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RESEARCH ARTICLE

Navigating ethical research during crisis: Facilitators and barriers to research conduct in Uganda amid the public health emergencies (COVID-19)

[version 1; peer review: 1 approved with reservations]

Christopher Ddamulira[1,2], Hellen Opolot[1], Beth Mutumba[1], Dorcas Lamunu[1], Steven Ssebale[1], Irene Semakula[1], Jacob Komakech[1], Bernard Kikaire[3], Helen Byomire Ndagijje[4], Vivian Nchanchou Mbanya[5], Rosemarie De La Cruz Bernabe[5,6]

[1]Uganda National Council for Science and Technology, Kampala, Central Region, Uganda
[2]School Graduate Studies and Research, Bugema University, Kampala, Central Region, Uganda
[3]Uganda National Health Research Organization, Entebbe, Uganda
[4]National Drug Authority, Kampala, Uganda
[5]Centre for Medical Ethics, Institute of Health and Society, Faculty of Medicine, University of Oslo, Oslo, Norway
[6]Faculty of Health and Social Sciences, University of South-Eastern Norway, Oslo, Norway

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Abstract

Background

Research regulation shapes how studies are conducted during public health emergencies, ensuring adherence to ethical, safety, and legal standards. However, gaps in the practical implementation of regulation remain evident during crises. Uganda is particularly vulnerable to public health emergencies due to its proximity to epidemic hotspots, location within multiple disease belts, rapid population growth, and refugee influx. This vulnerability underscores the need for robust systems to support ethical research conduct. This study explored how the COVID-19 pandemic affected research regulation and ethical oversight in Uganda.

Methods

A qualitative descriptive design was employed. Data were collected through in-depth interviews, key informant interviews, and focus group discussions involving 56 participants across seven districts (Gulu, Mbale, Mbarara, Bushenyi, Wakiso, Mukono, and Kampala).

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1. **Gerry A. Quinn**, Ulster University, Coleraine, UK

Any reports and responses or comments on the article can be found at the end of the article.

Participants included Research Ethics Committee (REC) chairpersons, REC administrators, researchers involved in COVID-19 studies, and representatives from national regulatory bodies. Purposive, criterion-based sampling was used. Data were analyzed using thematic analysis.

Results

The COVID-19 pandemic disrupted research conduct and regulation but also prompted key adaptations. Facilitators included the development of research guidelines, implementation of risk management strategies, prioritization of COVID-19 studies, and adoption of digital submission and review systems. Barriers included suspension of studies due to travel restrictions, delays in protocol approvals, increased financial costs, unclear communication, technological challenges, and poor internet connectivity. Regulatory processes were reshaped through expedited reviews, new policies, and increased reliance on online systems.

Conclusion

The pandemic revealed both challenges and opportunities within Uganda's research ecosystem. While disruptions hindered ethical research conduct, adaptations demonstrated potential for more efficient and resilient systems. Strengthening communication, digital infrastructure, and sustainable funding mechanisms is critical to ensuring research continuity during future public health emergencies.

Plain Language summary

This study looked at how COVID-19 affected the way health research was done and regulated in Uganda, a country that is especially vulnerable to disease outbreaks. Researchers talked to ethics committee leaders and staff, researchers working on COVID-19 studies, and officials from national regulatory bodies in seven districts. They found that the pandemic disrupted many research activities. Some studies were paused, approvals were delayed, costs went up, internet and technology were often unreliable, and guidance was sometimes unclear. At the same time, the crisis pushed the system to adapt. New research guidelines were introduced, risk management plans were put in place, COVID-19 studies were prioritized, and many processes moved online, including study submissions and reviews. These changes helped some research continue and even made parts of the system more efficient. Participants felt that to be better prepared for future emergencies, Uganda needs clearer communication, stronger digital systems, and more reliable funding to support ongoing, ethical research.

