the thematic analysis of merged summaries of the review

Main themes	Sub-themes
Stakeholders and their roles in the COVID-19 response	National-level stakeholders
	State-level stakeholders
	Local government stakeholders
	Non-state actors
	Health providers
Relationships and linkages between stakeholders in COVID-19 response	Types of linkages and relationships
Contextual influences to effective collaboration among stakeholders' response to COVID-19	Facilitators
	Barriers

Stakeholders and their roles in coordinating COVID-19 response

Various stakeholders at national, state and local government levels played (and indeed continue to play) complementary roles in the coordination and actual implementation of interventions for the COVID-19 response in Nigeria. The various stakeholders and their involvement in the coordination of response at federal, state and local government levels are summarized in Table 2.

National-level stakeholders

When the first case of COVID-19 was confirmed in Nigeria, the Federal Government of Nigeria (FGN) through the Federal Ministry of Health (FMoH) announced a multi-sectoral coronavirus and pandemic preparedness group that was led by the NCDC [38]. The FMoH subsequently outlined the policy directions and response strategy for containing the spread of the coronavirus and set up the Ministerial Expert Advisory Committee on COVID-19 (MEACOC) to provide technical advice to the Honourable Minister of Health [39].

A Quarantine Act was elaborated by the Federal Government of Nigeria (FGN) to contain the virus by regulating internal (inter-state) and international movement and travel. Furthermore, Port Health Authority (PHA) employees stationed in Lagos and Abuja were deployed by the FMOH to key entry and exit points to restrict movement [40].

The multi-sectoral response to COVID-19 in Nigeria was coordinated through the Presidential Task Force (PTF) on COVID-19 lead by Boss Mustapha. PTF was established on the 9 March 2020 to coordinate and oversee the multi-sectoral and inter-governmental response to COVID-19 in Nigeria [6]. The committee was tasked with the responsibility of providing overall policy direction, guidance and support to the National and State Emergency Operations Centres (EOC), and other ministries and government agencies involved in the response. Other mandates include delivering national and state-level pandemic control priorities such as the establishment of treatment centres, defining containment measures and promoting dissemination and management of information. A multi-sectoral Emergency Operations Centre (EOC) was activated at Level 3 – the highest emergency level in Nigeria, led by NCDC in close coordination with the State Public Health EOCs (PHEOC) [41].

More so, the FGN established economic countermeasures to contain the coronavirus and stimulate the economy by protecting businesses, creating jobs and protecting vulnerable groups from economic hardship [39]. The federal government's economic response was led by the Economic Sustainability Committee (ESC), which is chaired by the Vice President of Nigeria, Prof. Yemi Osibanjo, while the Minister of Finance co-chairs the sub-committee on fiscal stimulus measures. The ESC developed the Economic Sustainability Plan, which was published in June 2020 [42]. Part of the economic plan was the announcement of fiscal and stimulus measures to shore up the economy. These measures included reducing government spending in anticipation of lower revenues from crude oil exports and providing up to 50 billion Naira to support households and small- and medium-scale enterprises affected by COVID-19 [42]. The plan consolidates on existing safety net programmes such as cash transfers and N-power and reviews loan repayment plans for micro-credit interventions (tradermoni) such that beneficiaries are given a 3-month "holiday" period before loan repayment begins [39].

The Central Bank of Nigeria (CBN) extended the moratorium and provided a reduction of interest rate, credit support for the healthcare industry, regulatory forbearance and N50 billion targeted credit facility to reduce the impact of the virus and stimulate the economy [43]. Similarly, the Federal Inland Revenue Services (FIRS) introduced some tax-exemption and extension measures and relaxed some audit requirements to reduce the impact of the pandemic on the economy of businesses

Table 2 Key stakeholders and their involvement in the coordination of COVID-19 response at national and sub-national levels in Nigeria

