

Response to Health Crises in Africa: Insight From Executing a 2-Year Project in Nigeria

Science Communication

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Abstract

Science advice aids in integrating scientific evidence into policymaking. In Africa, a significant gap exists between science and policy, necessitating high-quality advisory services. The Multifaceted Response Development from Research on COVID-19 in Africa (MURDER COVID-19) project by the Nigerian Young Academy (May 2021–April 2023) aimed to bridge this gap. Project outputs included eight policy briefs, 10 webinars, a hybrid international conference, and a searchable research equipment database. The project effectively dispelled COVID-19 myths, promoted vaccine confidence, and highlighted the need to strengthen health systems and

research capacity. The project provides valuable lessons/recommendations and serves as a model for collaborative initiatives addressing health crises and enhancing research capacity.

Keywords

collaboration, evidence, pandemic, policymakers, science advice, Nigerian Young Academy

Introduction

In December 2019, the first cases of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus causing coronavirus diseases 2019 (COVID-19), were reported in Wuhan, China. To the shock of many, from a local outbreak, the COVID-19 spread across the world and was declared a global pandemic by the World Health Organization (WHO) in March 2020. The COVID-19 pandemic is regarded as the world's most significant global health crisis since the 1918 H1N1 influenza pandemic (Morens et al., 2021).

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The SARS-CoV-2 virus spreads through respiratory droplets from infected persons and transmitted by air, contact with contaminated surface, or person to person contact. This mode of transmission made it easy for the virus to spread wide and fast. The infection rate and deaths arising from the disease drove governments to devise means of curtailing the spread of the virus. This was principally achieved through enacting and enforcing wearing of face masks, movement restrictions, lockdowns, and social distancing. These measures remained in place until the development and deployment of COVID-19 vaccines.

The lockdowns and restrictions on movement and gatherings brought about massive undesired impact on economy and social life across the globe. Jobs were lost, economies shrunk greatly, and people could no longer interact one-on-one as they desired. This was also reported to have had a mental health and psychological impact on people. Researchers have linked many of the civil unrests which rose massively across the globe in the year 2020 to the COVID-19 and have attributed these unrests as part of the socioeconomic footprints of lockdown and restriction policies enacted to control the spread of the virus (Institute for Economics and Peace, 2021; Mercy Corps, 2021). Unrests like the EndSARS protest in Nigeria, the black lives matter movement in the United States, among many others, have also been shown to be in a way linked to the pandemic lockdowns (Institute for Economics and Peace, 2021; Mercy Corps, 2021).

There were numerous arguments and misinformations during the pandemic, and who and what to believe about the disease became an issue. Also, citizens often argued that some of the government policies were based on one-sided views and not based on a holistic consideration of facts and realities (Oyebode & Unuabonah, 2022; Unuabonah & Oyebode, 2021). Science advice was critically needed to guide not only governments but also the citizens, and the need for scientists to learn how to communicate scientific evidence effectively to evidence users (policymakers, industry, and the public) became clearer.

During this period, the Nigerian Young Academy¹ initiated a multifaceted and sustainable science advisory project to bridge the science-policy gap in Africa especially in relation to COVID-19. The project known as Multifaceted Response Development from Research on COVID-19 (MURDER COVID-19) in Africa was funded by the National Research Foundation (NRF), South Africa under the COVID-19 African Rapid Grant Fund (ARGF) initiative which was in itself a multi-donor funding initiative. The objective of the project was to gather and document state-of-the-art research evidence and policy messages and communicate these to the policymaking community and the public in Africa. In addition, the project sought to facilitate the emergence of

an information sharing network to boost response capabilities to diseases at present and in the future. The project commenced in May 2021 and was formally concluded in April 2023.

This paper presents a synopsis of the MURDER COVID-19 in Africa project initiatives, implementation, outputs, and lessons. The objective is to share information on the activities performed, the various lessons gleaned and provide useful recommendations.