Keywords

Barriers, Facilitators, Ethical Research, Research Conduct, COVID-19, Pandemic.



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Corresponding author: Christopher Ddamulira (c.ddamulira@uncst.go.ug)

Author roles: Ddamulira C: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Opolot H**: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Mutumba B**: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Lamunu D**: Conceptualization, Investigation, Methodology, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; **Ssebale S**: Conceptualization, Investigation, Methodology, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; **Semakula I**: Conceptualization, Investigation, Methodology, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; **Komakech J**: Conceptualization, Investigation, Methodology, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; **Kikaire B**: Conceptualization, Funding Acquisition, Methodology, Supervision, Validation, Visualization, Writing – Review & Editing; **Byomire Ndagijje H**: Conceptualization, Methodology, Validation, Writing – Review & Editing; **Nchanchou Mbanya V**: Conceptualization, Data Curation, Funding Acquisition, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **De La Cruz Bernabe R**: Conceptualization, Data Curation, Funding Acquisition, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Review & Editing

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Introduction

Public Health Emergencies (PHEs) are events that pose significant threats to population health at local, national, or global levels.[1,2] Their frequency and impact have increased in recent decades, including events such as H1N1 influenza (2009), Ebola (2013–2015; 2018–2020), poliomyelitis (2014 to present), Zika (2016), and COVID-19 (2020–present).[3–5] These emergencies affect millions annually, causing illness, deaths, and disruption of essential services such as healthcare, water, and sanitation.[4,5] As a result, countries have prioritized strengthening regulatory preparedness to support effective responses.

Research regulatory systems are essential during PHEs to ensure that studies meet ethical, legal, and safety standards.[4] However, these systems often face challenges in emergency contexts, including gaps in policies, institutional processes, and operational tools. In developing countries, these challenges are compounded by limited preparedness, such as weak adoption of reliance mechanisms, fast-tracking procedures, and flexible pharmacovigilance systems.[6] In Africa, over 1,910 outbreaks were reported between 1970 and 2019, highlighting persistent vulnerability to emerging and re-emerging diseases.[7,8] Uganda remains particularly at risk due to its proximity to epidemic hotspots, multiple transmission belts, high population growth, and refugee influx.[9]

The COVID-19 pandemic intensified pressure on research regulatory systems, requiring rapid coordination of expedited reviews for studies on prevention, diagnosis, and treatment across Africa.[10] In Uganda, the Uganda National Council for Science and Technology (UNCST) and Research Ethics Committees (RECs) introduced adaptive measures, including expedited reviews, virtual meetings, digital submissions, and the National Guidelines for Conduct of Research during Coronavirus Disease, 2020.

Despite these responses, there is limited empirical evidence on how COVID-19 affected Uganda's research regulatory system. Key gaps include its effects on REC operations, researcher–regulator interactions, digital transitions, and changes in oversight, workload, communication, and funding. This study addresses these gaps by examining stakeholders' perceptions of facilitators, barriers, and regulatory adaptations during the pandemic, providing insights to inform more resilient research governance in future PHEs.

Methods

A qualitative descriptive design[11,12] was adopted, utilizing in-depth interviews, focus group discussions (FGDs), and key informant interviews. This approach is appropriate for systematically describing stakeholders' perceptions of facilitators, barriers, and regulatory adaptations, as well as their experiences of ethical research conduct and oversight during the COVID-19 pandemic, without seeking to explain causal mechanisms. The study relied on retrospective participant accounts, capturing perceptions of events prior to data collection. It was conducted across seven districts in Uganda: Gulu, Mbale, Mbarara, Bushenyi, Wakiso, Mukono, and Kampala with participants drawn from all UNCST-accredited Research Ethics Committees (RECs) in March 2023.