Level	Stakeholder	Role played	Sector and area
National	FGN	Constituted a presidential task force as overall coordinating body	Health–Governance
		Constituted a national multi-sectoral EOC	Health–Governance
		Enacted a quarantine act to contain the virus through regulation of movements and travels	Health–Governance
		Provided funds through NCDC to for laboratory testing, contact tracing and case detection, isolation of positive cases and treatment of patients with COVID-19	Health–Governance/Health Financing
		Established measures to contain COVID-19 and stimulate the economy from hardship	Economy–Finance
		Constituted Economic Sustainability Committee (ESC)	Economy–Finance
	PTF	Coordinated and oversee the multi-sectoral and inter-governmental response to COVID-19	Health–Governance
		Provision of overall policy direction, guidance and support to the National and State EOC and others involved in the response	Health–Governance
		Delivering national and state level pandemic control priorities such as establishment of treatment centres, defining containment measures	Health–Governance
		Promoting dissemination and management of COVID-19 information	Health–Governance
		Policy/decision-making on safe re-opening of schools and learning centres, international travel and immigration policies	Health–Governance
	ESC	Developed and announced Economic Sustainability Plan on fiscal and stimulus measures to shore up the economy	Economy–Finance
	CBN	Extended moratorium and provision of reduction of interest rate	Economy–Finance
		Provided credit support for the healthcare sector	Health–Health Financing
		Provided credit facility to reduce the impact of the virus and stimulate the economy	Economy–Finance
	FIRS	Introduced some tax-exemption and extension measures, and relaxation of some audit requirements to reduce the impact of the pandemic on the economy of businesses and corporate organizations	Economy–Finance/Taxation
		Granted administrative concessions to tax payers in response to cushion the effect of the pandemic on household and individual incomes	Economy Finance/Taxation

Table 2 (continued)

Level	Stakeholder	Role played	Sector and area
	FMOH	Constituted of a multi-sectoral COVID-19 and pandemic preparedness group	Health–Governance
		Set up the Ministerial Expert Advisory Committee on COVID-19 (MEACOC)	Health–Governance
		Developed the policy directions and response strategy for containing the spread of COVID-19	Health–Governance
		Stationed Port Health Authority staff in major cities of key entry and exit points – Lagos and Abuja for movement/travel restriction	Health–Governance
		Approved closure of school for safety of students, teachers and other staff	Education–Governance
		Developed a policy which detailed guidelines for safe re-opening of schools and learning centres	Education–Governance
	MEACOC	Provided technical advice to the Minister for Health on COVID-19	Health–Governance
	NCDC	Led and coordinated a multi-sectoral and pandemic preparedness group on COVID-19	Health–Governance
		Led and coordinated a multi-sectoral EOC at federal and state levels	Health–Governance
		Trained health workers to engage in active case search and contact tracing	Health–Governance/Human Resource for Health (HRH)
		Distributed PPE in treatment centres, teaching hospitals and primary healthcare agencies across the states	Health–Governance
		Established a dedicated portal for registering international travellers (returnees) for a 2-week quarantine period	Health–Governance/Health Management & Information System (HMIS)
		Risk communication and information dissemination	Health–HMIS
		Deployed staff across the states to support in data management and collation	Health–HMIS
		Reporting of epidemiological information/data such as cases, deaths, discharges, etc.	Health–HMIS
		Collaboration with the FMOI and the NOA for appropriate sensitization about the virus and that risk communication is maintained at all levels	Health–Governance/HMIS
	FMOI	Risk communication and information dissemination	Health–Governance/HMIS
	FMOE	Approved closure of school for safety of students, teachers and other staff	Education–Safety
	NOA	Risk communication and information dissemination	Health–Governance/HMIS

Table 2 (continued)

Level	Stakeholder	Role played	Sector and area
	FMOHA&DM	Protected and provided humanitarian and social assistance to people in IDP camps/areas	Social Welfare—Humanitarian andSocial Work
		Sustained the school feeding programme to reduce nutritional and social effects of the pandemic on children and vulnerable households	Health & Social Welfare–Humanitarian and Social Work
Sub-national	SG	Constituted of a national multi-sectoral EOC	Health–Governance
		Set up ad hoc expert Medical Advisory Committee	Health–Governance
		Provided reference laboratories to improve testing and case detection and treatment centres	Health–Governance/Service Delivery
		Procured Bsl2 or Bsl3 cabinet necessary for the upgrade and activation of the gene expert platform	Health–Governance/Service Delivery
		Released fund for revamping of some hospitals as isolation and treatment centres and for purchase essential health consumables and supplies	Health–Health Financing/Service delivery/Medicine and technology
		Earmarked fund for as a special health emergency	Health–Health Financing
		Approved life assurance packages for frontline health workers	Health–Governance/HRH
		Sensitization and risk communication to citizens and high-risk groups	Health–Information
		Approved closure of school for safety of students, teachers and other staff	Education–Governance
		Developed of detailed guidelines for safe re-opening of schools and learning centres	Education–Governance
		Provided COVID-19 preventive items/material – hand sanitizers, hand-washing equipment, facemasks, etc.	Health–Governance
	Multi-sectoral Rapid Response Teams	Developed effective measures for de-escalation of the pandemic in the states	Health–Governance
	Ad hoc expert Medical Advisory Committee	Provided technical advice to the state on de-escalation of the pandemic	Health–Governance
	STF	Contextualization and operationalization of national policies and guidelines on COVID-19 at the state level	Health–Governance
	PHEOC	Coordinate the State Public Health EOCs	Health–Governance
	Epidemiology Unit	Contact listing of suspect cases from points of isolation (POI) to treatment facilities	Health–Service Delivery
		Created linkages and referral services	Health–Service Delivery
		Notification of cases, deaths, discharges, etc.	Health–HMIS
		Risk communication and information dissemination	Health Sector–HMIS