Project Background

The COVID-19 pandemic had a tremendous impact on the global economy, with nearly 7.7 million confirmed cases and over 427,000 deaths by mid-June 2020. In Africa, over 167,000 cases were reported, with around 4,000 fatalities by June 14, 2020 (World Health Organization [WHO], 2020). About a quarter of all confirmed cases and a fifth of all deaths were in four African countries (Nigeria, Ghana, Cameroun, and Senegal), all of which have an existing young academy of scientists. For instance, as of April 15, 2024, Nigeria recorded cumulative total of 267,188 cases and 3,155 deaths (World Health Organisation [WHO], 2024). To build a synergy, the activities in the MURDER COVID-19 in Africa project focused on these countries.

The full extent of the health and economic consequences of the COVID-19 pandemic are still unfolding, but currently, we know more about its health implications than its impact on household and individual welfare. Obviously, response emphasis now and in the near future should be on curtailing the disease itself, but the economic impacts are also significant and should not be ignored (Reeves et al., 2020). For instance, the World Bank (2020) estimated that economic growth in sub-Saharan Africa will decline from 2.4% in 2019 to -5.9% in 2020, with an associated loss in economic output up to US\$79 billion and welfare loss up to 10%. These will have dire consequences for African countries where large sections of the populations are in vulnerable households (International Labour Organisation [ILO], 2020).

Containing and mitigating the impacts of the COVID-19 pandemic required a comprehensive policy response that incorporates health and economic considerations. Developing such responses benefits from adopting an evidence-based approach. Given the urgency of the situation, sound evidence needed to be accumulated as quickly as possible, to fill existing knowledge gaps and inform appropriate responses. As the evidence accumulated, a pathway to research uptake and impact needed to be developed. This pathway should in principle take the form of rapid science advice that brings timely scientific evidence to policymakers and critical stakeholders who can then deploy them in support of national, regional, and continental responses.

Sound science communication and advice is essential, especially at the time, because the extent to which the negative impacts of the pandemic—on health and the economy—will be mitigated, and how long it will take to recover from these impacts, depended not only on good policy responses but how soon and how effectively these responses were implemented.

It has been suggested that African policymakers acknowledge the role of research evidence in policy and legislative activities (Akerlof et al., 2019). In a survey by the International Network for Government Science Advice (INGSA), 67% of policymakers admitted that researchers are the main providers of research evidence. However, only 7% of the policymakers listed science research and evidence as one of the factors they consider when making policy. Thus, while African policymakers admit that science and researchers are relevant for policymaking, they rarely apply scientific evidence or contact the researchers. Consequently, there is a wide science-policy gap in Africa even today. Indeed, 81% of policymakers and 75% of researchers in the INGSA survey noted that there is a big gap between science and policy on the continent (International Network for Government Science Advice [INGSA], 2020). Bridging this gap requires well-designed and high-quality science advisory services from the scientific community.

The value of science advice that acknowledges the needs and weaknesses of the policymaking community cannot be over-emphasized, especially in the face of a global threat like COVID-19. For instance, available evidence highlights that science advisory must not be based on “raw” science as is typically published in journals. Interrogative science advice where the provider and user of evidence interact offer the best outcomes. Instead of passive learning opportunities such as websites or journals, most policymakers tend to choose active person-to-person mechanisms for knowledge transfer, including dialogue panels, seminars, participative approaches, as well as conferences and other large public meetings. There is evidence to support the fact that where physical meetings are not immediately possible, digestible evidence in the form of policy briefs and infographics are appreciated by policymakers; formal publications like journal articles and book chapters are not as impactful (National Centre for Technology Management [NACETEM], 2011; Sanni et al., 2016). INGSA (2020) suggest that researchers need to feature more regularly on media programs to communicate their research findings and should present research in a simplified and easy to understand format via several communication channels, including public seminars or roundtables on contemporary issues like COVID-19. In light of these circumstances, the MURDER COVID-19 in Africa project aimed to collect and disseminate cutting-edge research evidence and policy messages to the policymaking