At the time of the study, UNCST had 35 accredited RECs, of which 29 were operational between March 2020 and March 2023; for each REC, one Chairperson and one administrator participated. Participants were drawn from UNCST-accredited RECs, ensuring representation from both national and institutional committees. The study included four stakeholder groups within the research regulatory ecosystem: Research Ethics Committee Chairpersons, Research Ethics Committee administrators, researchers involved in COVID-19, and representatives of national regulatory authorities. These groups were selected because they are directly involved in implementing and overseeing research regulatory systems at both institutional and national levels, providing insights into the facilitators and barriers to conducting research in Uganda during public health emergencies such as COVID-19. In total, 56 participants were included: 16 REC Chairpersons, 11 researchers, 24 REC administrators, and 5 NRA representatives (one from UNHRO, two from NDA, and two from UNCST).

Participants in the focus group discussions (FGDs) were REC administrators, with each REC represented by one administrator. A total of four FGDs were conducted, each comprising six participants (total n = 24). The FGDs were stratified by host institution and type of research reviewed into four categories: (i) hospital-based RECs, (ii) education institution-based RECs, (iii) RECs primarily reviewing social sciences and humanities protocols, and (iv) RECs primarily reviewing medical and health sciences protocols.

In addition, 16 REC Chairpersons and 11 researchers participated in in-depth interviews, and 5 key informant interviews were conducted. These sample sizes fall within recommended qualitative ranges (3–6 FGDs, 5–15 key informants, and 10–30 in-depth interviews),[13] and thematic repetition across stakeholder groups indicated adequate information power and saturation.

Inclusion criteria: Participants who provided informed consent, REC administrators and Chairpersons who were actively serving in their positions at the time of the study, and researchers who were leading clinical trials between March 2020 and March 2023 during the COVID-19 and Ebola public health emergencies were included in the study.

Exclusion criteria: Individuals who did not provide informed consent; REC administrators and Chairpersons who were not actively serving in their roles during the study period; researchers who were not involved in leading clinical trials during the specified period; and members of newly accredited RECs without experience of research conduct and oversight during the COVID-19 pandemic.

Purposive, criterion-based sampling was used to recruit participants based on their roles and experience within the research regulatory system. Participants' information was accessed from the database of Uganda National Council for Science and Technology, which was thereafter used to reach out to the participants through either phone calls or emailing. The enrolled participants were engaged in respect of their convenient time schedules.

Data collection methods were tailored to participant groups: Research Ethics Committee administrators participated in focus group discussions, Research Ethics Committee Chairpersons and researchers in in-depth interviews, and representatives of national regulatory authorities in key informant interviews. Data were collected using structured, method-specific guides covering experiences of research conduct and regulation during public health emergencies, implementation of the National Research Information Management System, perceived facilitators and barriers, and adaptations in oversight processes. Key informant interviews involved representatives from the Uganda National Council for Science and Technology, the National Drug Authority (NDA), and the Uganda National Health Research Organization (UNHRO).

Major themes across data collection methods included, focus group discussions with REC administrators: operational changes, barriers, digital transformation and NRIMS experiences, coping strategies, opportunities, and recommendations. In-depth interviews with REC Chairpersons and researchers highlighted operations, challenges, regulatory support, online application improvements, guideline effectiveness, and preparedness recommendations. Key informant interviews with national regulatory authorities emphasized regulatory adaptations, challenges, digital systems, opportunities, and strengthening research governance. Collectively, these themes capture facilitators, barriers, and adaptations in Uganda's research regulatory system during COVID-19.

Interviews and focus group discussions were conducted by the principal researcher and trained research assistants in private, quiet locations convenient for participants. Focus group discussions were facilitated by at least two research assistants, behavioral and social scientists from Makerere University College of Health Sciences, trained in qualitative methods, human subject protection, and Good Clinical Practice. One assistant moderated the discussion while the other documented group dynamics, non-verbal cues, and interaction patterns. To minimize potential power imbalances, participants were reminded of confidentiality and the voluntary nature of participation.