Table 2 (continued)

Level	Stakeholder	Role played	Sector and area
	SMoH/SPHCDA	Developed a policy which detailed guidelines for safe re-opening of schools and learning centres	Education–Governance
		Developed effective measures for de-escalation of the pandemic in the states	Health–Governance
		Provided COVID-19 Preventive items/material – hand sanitizers, hand-washing equipment, facemasks and IEC materials, etc.	Health–Governance
	SMoE	Developed a policy which detailed guidelines for safe re-opening of schools and learning centres	Education–Governance
		Risk communication and information dissemination	Health–Governance/HMIS
	SMOI	Developed a policy which detailed guidelines for safe re-opening of schools and learning centres	Education–Governance
		Risk communication and information dissemination	Health–Governance/HMIS
LGA	LG	Implementation of policies and strategies at the city and community levels	Health–Service Delivery
		Bridging gaps in risk communication at the community levels	Health–Governance
		Enforcing pandemic prevention guidelines in public places	Health–Governance
	WTF and community leaders	Monitoring of community compliance with directives on public gathering	Health–Governance
		Assisting in contact tracing and case detection based on travel history and/or presence of symptoms	Health–Service Delivery
		Promoting pandemic prevention guidelines in public places	Health–Governance
Non-state actors	Development partners for example, WHO, UNICEF	Part of multi-sectoral Rapid Response Teams established at national and sub-national levels	Health–Governance
	CACOVID	Generated funds to support government's efforts to the response and alleviate socioeconomic effects of the virus on households and individuals	Economy–Financial Resources/Poverty Alleviation
		Financial support for provision of treatment, testing, training and isolation facilities all over the country	Health–Health Financing/Service Delivery
	POSWASH	Installed hands-free hand-washing facilities to promote hand hygiene in IDPs camps	Health–Service Delivery/Health Promotion
	Nigeria One UN COVID-19 response	Coordinated and aligned UN's efforts and leverage partnerships with the government, development partners and the private sector to improve COVID-19 response interventions in Nigeria	Health–Governance
	Nigeria SDI Alliance	Sensitization/community awareness campaign and provided IEC and preventive items	Health–Health promotion

Table 2 (continued)

Level	Stakeholder	Role played	Sector and area
	CSO, professional groups and organized private sector	Promoting hand hygiene and compliance to use of face masks in public places	Health–Service Delivery/Health Promotion
		Distribution of palliative to rural communities	Economy
		Production of risk communication materials	Health–Service Delivery/Health Promotion
		Training of community volunteers on contact tracing and use of PPE	Health–Service Delivery/Health Promotion
		Enforcement of safety measures and penalizing offenders	Health–Governance
		Provided relief and food items to poor and vulnerable groups	Economy–Poverty alleviation
Health workers	Health Provider	Case detection through laboratory testing and contact tracing of suspected individuals	Health–Service Delivery
		Referrals services	Health–Service Delivery
		Treatment services	Health–Service Delivery

and corporate organizations [43]. Furthermore, FIRS granted various administrative concessions to taxpayers in response to cushion the effect of the pandemic on household and individual income [44].

The epidemiologic profile/data of COVID-19 in Nigeria is coordinated by the NCDC at the national level. The staff of the NCDC are deployed to states to support data management and collation, and to ensure that all cases and deaths from COVID-19 are reported from states to the NCDC. In addition, the NCDC, the Ministry of Information (FMoI) and the National Orientation Agency (NOA) ensure that citizens are properly sensitized about the virus and that risk communication is maintained at community levels. Various media platforms [including short message service (SMS), radio, television and social media] have been used to promote risk communication and COVID-19 prevention measures such as physical and social distancing, restrictions in social gatherings, staying at home and hand hygiene practices [45].