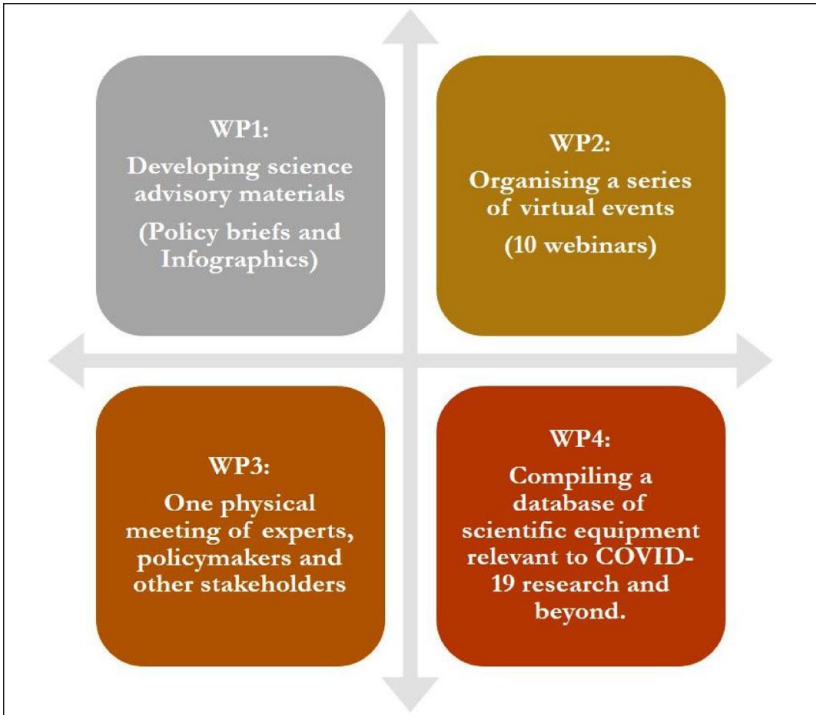


Figure 1. A Summary of the Various Project Work Packages (WP) in the Multifaceted Response Development From Research on COVID-19 (MURDER COVID-19) in Africa.

community and the general public across African nations. The subsequent section will outline the approach employed to accomplish this goal.

Project Delivery and Management

To ensure delivery of objectives, the project was divided into four work packages (WPs) as shown in Figure 1. Overall, the Vice President of the NYA at the time of the project commencement was designated as the principal investigator (PI). This was done partly to fulfill the donor requirement of a named PI and in keeping with best project management practices that prescribe the designation of an individual who bears overall responsibility for the project. Implementation of each WP was handled by an implementation committee comprising NYA members. The implementation committees reported to the

Executive Committee of the Academy. For smooth management and communication, each implementation committee included at least one member of the NYA Executive. Due to the donor's procedural requirements, the project funds were disbursed through and managed by the Nigerian Academy of Science (NAS). Thus, while the NYA was responsible for technical implementation, NAS managed the administrative and financial aspects of the project. In hindsight, this arrangement was particularly beneficial in two ways. First, it made it easier to keep the administrative and financial protocols steady especially during the leadership transition of the NYA, which was an inevitable experience given the length of the project and the tenured nature of NYA leadership. Second, it offered the NYA, a relatively young academy, to leverage on the network, goodwill, experience, and reputation of NAS throughout the project duration.

Delivery of the project was collaborative and interdisciplinary. From the proposal development stage, the NYA engaged internationally with the Young Academies of Ghana, Benin, Cameroon, and Senegal. These academies later contributed to the project deliverables. For instance, a number of activities and output (webinars, policy briefs, and infographics) were produced in the French language in collaboration with the Benin Young Academy of Science in Benin Republic, one of the Francophone West African countries. In addition to providing mentorship during the development stage, NAS supported with administrative backstopping and reporting throughout the project duration. For instance, NAS provided an office space for the project assistant at no cost to the project or to the NYA. All activities were also done in collaboration with other academies, agencies, institutions, and individuals within and outside Nigeria.