All interviews and focus group discussions were conducted in English, lasting approximately 45–60 minutes. Interviews were conducted either in-person or virtually via videoconferencing with participants' consent and audio-recorded. Recordings were transcribed verbatim and securely stored on password-protected computers accessible only to the research team.

Data was analyzed using the thematic analysis framework outlined by Braun and Clarke,[14,15] which facilitated systematic coding, identification of themes, and interpretation of insights across the different participant groups, opinions, and experiences. Data analysis began with repeated reading of all transcripts to achieve familiarity with the data. Coding was conducted manually by examining the text word by word, with phrases or sentences highlighted and assigned shorthand labels (code). An inductive approach was used, allowing codes to emerge from the data rather than being predetermined. Similar codes were grouped into clusters, with some codes merged during the process, and these clusters were subsequently organized into themes. Two analysts independently coded the transcripts, and any discrepancies in code definitions were resolved through discussion and reference to the original data to ensure consistency. The resulting themes were then reviewed, refined, defined, and named to provide a clear interpretation of the data. Study findings are presented using these themes, supported by illustrative quotations from participants to reflect stakeholder perspectives.

Ethical considerations and consent

Ethical and scientific approval was obtained from the National HIV/AIDS Research Committee (NARC-2023-10), and final clearance was sought from the Uganda National Council for Science and Technology (UNCST) for registration and approval (SS2192ES). The administrative clearances were sought from UNCST, NDA, and UNHRO before the

commencement of any study activity. The UNCST, NARC, and the research team ensured that the study was conducted ethically, and in compliance with the national and international guidelines for research involving Humans as Research Participants.[16] Written informed consent was obtained from all study participants before they were enrolled in the study, and no minors were enrolled in the study. Only the approved study protocol, informed consent forms, and study tools were used when conducting the study.

Results

Theme 1: Institutional and procedural adaptations

Despite COVID-19 challenges, several institutional adaptations sustained research activities. Key measures included the development of tailored research guidelines, implementation of risk management plans, and prioritization of urgent projects.

Development of research guidelines

> "So, in that period, guidelines were put in place on how to implement research during, during pandemic, such a in a period like COVID-19 when it happened. Okay. So those guidelines, before I go to the implementation" (FGD 1, REC Administrators). "We didn't know how people are going to move between places, how people are going to interact and engage. So, the guidelines were important …" (IDI 01, REC Chairperson).

Implementation of risk management plans

> "At least as a REC, we did that, we encouraged the researchers to do those. I think the other time around the same time, the thing that came out was the risk mitigation. COVID-mitigation basically should be for things beyond COVID. But specifically, we used to ask that researchers include, COVID-19, risk assessment, and mitigation plan" (IDI 04, REC Chairperson).

> "I think there were elements of protection, uh, procedures for protecting the researcher, but also, the population" (IDI 02, Researcher).

> "We had to put in place risk management plans to ensure that research activities did not expose people to unnecessary danger" (FGD 2, REC Administrators).

Prioritization of urgent research projects

> "… the REC received, uh, a submission on a project regarding COVID-19, which required RECs to put in place quick means on how to make sure that that project is reviewed. Because it was something which required, maybe what, how can I say it? Uh, it required, uh, a quick response so that, because it was an issue of saving life, and by then the, the researchers who were linked to COVID-19 were more of saving life other than, uh, maybe other than treatment and whatever" (FGD 1, REC Administrators).

Theme 2: Digital transition and challenges

> "And then, you know, also thinking about how we support researchers online, the business of going to their offices or the business of bringing hard copy, hard copies. Documents for signing and delivery and all that stopped ceased" (IDI 06, REC Chairperson).

Transitioning to online processes posed challenges: long-serving REC members struggled with digital literacy.

> "One of the challenges was, um, members had to review via online, and that was so challenging because it was like the first-time people were used to the physical meetings, and it was somehow dragging the REC decisions" (FGD 1, REC Administrators).