NCDC has embarked on training health workers to engage in active case search and contact tracing [41]. Moreover, personal protective equipment (PPE) has been distributed in treatment centres, teaching hospitals and primary health care agencies in all 36 states and the FCT. There is also a dedicated portal for registering international travellers (returnees) to enable monitoring (through PCR tests) for a 2-week quarantine period following return from international travel [46].

The Federal Ministry of Education (FMoH) worked closely with the PTF to ensure the safety of students, teachers and other staff. After due assessment of the pandemic, approval for the closure of schools was granted with effect from Monday 23 March 2020 [38]. In collaboration with federal and state governments, and stakeholders in the education sector, a policy document that details guidelines for the safe re-opening of schools and learning centres was developed, and on the basis of the recommendations, decisions regarding the phased re-opening of schools were made for state level action(s).

The Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development (FMoHA&DM) has the responsibility of protecting and providing humanitarian and social assistance to people in conflict or disaster-affected areas in the country. The Ministry was mandated to sustain the school feeding programme during the pandemic to reduce the potential nutritional and social effects of the pandemic on children and vulnerable households [40]. About 70 000 metric tons of food were to be released from the national grain reserve for distribution to poor and vulnerable households, and internally displaced persons were granted 2 months' worth of food rations [43]. An additional 1 million poor and vulnerable households were added to the list of 2.6 million households eligible for assistance within 2 weeks [42].

State-level stakeholders

The coordination mechanisms at the state levels, to a large extent, mirrored what was obtained at the federal level. In line with the national response, multi-sectoral Rapid Response Teams were established in states, comprising representatives of relevant ministries, departments and agencies (MDA), and development partners such as WHO and UNICEF. State task forces were also established in all states of Nigeria to contextualize and adopt/adapt national policies and guidelines on COVID-19 to the state front. The composition of the state task force varies from state to state. However, it comprised policymakers, political office holders, heads of relevant ministries and agencies (including health, information and security), heads of referral hospitals and laboratories and civil society organizations. The state governments also play critical roles in awareness creation and risk communication to citizens and high-risk groups [47].

The state epidemiologists are in charge of contact listing after suspect cases have been moved from points of isolation (POI) to treatment facilities. They are also responsible for creating linkage with designated focal persons in referring facilities and notifying relevant authorities at the state (director of public health at SMoH) and national levels (director of surveillance at NCDC) [48].

The SMoE worked with the STF to ensure the safety of the school environment, including approval for the closure of schools and provision of handing washing facilities [38]. Some also worked with FMoE and other relevant stakeholders to develop a guideline for the safe re-opening of schools and learning centres that led to the phased re-opening of schools.

Local government stakeholders

The local government area (LGA) drives the implementation of the state's policies and strategies at the city and community levels. They have a critical role to play in bridging the gap in risk communication at the community level, and ensuring that pandemic prevention guidelines are strictly adhered to in public places.

Non-state actors

The private-sector Coalition against COVID-19 (CACOVID) has been heralded as a foremost contributor in the fight against the coronavirus pandemic in Nigeria [49, 50]. CACOVID comprises 100 private organizations and individuals who have pooled resources to support the government's efforts to contain the virus and cushion the socioeconomic effects on households and individuals

in Nigeria. According to a report by Business Day (2020), CACOVID has raised more than 27 billion Naira and supported the provision of treatment, testing, training and isolation facilities all over the country [51].

The Organized Private Sector for WASH in Nigeria (POSWASH) installed hands-free hand-washing facilities at target locations without hand-washing facilities to promote hand hygiene for vulnerable groups, especially those in internally displaced persons (IDPs) camps [52].

The Nigeria One UN COVID-19 response reflects the United Nations' support for an inclusive and nationally owned COVID-19 response through a shared vision and a common strategy. Its purpose is to coordinate and align the UN's efforts and leverage partnerships with the government, development partners, foundations, Civil Society Oragnizations (CSOs) and the private sector to increase the availability, accessibility, affordability, adaptability and acceptability of COVID-19 response interventions in Nigeria [53].

The Nigeria SDI Alliance, composed of Justice & Empowerment Initiatives—Nigeria (JEI), the Nigerian Slum/Informal Settlement Federation (the Federation) and the Physically Challenged Empowerment Initiative (PCEI), launched a community awareness campaign through peer-to-peer, door-to-door education and distribution of flyers, facemasks, hand sanitizers and handwashing stations across slums and informal settlements in Nigeria [54].