Project Deliverables

Policy Briefs and Infographics

Policy briefs, recognized as impactful vehicles for conveying evidence to policymakers, consist of concise documents that consolidate findings from individual or multiple studies (see Arnautu and Dagenais, 2021). These briefs adeptly distill complex information and employ simplified language, making them accessible to evidence users lacking technical expertise in particular disciplines. Furthermore, their brevity is a significant advantage, enabling policymakers to save time and make prompt, informed decisions, particularly in urgent situations where swift and accurate actions are imperative.

A total of eight policy briefs were developed and disseminated as part of the MURDER COVID-19 project. Each policy brief not only addressed issues

Table 1. Policy Briefs Produced and Disseminated as Part of the MURDER COVID-19 Project.

S/N	Title of the policy brief	URL
1.	The innovative approach to COVID-19 containment in Oyo State, Nigeria	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-Policy-Brief-21-The-Innovative-Approach-to-COVID-19-Containment-in-Oyo-State-Nigeria-.pdf
2.	Multifaceted response development from research on COVID-19 in Africa	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-COVID-19-Policy-Brief-2-March-2022-1.pdf
3.	Reaching the community on COVID-19 vaccination through sensitization of Muslim scholars and Imams	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-COVID-19-Policy-Brief-23-April-2022-.pdf
4.	Future pandemic preparedness and emergency responses	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-Policy-Brief-24-.pdf
5.	Being ahead of the curve: Winning the war against COVID-19 in Africa	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-Policy-Brief-25-.pdf
6.	COVID-19 and mental health: The need for action and the action needed	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-COVID-19-Policy-Brief-6-Sept-2022.pdf
7.	Towards control of Coronavirus disease in Nigeria: Trajectory of NCDC's response activities	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-COVID-19-Policy-Brief-7-Oct-2022.pdf
8.	Mitigating information disorder on COVID-19 pandemic	https://nigerianyoungacademy.org/wp-content/uploads/2023/01/NYA-COVID-19-Policy-Brief-8-Nov-2022.pdf

MURDER COVID-19 project resources can also be found: <https://bit.ly/nyaprojectresources>.

related to the COVID-19 pandemic but also looked beyond the pandemic so as to remain relevant even after the pandemic. The briefs were developed by experts in various fields who are credible and also played key roles in the fight against the pandemic. Table 1 itemizes the various policy briefs.

Each policy brief was further simplified into an infographic, which utilized various figures and pictures to simplify and clarify the key messages of the policy brief. This was done sequel to the fact that infographics have been established to be effective in captivating non-technical audience and enhancing understanding (Murray et al., 2017), as well as making evidence clearer and easier to imagine, interpret, and implement. All the infographics

developed are available on the Nigerian Young Academy's website: <https://nigerianyongacademy.org/murder-covid-19-project/>.

Virtual Events: Webinars

Virtual events are a quick and easy way to convey people from different parts of the world at the same time with less financial cost and less disruption of their schedules (since they would not have to travel to a physical venue). They became more popular during the pandemic and are utilized in different spaces (marketing, business meetings, etc.). They can be impactful when wisely organized and maximized. Virtual events are usually more highly inclusive as they eliminate economic barriers and other barriers (such as status and physical disability) that could hinder some groups of participants (Ramely, 2021). Ramely (2021) further showed that virtual events generally align with the Sustainable Development Goals (SDGs) principles of promoting inclusion, "leaving no one behind," sustainable utilization of natural resources, and equitable quality education. Numerous virtual platforms exist today and the choice of a platform for a virtual event must always consider target participants.

A total of 10 webinars were conducted under the project. Each webinar touched on diverse topics, featured a minimum of two speakers; and provided time for interactions between and among audience and panelists. Participants in the webinars included persons from various fields and walks of life. At the different webinars, academics, decision makers, government organizations, non-governmental organizations, business people, and students were represented. Table 2 lists the various webinars. Topics were selected through careful consideration of needs of the public and policymakers, and competent speakers were selected to discuss these topics. The key messages of all the webinars were summarized and compiled in a document which is downloadable here: <https://bit.ly/nyacovidwebinars>. Webinar recordings were also disseminated via social media channels.