Poor internet connectivity caused delays and rescheduled meetings

> "One of the major challenges was, you know, the internet connectivity. Uh, for some of the things really understand the quality, the quality of the internet would be poor because some old, for instance, yeah. We live in areas where, because of the infrastructure, sometimes they have poor quality of the internet. And so the interruptions, sometimes, uh, was difficult. We couldn't hear what somebody was saying and, and that, you know, sometimes the meetings would stretch longer than planned because, um, sometimes the internet would go off for some individuals while somebody speaking or something presenting. And so you, you had to organize another

meeting to finish the ones, the protocols that were not discussed, discussed. That was one of the challenges" (IDI 03, REC Chairperson).

Theme 3: Impacts on continuity, oversight, and workload

"I think COVID-19 taught us that it's, it's possible to review a clinical trial in a short time. Yes. And I think that is a good thing because before then you would take your time to review a clinical trial. But COVID-19 orders that it was possible to review in a short time. In a short time" (KII 02, Regulator).

"Like it made us UNCST to shift now from the hard copy, uh, to the, to the online, but also in terms of uh, being, being alert. And I'm happy that that is coming up because it has made us to like to be alert that in case of the similar, similar issue or similar emergency, we need to be awake" (KII 03, Regulator).

Barriers included temporary halts of some studies due to travel restrictions or budgetary constraints.

"… so particularly, I'll speak for my Research Ethics Committee. Yes. So, I already said the studies went down. Mm. And also, some of the studies closed, uh, because of the budgetary, you know, like already said, transport had to go up for participants. But then remember, this is a study that had been approved before the pandemic. So, they were running on that budget" (KII 01, Regulator).

"The other challenge was to do with, uh, resource constraints. You know, because of the overwhelming workload, very many people are bringing in protocols or proposals, covid related, and even the numbers were so high. So, in one way or the other, the overwhelming workload also is related with something to do with resource" (FGD 2, REC Administrators).

"So, you know, an environment where you are in a virtual meeting, you're at home with families, how small children running around like that, that was also one of the challenges" (FGD 2, REC Administrators).

Movement restrictions limited oversight and compliance monitoring

"… we're not sure whether our researchers would adhere to this risk mitigation strategies that they were submitting. You know, it's another thing to submit, but we could not verify that what they have submitted is what we are doing. So, I think that it was a challenge to ensure that the PIs were adhering to the mitigation plan, although they had submitted. So, it was a difficult time" (IDI 03, REC Chairperson).

"There are some who are resistant to the idea of all the time meeting online. We are saying, yeah, but we need to be in the same room. We need to be together; can we postpone this until the lockdown is over?" (IDI 06, REC Chairperson).

Theme 4: Financial and communication barriers

"What I'm saying is, let me assume that my initial budget was X, but then in following the guidelines for such during COVID, the IPC measure and things like that, they would increase my budget" (IDI 05, Researcher).

"But you can imagine that, and this is not the fault of the direct or the National Council, but you can imagine that this increased study costs or studies which were already running, our budgets were already set, but it was necessary under those circumstances" (IDI 09, Researcher).

Communication gaps regarding new guidelines caused delays and confusion

"So most of the times they would submit protocols without the COVID-19 risk mitigation plan. And then you had to tell them to prepare it. And then they're like, so, but what is this? Then, you have to refer them to UNCST websites, for this. So it affected, it delayed our review process at the REC level, largely because of limited awareness amongst the researchers" (IDI 02, Researcher).

Discussion

The discussion interprets the study findings in relation to existing literature, structured around the four themes identified in the Results. Emphasis is placed on participant perceptions, distinguishing new insights from known findings, and highlighting distinctive aspects of the Ugandan context.