Several community groups and non-governmental organizations (NGOs) provided relief and food items to poor and vulnerable groups (women and children). However, there was no clear mechanism of coordination for these groups [55–57]. Apparently, these philanthropy groups decide and mobilize what they want to give, whom they want to assist and where they will find such people, without the guidance of the government.

Relationships/linkages between stakeholders in the COVID-19 response

The response to COVID-19 in Nigeria has been the result of collaborations between various government and non-government stakeholders at national, state and local government levels. Some of the notable responses to highlight these relationships or linkages are highlighted in Fig. 2.

Training of health workers

The training of laboratory technicians on testing for COVID-19 was jointly undertaken by the SMoH, NCDC and WHO [58]. Likewise, the National Primary Healthcare Development Agency (NPHCDA) complemented the efforts of state governments by training PHC workers on preparedness and response to COVID-19.

Policy/decision-making

Some states rolled out strategies and state-specific measures independent of the control and directives of the national government. However, irrespective of the origin of the policies or interventions, they have been mostly synergistic. For instance, the decision to re-open schools was a joint decision between F/SMoE and the PTF [48]. Other stakeholders involved were local government, development

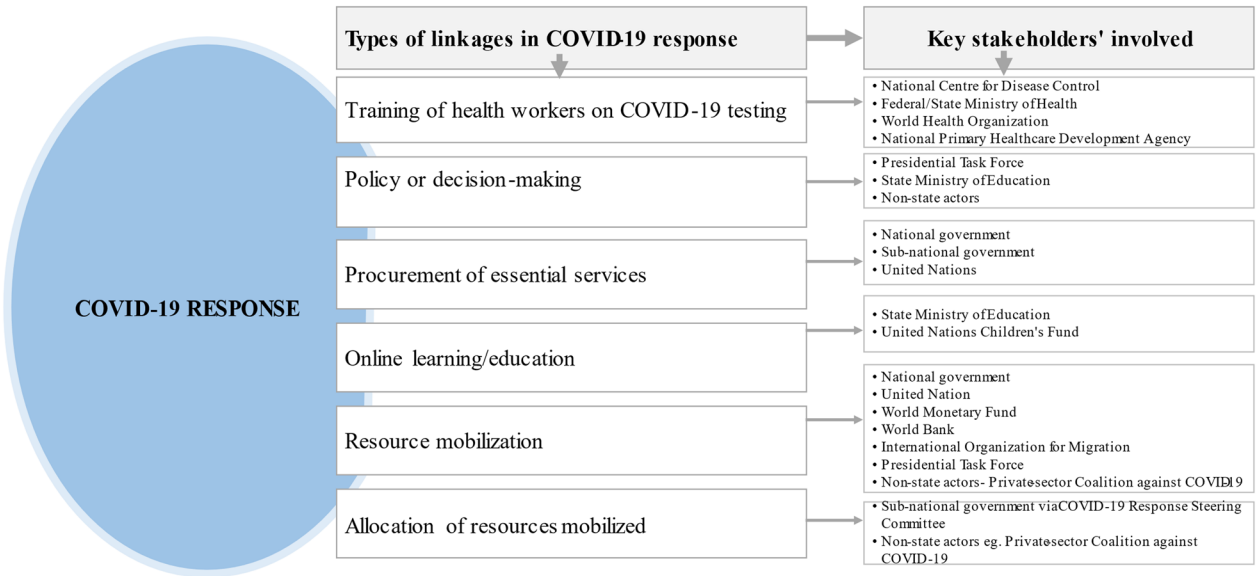

Fig. 2 Linkages between stakeholders in the COVID-19 response

partners, donors, civil society and the private sector. Parents/guardians, parent–teacher associations, school-based management committees, unions, communities and education service providers were also consulted for the safe reopening of schools.

Procurement of essential services

The government at the national and state levels has been working closely with the UN to procure essential health equipment for testing, quarantine and medical care [3, 45].

Online learning/education

UNICEF continues to provide technical assistance to FMOE and state governments to deliver home-based learning through radio and television for school-aged children [45].

Resource mobilization

The federal government have been making concerted efforts to mobilize internal and external resources from the private sectors, the UN and the World Monetary Fund (IMF)/World Bank [53]. International Organisation for Migration (IOM) has also been working with the government and relevant partners to (i) stem the impact of the disease, (ii) support the Government of Nigeria to safeguard development gains made thus far, mitigating the pandemic's socio-economic impacts and (iii) continue with life-saving assistance and services in emergency settings [59]. The IOM showed enough commitment to this by engaging with different working and technical groups coordinated by the UN in Nigeria to co-lead the World Food Programme, collaborate on the socioeconomic response pillar and support the PTF and National Laboratory system pillars.