Physical Meeting of Experts, Policymakers, and Other Stakeholders

A conference with the theme: "Linking Academic Research, Industry and Policy Engagement amidst COVID-19 Pandemic" was convened between August 23 and 26, 2021, in the Federal Capital Territory, Abuja, Nigeria. The hybrid conference boasted over 100 in-person attendees from various organizations in Nigeria, alongside virtual participants. In order to enhance

Table 2. List of Webinars Featured in the MURDER COVID-19 in Africa Project.

S/N	Date held	Speakers and topics	Recording
1	January 20, 2022	<p>1. Genomics and Translational Research in Africa: How Close is Africa to Local Vaccine Production? Professor Christian Happi (Professor of Molecular Biology and Genomics; Director of the World Bank funded African Centre of Excellence for Genomics of Infectious Diseases [ACEGID], Redeemer's University, Ede, Osun State, Nigeria).</p> <p>2. Nigerian Molecular Laboratory Network Beyond COVID-19 Professor Rosemary Audu (Professor of Medical Virology and a Director of Research at the Nigerian Institute of Medical Research [NIMR], Yaba, Lagos State, Nigeria).</p>	https://youtu.be/2_0QEYBLqY0
2.	February 28, 2022	<p>1. Effective Response Strategies of the Agricultural Sector to COVID-19 Induced Health and Economic Consequences Professor M. K. Othman (Department of Agricultural and Bioresources Engineering at Ahmadu Bello University, Zaria, Nigeria).</p> <p>2. Strategic Policies for Mitigating COVID-19 Induced Economic Hardship: The Entrepreneurship and SMEs Option Mr. Niyi Adekanla (Aidline Research Consult)</p>	https://youtu.be/rO61rFp7Ru4
3.	March 31, 2022	<p>1. Effectiveness and Merits of Some COVID-19 Vaccines; Time for Local Vaccine Independence Dr. Elijah K. Oladipo (Healthcare Research Scientist and Head of Department of Microbiology, Adeleke University, Ede, Osun State).</p> <p>2. Effective Communication and Acceptance of Some COVID-19 Vaccines: Lessons from the Ongoing Vaccination in Nigeria Ms. Eunice Damisa (Director of Advocacy and Communication at the National Primary Healthcare Development Agency [NPHCDA])</p>	https://youtu.be/fY_swhQzZMM

Table 2. (continued)

S/N	Date held	Speakers and topics	Recording
4.	April 25, 2022	<p>1. Perceptions et attitudes des populations vis-à-vis de la COVID-19 et des vaccins Dr Esther DEGUENON Université d'Abomey-Calavi</p> <p>2. COVID-19 et mesures de riposte au Bénin Dr. Geraud PADONOU Directeur de la Recherche, Ministère de la Santé, République du Bénin.</p> <p>3. De l'espoir suscité par la CEDEAO: le programme PARI pour des solutions anti-COVID à base de plantes médicinales Dr Victorien DOUGNON Université d'Abomey-Calavi</p>	<p>https://youtu.be/4ZeuFEwIB20</p>
5.	Thursday, May 26, 2022	<p>1. Mental health impact of COVID-19 Dr Olayinka Atilola Associate Professor. Department of Behavioural Medicine, Lagos State University College of Medicine, Ikeja, Lagos State, Nigeria.</p> <p>2. Lessons from issues surrounding COVID-19 pandemic in Northern Nigeria: Animal surveillance as future preventive strategy Dr Nusirat Elelu Associate Professor, Department of Veterinary Medicine, University of Ilorin, Nigeria—Chairperson, Kwara State COVID-19 Vaccination Technical Working Group and Community Engagement Committee</p>	<p>https://youtu.be/jG-3YG4C16l</p>