Theme 1: Institutional and procedural adaptations

Participants stated that the formulation of national research guidelines helped streamline protocol reviews and guide ethical research conduct, in contrast supporting collaboration among regulatory bodies and expediting review processes. Notably, these adaptations were perceived as helpful rather than definitively ensuring outcomes. Comparable benefits of structured guidelines have been observed in sustaining HIV clinical trials elsewhere.[17]

Participants also observed that prioritization of urgent COVID-19 research projects facilitated timely data generation to inform public health responses.[18] What is distinctive in Uganda is the coordinating role of the Uganda National Council for Science and Technology, the interaction among different types of Research Ethics Committees, and engagement with stakeholders involved in the implementation of clinical trials in Uganda.[18] Notwithstanding these facilitators, challenges such as disruptions to ongoing studies and procedural modifications were reported, emphasizing the partial and context-dependent nature of adaptations.[19]

Theme 2: Digital transition and challenges

Shifting from physical submissions to online platforms enabled remote engagement between researchers and ethics committees, supporting continuity during travel restrictions.[17,20] Conversely, participants highlighted challenges in digital adoption, including difficulties among long-serving REC members and unreliable internet connectivity causing delays.[18] These challenges are coherent with reports from other African countries, including Ghana and Nigeria,[21] though European countries with established digital infrastructure experienced fewer disruptions.[22] Participants highlighted that digital transformation was only partially effective, varying by REC type and individual capacity. This aligns with global reports noting cybersecurity and accessibility concerns in Germany and the United States.[23]

Theme 3: Impacts on continuity, oversight, and workload

Participants explained temporary halts of research, delays in approvals, and increased workloads due to high volumes of protocol submissions. Movement restrictions and COVID-19 infections among reviewers further contributed to back-logs.[24,25] Although similar challenges occurred internationally, rapid decision-making alongside maintaining ethical standards was also reported in Germany.[26,27] Participants perceived these disruptions as highlighting the vulnerability of regulatory processes to external shocks and the importance of contingency planning, consistent with recommendations from global health organizations.[23,28]

Theme 4: Financial and communication barriers

Limited budgets and reduced funding were reported to significantly affect research conduct, including covering internet costs for online meetings.[29] Unlike some European countries that increased support for research adaptation,[30] Uganda faced continued financial constraints. Participants also emphasized limited awareness among researchers about guideline changes, contributing to delays and partial non-compliance with REC expectations.[24,31] In contrast, structured government-led communication in countries such as China and South Korea facilitated to mitigate these challenges.[29]

Limitations

The interviews took a lot of time due to the sensitivity of dealing with respondents' emotions about what happened during the COVID-19 pandemic and restrictions. The recall bias rose because of trying to remember the various experiences and operations of the RECs since March 2020. Conversely, these limitations were minimized by careful selection of the research questions, choosing an appropriate data collection method, and ensuring that the strategies to maintain rigor in the conduct and reporting of the study findings were followed. Trained research assistants who knew how to create a good rapport with participants before the interview and put emphasis on maintaining the privacy and confidentiality of the research participants were used.

Conclusion

The COVID-19 pandemic exposed both challenges and opportunities within Uganda's research ecosystem, that hindered and accelerated the research conduct respectively. These adaptations demonstrated the potential for more efficient and resilient research processes. Hence, strengthening communication, digital capacity, and funding mechanisms are essential for sustaining research continuity during future public health emergencies.

Data and software availability

Data underlying this study are available from the Zenodo repository: Dataset Supporting the Study on the Effect of Public Health Emergencies on Research Regulatory Systems. https://doi.org/10.5281/zenodo.19915894.[32]

The repository contains the

- COVID 19 STUDY ANONYMIZED NVIVO DATA comprising the anonymized study dataset and supporting files: COVID 19 STUDY ANONYMIZED NVIVO DATA (NVivo R15.2.1).nvp
- Focus Group Discussion Guide-REC Administrators.pdf
- In-Depth Interview Guide-REC Chairpersons, REC Members and Researchers.pdf
- Key Informant Interview Guide-Regulators.pdf

The data are available under the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0) License.