Allocation of resources mobilized

Financial and material resources have been mobilized from philanthropists, private sector organizations and donor agencies [60]. The largest coalition of donors is the CACOVID. Similarly, the sub-national government-COVID-19 Response Steering Committee has successfully lobbied the government to ensure that PPE is adequately mobilized and equitably allocated to health workers in the COVID-19 isolation centres. Moreover, some traditional leaders are collaborating with the committee to ensure humanitarian support is equitably distributed to those in need [61].

Contextual influences to effective collaboration among stakeholders' response to COVID-19

Facilitators

Multiple funding sources

Federal and state governments generated their resources to contain the spread of the virus while providing as much support to the people as the economy would permit [62]. Funding from donors, private individuals and private establishments has been quite useful. Through pooled resources, the government have been able to start up test centres in many states and increase the test capacity of many laboratories.

Joint information dissemination

The government's intervention covers the spectrum of information dissemination and sensitization on preventive measures [62], but the task is not left to the government alone. Civil society groups as well as local partners at the community level have been helping to disseminate information regarding the virus. This was to ensure that people learn about the virus, in addition to learning ways to reduce the risk of exposure.

Non-state actors' involvement/supports

To further assist the government, some non-state actors including the organized private sector at national and state levels joined in the enforcement of lockdowns, provision of health resources and food palliatives and advocacy for efficient and transparent utilization of resources by the governments throughout the period and beyond have contributed to stimulating city level coordination of the response [63–65].

Grassroots involvement

Although the tasks of screening, contact tracing and testing and isolation and care have been primarily the responsibilities of federal and state governments, the processes have been facilitated by the actions of city-level (ward) task forces [62].

Barriers

Poor communication of policies between state governments

Poor communication of policies between state governments was a serious challenge to the effective coordination and synergy of some responses. For instance, the installation of a gate at the Onitsha (Niger) head bridge created a misunderstanding between Anambra and the neighbouring Delta state government [66]. For several days and weeks, trucks conveying food items and fuel were stranded despite being categorized as essential services. Eventually, the blockade was lifted and the tension between the two states was resolved.

Weak enforcement of control measures by security agencies

The ban on interstate travel was violated by many citizens because security forces were compromised in their enforcement of the bans. Non-essential workers were granted access to travel in-between states if they were willing to pay their way through security checkpoints [67,

68]. This resulted in some state governors making occasional visits to inter-state boundaries to supervise and enforce the travel restrictions [69]. Similarly, there were breaches in social gatherings that necessitated crackdowns undertaken by some state governors [70].

Poor planning and poor contextualization of control measures

Implementation of lockdowns and curfews across the country, particularly in urban areas, was constrained by a lack of adequate preparation and adaptation to the country's context of an economy that is largely driven by the informal sector. Hence, coordination of the response was almost impossible as citizens found it difficult to adjust to the economic implications of a lockdown [71].

Lack of data or inappropriate use of data

The absence of data on the socio-economic status of urban residents affected the disbursement of palliatives since it was difficult to determine who was poor [72]. The measures of poverty used in the National Social Register to compile the list of those to receive conditional cash transfers were inadequate. The ability to recharge a mobile phone with more than 100 Naira and a bank balance of more than 5000 Naira are not standard parameters for measuring poverty and vulnerability. Rather, poverty is a composite measure of income level, consumption pattern, literacy level, employment status, nutritional status and levels of access to healthcare, safe drinking water and sanitation [73].

Corruption and lack of accountability

Health workers have complained that there are structural and facility-level corruption and accountability issues that compromise their efforts as healthcare providers to contain the COVID-19 pandemic and limit its health and social impacts [74].

Discussion

The study reviewed the roles of stakeholders and their coordination mechanisms in the implementation of the COVID-19 response in Nigeria. The finding reveals that the COVID-19 response in Nigeria adopted both centralized and decentralized approaches involving multiple stakeholders operating at various levels and playing different roles in varying capacities. The implication of the multiplicity of stakeholders in the COVID-19 response underscores the genuine interest of groups and individuals to control the outbreak and mitigate the potential health, social and economic consequences.

More so, having multiple stakeholders from various sectors was also an enabler and beneficial to the response in that it allowed for multiple sources of fund generation and material resources. Evidence shows that multiple flows of funds increase financial pool and security which enables the provision of a wider range of health interventions or services [75].