(continued)

Table 2. (continued)

S/N	Date held	Speakers and topics	Recording
6.	Thursday, June 30, 2022	<p>1. Future Pandemic Response: The Application of Geospatial Data in Nigeria for COVID- 19 Response Mr. Nazir Halliru GRID3 Nigeria Country Manager, Center for International Earth Science Information Network (CIESIN), Columbia Climate School, Columbia University.</p> <p>2. Mathematical modelling and the COVID-19 pandemic—past, present and preparedness for the future Prof. Daniel Okuonghae Department of Mathematics, University of Benin, Edo State, Nigeria</p>	https://youtu.be/7tjQw62QGI34
7.	Wednesday, August 31, 2022	<p>1. Explorer le potentiel des plantes médicinales africaines dans la lutte contre les pandémies virales (Exploring the potentiality of African Medicinal Plants in the fight against viral pandemics) Dr Boris LEGBA Université d'Abomey-Calavi.</p> <p>2. Adoption de stratégies efficaces de lutte contre la COVID-19: Le Bénin dans le cadre du respect de la Déclaration universelle de l'UNESCO sur les principes bioéthiques et les droits de l'homme (Adoption of Effective Strategies to Combat COVID-19: Benin in Relation to Respecting the UNESCO Universal Declaration on Bioethical Principles and Human Rights) Dr Philippe Sessou Université d'Abomey-Calavi</p>	https://youtu.be/nBGys2-7RPQ

(continued)

Table 2. (continued)

S/N	Date held	Speakers and topics	Recording
8.	Thursday, September 15, 2022	<p>1. Dr André M. Chagas of University of Sussex, UK: Open source initiatives for prompt response in resource limited settings</p> <p>2. Dr Kaisan M. Usman of National Agency for Science and Engineering Infrastructure (NASENI): Contributions of Nigerian content in the development of scientific and engineering infrastructure in response to COVID-19 pandemic</p> <p>3. Dr Royhaan Folarin of Olabisi Onabanjo University: 3D printing as a tool for rapid response to pandemics</p>	https://youtu.be/cCF45gREhWM
9.	Thursday, September 29, 2022	<p>1. Dr Émile N. HOUNGBO (Director, School of Agribusiness and Agricultural Policy, National University of Agriculture, Port-Novo, Benin Republic): Résilience de l'Afrique à la Pandémie de COVID-19: Quelles Leçons Pouvons-nous en tirer? (Africa's Resilience to the COVID-19 Pandemic: What Lessons Can We Learn?)</p> <p>2. Dr. Assongba Yedjanlognon Faustin (National University of Sciences, Technologies, Engineering and Mathematics (UNSTIM): La Médecine Traditionnelle Béninoise Face à la Pandémie de COVID (Beninoise Traditional Medicine Faced With COVID Pandemic).</p>	https://youtu.be/Vci4iId0A28
10.	Thursday, December 1, 2022	<p>1. Dr Garba Waziri Consultant Physician & Former CMD, Muhammadu Buhari Specialist Hospital, Kano Preventing the next pandemic: Lessons from COVID-19</p> <p>2. Dr Temitope Sogbanmu Lecturer & Ecotoxicologist, Department of Zoology, University of Lagos Preventing the next pandemic: The role of young academies</p>	https://youtu.be/BhJalI7GBX0

participation and mainstream the event, it was fully integrated into the annual academic calendar of the Nigerian Young Academy, designated as the “11th Annual Conference and General Assembly.” Aligned with project objectives, the conference centered on facilitating thorough debates among relevant stakeholders to mitigate the health and economic impacts of the COVID-19 pandemic in the West African subcontinent, identifying effective pandemic response strategies on the African continent, and outlining a multidisciplinary roadmap for effective policies amid the pandemic. These objectives were realized through diverse conference activities, including panel discussions featuring local and international experts, a keynote address on the conference theme, and 11 oral and 34 poster presentations, among other engagements. The dissemination of conference activities via print and electronic media aimed to raise awareness and sustain engagement. Moreover, to amplify the message, conference attendees were given stickers carrying a simple call to action urging all sectors to unite and collaborate to address the COVID-19 pandemic. The sticker reads, “COVID-19 is everybody’s business: Academia, Industry, Government. No one is safe until everyone is safe.” The conference proceedings are available here: <https://bit.ly/nya2021covidconfproceedings>. Some sessions of the conference were also recorded and archived on the YouTube channel of the Nigerian Young Academy.