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Gerry A. Quinn
Ulster University, Coleraine, UK

Ugandan Covid ethics review
Navigating ethical research during crisis: Facilitators and barriers to research conduct in Uganda amid the public health emergencies (COVID-19)

Thank you for letting me review this interesting article. It is particularly welcome because there was a limited amount of articles emanating from the African continent during the Covid-19 period. It was my impression that African countries also pursued slightly different policies from western nations so their opinions and data add a larger perspective to this period in public health.

One aspect that I think that could have made this submission slightly better was if the authors could quantify the proportions of people that agreed with particular views. If the information was digitised and textually mined, I am sure there could be a way of quantifying opinions rather than using blanket statements of agreement.

I took the liberty of searching for opinions that might contrary to the ones expressed in this manuscript in Uganda and found several prominent scientists that might differ from the mainstream opinions, judging by the subject matter of their publications, however I see that their names are not included in this interview study. I think it is important that scientific ethics are debated from a wide base of ethical perspectives, therefore I think that the authors of this article should acknowledge (in a limitation section) that people were chosen for this project rather than being randomly selected or even being a cross section of Ugandan science or health practitioners.

I have made a few comments about other minor issues in the article:

“Participants felt that to be better prepared for future emergencies, Uganda needs clearer communication, stronger digital systems, and more reliable funding to support ongoing, ethical research.”
Did this statement originate from a text mining analysis of interviews? Perhaps this would be clearer to readers if this was explained.

“Their frequency and impact have increased in recent decades, including events such as H1N1 influenza (2009), Ebola (2013–2015; 2018–2020), poliomyelitis (2014 to present), Zika (2016), and COVID-19 (2020–present).[3–5]”
Does this sentence refer to data which shows an increase (compared to which period ?) in diseases or are the references merely to the specific diseases ? I note that ref 3 discusses events since 2007 but does not show any analysis of frequency of public health emergencies. Reference 4 is a promotional web-page and reference 5 is a report, rather than peer reviewed literature. Could the authors rephrase this statement to provide more clarity?

“These emergencies affect millions annually, causing illness, deaths, and disruption of essential services such as healthcare, water, and sanitation.[4,5] “
Could the authors please try and use original peer-reviewed research when making assertions or support these refs with peer reviewed material?

“As a result, countries have prioritized strengthening regulatory preparedness to support effective responses.”
Please state which countries or regions. It may also help to add a reference here.

“Research regulatory systems are essential during PHEs to ensure that studies meet ethical, legal, and safety standards.[4]”
Could the authors ensure that grey literature references are appropriately backed-up by peer-reviewed literature.

“However, these systems often face challenges in emergency contexts, including gaps in policies, institutional processes, and operational tools. In developing countries, these challenges are compounded by limited preparedness, such as weak adoption of reliance mechanisms, fast-tracking procedures, and flexible pharmacovigilance systems.[6] “
Could the authors also reinforce their grey literature reference with peer reviewed references ?

“In Africa, over 1,910 outbreaks were reported between 1970 and 2019, highlighting persistent vulnerability to emerging and re-emerging diseases.[7,8]”
Reference 7 seems to be missing a link to publication.
Reference 8 is an erratum page “**Infectious disease outbreaks in the African region: overview of events reported to the World Health Organization in 2018 – ERRATUM**
“

The authors state “Uganda remains particularly at risk due to its proximity to epidemic hotspots, multiple transmission belts, high population growth, and refugee influx.” but their reference actually discusses setting up an electronic database “**Uganda's experience in establishing an electronic compendium for public health emergencies “** rather than showing research on Uganda’s proximity to epidemic hotspots, transmission belts etc !

“The COVID-19 pandemic intensified pressure on research regulatory systems, requiring rapid coordination of expedited reviews for studies on prevention, diagnosis, and treatment across Africa.[10] “
Reference 10 is an editorial letter in Science, with no references. Could the authors reinforce this reference with some peer-reviewed material ?