However, there are concerns about duplication of interventions, inefficient utilization of resources and skewing of beneficiaries of these interventions due to poor coordination of the stakeholders in the response [62]. In an attempt to mitigate wastage and inefficiency, some civil society organizations have formed coalitions in some states and are collaborating with state governments to appropriately target vulnerable groups. For instance, advocates for disabled people in Enugu state are working with the government to provide palliatives to people living with disabilities inside and outside of the city [63]. This will inadvertently contribute to the effective and equitable distribution of palliatives to these groups of people. Our findings are similar to previous studies from other countries that reported poor coordination and collaboration among stakeholders, including government agencies, healthcare providers and community groups and communication, affecting the effectiveness of the COVID-19 response [76–80].

The importance of strong coordination and governance in accomplishing set objectives in a collaborative activity or effort as described by Sullivan et al. (2012) was brought to the fore in the COVID-19 response in Nigeria [81]. The weak (or absent) linkages between stakeholders found in this study are worrisome because this fosters working in silos and may lead to duplication of efforts and inefficiency in resource utilization. Moreover, stakeholders stand to benefit from one another when linkages exist because, in addition to providing an opportunity for pooling resources together, it also enables sharing of vital information and leveraging others' experiences in designing and implementing interventions. Therefore, attention should be given to the coordination of stakeholders and their actions in pandemic response.

The findings showed that there were barriers to successful multi-stakeholder collaboration in the responses to public health emergencies [82–85]. The weak linkage between different stakeholders involved in the COVID-19 response in Nigeria provides useful insights into the limitations of collaboration with the COVID-19 pandemic response. This finding is suggestive that in the event of collaborative action with a diverse range of stakeholders to strengthen national or even sub-national pandemic preparedness and response, the responsible government should establish an appropriate, clear and comprehensible process and structure to guide the coordinated actions. This is important because collaborative efforts do not produce the anticipated results without any clarity of roles and responsibilities among partners

[86]. Therefore, the first and most crucial step in effective collaboration for the pandemic response is to develop standard operating procedures that will guide the activities and actions of multiple stakeholders and sectors. By doing so, members within a collaborative relationship become proactive in the management of differences in the organizational culture as well as the opportunity cost of regulatory compliance and would create the possibility of preventing many challenges including inefficiency in resource management and allocation, leadership and trust issues towards the decision-making process.

The report of the embezzlement of COVID-19 relief funds by government officials, particularly at the federal level, is not surprising, as corrupt practices in the health system, perpetrated by governments (e.g. finance-related corruption, procurement-related corruption, diversion of drugs and medical supplies) have been reported in Nigeria [87], hence fuelling the existing public mistrust of government and political officeholders. In addition, the approach deployed by the government to determine vulnerable (poor) households that will qualify for relief materials was also faulty and non-transparent. Leveraging data used for the social investment programme (SIP) to determine potential beneficiaries of the COVID-19 palliative was faulted as lacking in transparency. Considering that poverty measurement is multi-dimensional, it was also inappropriate to use the amount spent on airtime recharge to determine poor households that receive the relief material and some money.

Our finding on poor levels of communication and awareness creation is similar to studies concerning communication, data sharing and constrained or lack of prioritization of resources and priorities of the collaborating entities, which reflected in the multiple stakeholders' experience with collaboration in healthcare emergency response [85, 88]. Recently, Nigeria was on the news for the mass looting of COVID-19 palliatives that was discovered in warehouses in some major cities.

The delay in the distribution of palliatives was once more attributed to a lack of data on the vulnerable and poor. Our findings agree with studies that found that several countries faced challenges in data infrastructure and capacity to generate and use data effectively during the COVID-19 response [77–79, 89, 90]. Data are also a critical requirement to ensure that project planning and implementation are effective and successful. The consequences of the unavailability of a comprehensive and socio-economic status disaggregated register of urban dwellers became very apparent in the distribution of palliatives and cash transfers to vulnerable households. It significantly hampered the equitable distribution of palliatives in the cities and increased citizens' mistrust of the government. Governments should leverage the lessons of COVID-19 to generate a comprehensive database of urban dwellers and establish systems to ensure this database is regularly updated.

Overall, the review reveals that Nigeria's experience with multi-sectoral response to COVID-19 was hampered by poor communication, lack of data, and inadequate planning, highlighting that effective pandemic response requires stronger collaboration and engagement with multiple stakeholders, including state and non-state actors. The potential for leveraging traditional and community-based structures to support future pandemic response was also identified.