Database of Scientific Equipment Relevant to COVID-19 Research and Beyond

To bridge the gap on facilities shortage which is one of the key challenges faced by researchers in Africa, the Nigerian Young Academy began the scientific equipment database. The database is an online open-access site where institutions can upload details of the facilities they have, while users of the database can then contact institutions having facilities they may need. This system would help to enhance maximal benefit from the thinly spread research facilities in the country while also strengthening collaboration and synergy which is key to more productive and impactful research.

A searchable scientific equipment database has been developed and is now live and openly accessible. Users can search for availability of scientific equipment across institutions within Nigeria. Users can also share data on equipment available in their various institutions and these will be made visible to the public after verification/confirmation of the information. The database is expanding as more data is being collated and updated. The research equipment database can be visited via this link: <http://researchequipmentdatabase.nigerianyouthacademy.org/>.

The first phase of the equipment database work only showcases facilities across institutions in Nigeria, but plans exist to expand the project to include West Africa and beyond. Just like the African Scientists online directory which enhances the visibility of various experts in the continent, the research equipment database will aid researchers to easily locate and access research facilities not immediately available to them. This database is open access so that the scientific community can access the data freely. Also, it has a mechanism to crowdsource information such that members of the scientific community can openly and freely submit entries on equipment to which they have access or on the availability of which they have information. Such entries will be screened to verify the information. The end of this is to make the database remain dynamic and continue to expand.

Project Impact, Challenges, and Lessons Learned

Impact

The MURDER COVID-19 in Africa project has profoundly impacted researchers, policymakers, government bodies, and the public across all geopolitical zones of Nigeria and other African nations. Various project events have successfully engaged these groups in diverse capacities. Efforts to bridge language barriers have ensured the inclusion of French-speaking nations, with all Policy Briefs and Infographics translated into French and 30% of webinars delivered in the French language. In addition, eliminating distance barriers has enabled online participation in international conferences, allowing for contributions and access to project outputs. The dissemination of project events and outputs through online news articles, newsletters, live streaming, and social media sharing has significantly expanded the project's reach. Beyond the over 400 Zoom attendees and 100-plus in-person participants, numerous individuals have accessed events live or afterwards, along with various project outputs. The Research Equipment Database hosted on the Nigerian Young Academy website provides freely accessible information for anyone seeking scientific equipment in Nigeria. Furthermore, NYA members and fellows have utilized social media platforms such as Facebook, Instagram, and WhatsApp to disseminate project outputs, reaching thousands through combined followership and resharing, thus maximizing transmission.

Participants from the various project engagements were enlightened on various ways to contribute to mitigating the pandemic and problems resulting from the pandemic. The various project engagements have also been effective in dissolving doubts, removing unnecessary fears, and clearing out

myths/lies/conspiracy theories about the COVID-19 disease and safety of the vaccines.

The engagements have also emphasized the need to **strengthen national health systems and research capacity** in Africa not only for better response to the COVID-19 pandemic but also for strengthening capacity to handle other diseases/health problems as well as for adequate preparedness against future disease outbreaks. Engagements from the project have also shown some lapses in response strategies, provided valuable recommendations for reducing economic and social impacts of the pandemic and provided information to strengthen science advice. In addition, the research equipment database will greatly help in strengthening collaboration among researchers and improving the quality of scientific research in Nigeria by making research equipment easier to access.