Perhaps the authors could provide a reference for this statement “In Uganda, the Uganda National Council for Science and Technology (UNCST) and Research Ethics Committees (RECs) introduced adaptive measures, including expedited reviews, virtual meetings, digital submissions, and the National Guidelines for Conduct of Research during Coronavirus Disease, 2020.”
Reference 12 seems to be missing a link to the publication.

“Theme 1: Institutional and procedural adaptations
Despite COVID-19 challenges, several institutional adaptations sustained research activities. Key measures included the development of tailored research guidelines, implementation of risk management plans, and prioritization of urgent projects.”
Is there any quantification of ‘several’ ?

Could the authors contextualize this statement “***Development of research guidelines***
“So, in that period, guidelines were put in place on how to implement research during, during pandemic, such a in a period like COVID-19 when it happened. Okay. So those guidelines, before I go to the implementation” (FGD 1, REC Administrators). “We didn’t know how people are going to move between places, how people are going to interact and engage. So, the guidelines were important …” (IDI 01, REC Chairperson).
“
the same applies to most other sections and themes !
The results section is a bit confusing; it might be easier for readers to understand this if the authors included a small explanation of what was happening.
Authors should add some more context to the quotations to provide the appropriate background for quotations. This might bring more clarity to this section .
Should ref 19 also have a link ?

“Shifting from physical submissions to online platforms enabled remote engagement between researchers and ethics committees, supporting continuity during travel restrictions.[17,20]”

“Participants stated that the formulation of national research guidelines helped streamline protocol reviews and guide ethical research conduct, in contrast supporting collaboration among regulatory bodies and expediting review processes.”
I am not entirely sure what this sentence means !

When the authors say “**Theme 1: Institutional and procedural adaptations**
Participants stated that the formulation of national research guidelines helped streamline protocol reviews and guide ethical research conduct,“ can this be quantified ?

“Participants stated that the formulation of national research guidelines helped streamline protocol reviews and guide ethical research conduct, in contrast supporting collaboration among regulatory bodies and expediting review processes. Notably, these adaptations were perceived as helpful rather than definitively ensuring outcomes. Comparable benefits of structured guidelines have been observed in sustaining HIV clinical trials elsewhere.[17] “
Does this mean that the health policies enacted during the covid-19 period were informed by the data which was generated within Uganda?
Or that global policies towards covid-19 were modified by a Ugandan perspective ?

If responses to the interviews were fed into a text mining model would it not give some sort of quantitative indication of the responses to each subject.
For instance
“Participants also observed that prioritization of urgent COVID-19 research projects facilitated timely data generation to inform public health responses”
Was this all participants, the majority of participants or a significant proportion?

“**Conclusion** The pandemic revealed both challenges and opportunities within Uganda’s research ecosystem. While disruptions hindered ethical research conduct, adaptations demonstrated potential for more efficient and resilient systems. Strengthening communication, digital infrastructure, and sustainable funding mechanisms is critical to ensuring research continuity during future public health emergencies.“

I think the authors should also consider some lessons learned during the covid-19 period. In times of emergency it is very important to reinforce health and medical ethics so that the public can have confidence in any health directives. This might include independent verification of disease models and public health measures. It is also important that researchers can critically evaluate health measures without fear of sanction from governments, employers or health authorities. In addition, while health policies are designed at a national level, it is of extreme importance that patients and physicians are allowed to work together to develop personal healthcare pathways individually designed for the circumstances of each patient.

Is the work clearly and accurately presented and does it cite the current literature?
Yes

Is the study design appropriate and does the work have academic merit?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Yes

If applicable, is the statistical analysis and its interpretation appropriate?
Partly

Are all the source data underlying the results available to ensure full reproducibility?
Yes

Are the conclusions drawn adequately supported by the results?
Partly

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.