Comparing lessons learned from Nigeria with those from high-income countries (HICs) and other LMICs reveals similarities and differences in approaches to pandemic response. Weak coordination mechanisms and poor communication among stakeholders were also observed in a study conducted in six LMICs: South Africa, India, Kenya, Indonesia, Ghana and Uganda [91]. In these countries, lack of data for evidence-informed planning, poor planning and poor integration of the private sector and non-health public sectors were common challenges [91].

However, high-income countries (HICs), such as those in Europe and North America, had more established coordination mechanisms and stronger healthcare systems, which enabled more effective responses to COVID-19. There was better communication and collaboration among stakeholders, including the private sector and non-health public sectors. For instance, HICs have leveraged technology such as digital contact tracing and data analytics to facilitate remote work and virtual collaboration enabling more targeted and effective responses, while LMICs including Nigeria have struggled with infrastructure and resource constraints [92].

A major strength of this study is the holistic and inclusiveness nature of data collection in that data were extracted from published and unpublished documents and media reports. However, one major limitation of this study is that it relied more on document review as the method of data collection, which does not seem to give a broader picture of the extent of implementing the set responses and linkages across different actors, sectors and levels (which primary data would have answered), and thus, was a limited opportunity to explore and understand the real-life implementation of the response. However, the principles highlighted in this review are deemed correct, verifiable and trustworthy information. In addition, excluding documents written in other languages (such as Igbo, Hausa and Yoruba) could make the study miss out and not capture important communication products published for COVID-19 response at subnational levels. Lastly, we acknowledge that registering

the study protocol in the International Prospective Register of Systematic Reviews (PROSPERO) is a best practice for scoping reviews although some journals may not consider it a prerequisite for publication of scoping review papers. However, we followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) guidelines and the Joanna Briggs Institute (JBI) methodology for scoping reviews in our methods in the manuscript. The authors are willing to make the protocol and search strategy available on reasonable request.

Conclusions

The review shows that the response to the COVID-19 pandemic in Nigeria is characterized by supports and efforts from multiple stakeholders playing different roles in varying capacities. The multi-sectoral preparedness approach has contributed to the overall country's response to the pandemic. However, coordination of the response with response to linkage is sub-optimal and inefficient at national and sub-national levels, hence the duplication of efforts, inequitable resource allocation, wastage of resources and amplification of vulnerabilities in particularly urban settings.

These findings have significant implications for policy and practice, particularly in LMICs. The study's recommendations can inform the development of more effective pandemic response strategies, reducing duplication of efforts, inequitable resource allocation and wastage of resources and time. Key policy recommendations the findings include:

(i) Establish a systematic coordination framework and guidelines involving multiple stakeholders, including the private and non-health public sectors, working at varying capacities and levels, to ensure an effective and efficient response during pandemics.
(ii) Strengthen weak linkages between and across different task forces, and establish lines of communication amongst expert and advisory committees.
(iii) Improve data collection and analysis to inform evidence-based planning and decision-making.
(iv) Strengthen the capacities of sub-national coordination platforms by assessing their capacity gaps and providing training to meet these needs.
(v) Strengthen accountability and transparency in the management of pandemic resources to reduce irregularities and corruption in the procurement, distribution and use of resources at sub-national level.

Abbreviations

CACOVID	Private-sector Coalition against COVID-19
CBN	Central Bank of Nigeria
EOC	Emergency operations centres
ESC	Economic Sustainability Committee
FIRS	Federal Inland Revenue Services
FMoE	Federal Ministry of Education
FMoH	Federal Ministry of Health
FMOHA&DM	Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development
FMoI	Federal Ministry of Information
LGA	Local government area
MDA	Ministries, Departments and Agencies
MEACOC	Ministerial Expert Advisory Committee on COVID-19
NCDC	National Centre for Disease Control
NPHCDA	National Primary Healthcare Development Agency
PHEOC	Public Health Emergency Operations Centres
POSWASH	Organized Private Sector for WASH
PTF	Presidential Task Force
SMoH	State Ministry of Health
UNDP	United Nations Development Plan
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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Author contributions
O.O. and C.M. conceptualized the study. U.E. and C.M. were involved the literature review, extraction and analysis/synthesis. U.E. drafted the first manuscript. All authors reviewed and approved the final manuscript.

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Declarations

Ethics approval and consent to participate
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Consent for publication
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Competing interests
The authors declare that they have no competing interests.

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