Challenges

Lockdowns and travel restrictions restricted in-person participation of international participants in the physical event. Also, the project involved no less than 10 virtual events of which the public were invited to participate. Due to an increase in the amount of zoom meetings especially during the pandemic period, some studies have shown the reality of zoom (virtual events) fatigue (Speidel et al., 2023). This was appropriately factored in spacing the virtual events, and in the duration and management of the events, so participants can easily cope and benefit maximally.

In addition, the evolving nature of the virus which brought in unanticipated events and trends called for flexibility in project implementation approach. For example, in choosing topics/speakers for events, current trends were appropriately considered to ensure the event would answer pertinent questions of the moment.

Also, it has become clear that to sustain and expand the research equipment database to continue to serve the research community in Nigeria and beyond, further funding and manpower will be required. Steps are already being considered to ensure the database remains dynamic, always updated, and available to serve the research community in Nigeria and is hopefully expanded to include other neighboring countries.

Lessons Learned

One of the lessons gleaned is that interventions are strengthened when interdisciplinary teams and multi-stakeholder partnerships are engaged. The complexity of problems and the unexpected effects that could spring from

one-sided interventions require partnerships, and synergizing of strengths from experts in diverse sectors and disciplines to tackle them effectively and sustainably. A systems thinking approach must always be employed in tackling a problem else more problems would be created. Truly, some of the interventions made during the COVID-19 pandemic though well-meaning were not effective and often created other problems difficult to tackle. Governments and organizations must embrace interdisciplinary models, multi-stakeholder partnerships, and a systems thinking approach in tackling problems.

Another lesson learnt is that effective communication is critical to the success of any intervention. Researchers and policymakers must arm themselves with effective communication skills. Also, strong partnership with those in the media could help strengthen communication and overcome several communication challenges. Misinformation and disinformation appeared to be another “pandemic” during the COVID-19 era which affected people’s attitude and perceptions, and thus negatively impacted many good interventions by governments and scientists. A strong communication strategy must be prioritized by researchers, policymakers, and anybody making an intervention.

In addition, the need for better synergy between policymakers and researchers in the health sector, as well as in all other sectors cannot be overstated. This synergy is necessary to build trust between both parties, foster production of quality evidence, and promote evidence utilization in decision-making. This will be mutually beneficial to both parties, and to the society at large, and will strengthen our capacity to tackle problems effectively.

Conclusion

The MURDER COVID-19 in Africa project, initiated by the NYA, has made significant strides in bridging the science-policy gap during the COVID-19 pandemic. The project’s multifaceted approach, encompassing policy briefs, infographics, webinars, a physical conference, and a scientific equipment database, has yielded valuable insights and outcomes. The policy briefs and infographics have effectively communicated research findings to policymakers and the public, addressing not only immediate concerns but also extending relevance beyond the pandemic. The webinars provided a platform for diverse voices, fostering inclusive discussions on crucial topics. The physical conference facilitated in-depth debates among experts, policymakers, and stakeholders, contributing to a multidisciplinary roadmap for effective policies amid the pandemic. The creation of a scientific equipment database addresses the shortage of research facilities in Africa, promoting collaboration and enhancing research productivity. Despite challenges such as virtual

event fatigue and the evolving nature of the virus, the project has played a pivotal role in dispelling myths, promoting vaccine confidence, and highlighting the importance of strengthening health systems. To sustain these efforts, ongoing funding and manpower are essential, and steps are being taken to expand the research equipment database beyond Nigeria. The project serves as a model for future collaborative initiatives to address health crises and build resilience in research capabilities.

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Note

1. The Nigerian Young Academy (www.nigerianyoungacademy.org) is a unified platform for interaction among brilliant young researchers in Nigeria (not above the age of 40 years at the point of entry) who are from various research disciplines and regions of the country. The academy seeks to nurture outstanding and aspiring youthful academics and professionals toward improving the state of the nation. The academy recognizes excellence among young researchers nationally and promotes the application of collective research findings for the improvement of the quality of the society. It also plays a crucial role in building inspirational figures for a new generation of researchers.

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