

## **Supplementary Appendix**

### **Author Reflexivity Statement**

#### **National and Subnational Governance and Decision-Making Processes during the COVID-19 Pandemic in Nigeria: An Empirical Analysis**

## Author Reflexivity Statement

A detailed author reflexivity statement, that examines equitable research partnerships and authorship in the publication of research from international partnerships, is provided below.

### Study conceptualization

1. *How does this study address local research and policy priorities?*

This study is designed to examine the governance and decision-making processes during the COVID-19 pandemic in Nigeria. Due to the widespread impact of the COVID-19 pandemic globally, examining how public health decision-making was carried out during a health emergency, amidst great uncertainty and time constraints, can help Nigeria better prepare for future pandemics. This aligns with Nigeria's domestic priorities related to strengthening epidemic and pandemic preparedness and response.

2. *How were local researchers involved in study design?*

IBG, WSU and ACI are affiliated with the Georgetown Global Health LTD/GTE Nigeria office based in Abuja, Nigeria. IBG, WSU and ACI were involved in defining informant selection criteria, and in reviewing and identifying potential key informants through their existing networks. WSU and ACI were also involved in data collection and data analysis.

### Research management

3. *How has funding been used to support the local research team(s)?*

This study is a component (Component 3) of the Cooperative Research Agreement (NU2HGH202000037) with the U.S. Centers for Disease Control and Prevention. The current Principal Investigator of Component 3 is CJS, while the Principal Investigator of the overall Cooperative Research Agreement is IBG (based in Nigeria). The current study examining governance and decision-making in Nigeria is part of a multi-country analysis within Component 3 of the Cooperative Agreement. Through this study, the local research team (WSU, ACI and IBG) has contributed to research related to governance and decision-making during health emergencies.

### Data acquisition and analysis

4. *How are research staff who conducted data collection acknowledged?*

All research staff who were involved in data collection are authors on the manuscript (SM, SA, WSU and ACI). Additionally, we have acknowledged the roles of authors who conducted data collection in the Contributor Statement.

5. *How have members of the research partnership been provided with access to study data?*

All members of the research partnership have access to the study data through Georgetown University's cloud storage platform i.e. Box Cloud Storage.

6. *How were data used to develop analytical skills within the partnership?*

Research members (SM, WSU and ACI) developed analytical skills in qualitative analysis and thematic content analysis, with support from senior members of the team and SA. This included developing key informant interview question guides, conducting key informant interviews, analysis of raw data for themes, sub-themes and codes, and using existing frameworks to guide the analysis. While LMIC research members (WSU, ACI and IBG) have previous public health research and publishing experience, they have not previously conducted research on governance and decision-making during health emergencies. Thus, this study helped research members gain relevant skills in qualitative research and in the field of governance and decision-making in health crises.

**Data interpretation**

7. *How have research partners collaborated in interpreting study data?*

SM, SA, WSU and ACI collaborated regularly through email correspondence and virtual meetings to discuss how to interpret study data. This included training sessions of qualitative research and thematic content coding, addressing discrepancies related to thematic content analysis, and assigning transcripts to research members (SM, SA, WSU and ACI) for coding. LMIC research members (WSU, ACI and IBG) also critically examined the manuscript drafts with respect to Nigeria country context and additional data included within the manuscript and supplementary file.

8. *Drafting and revising for intellectual content*

All members of the authorship team contributed to drafting and revising for intellectual content. SM wrote the initial draft of the manuscript, with ALP, CJS, SA, WSU, ACI and IBG critically revising the manuscript for intellectual content.

9. *How were research partners supported to develop writing skills?*

A post-doctoral early career researcher (SM) wrote the initial draft of the manuscript with more senior members of the research team providing additional writing support and training. ALP, CJS, SA, WSU, ACI and IBG critically revised the manuscript and provided constructive feedback. The LMIC members of the authorship team (WSU, ACI and IBG) have previous public health experience and have previously published research in peer-reviewed journals, demonstrating their existing high level of writing skills.

*10. How will research products be shared to address local needs?*

We plan to disseminate the findings from this study through multiple avenues. First, we aim to publish the findings in an open-access peer-reviewed journal. All participants whose quotes are used in the work have already been provided with a draft, in order to review and confirm that their perspectives have been used in an appropriate context. Upon publication, we plan to also share the final paper to participants in the study, who have been or are currently involved in the governance of the COVID-19 pandemic in Nigeria. Second, due to strong partnerships and existing networks with the Georgetown Global Health LTD/GTE office in Nigeria, in collaboration with the local team members, we plan on creating briefing materials that can be used by the local research team to disseminate findings to relevant Nigerian stakeholders and partners. Third, the results of this study will be shared with the U.S. Centers for Disease Control and Prevention which has extensive programmatic investment and partnerships in Nigeria, most notably with the Nigerian CDC, which is lead federal agency for pandemic preparedness and response, and is therefore best placed to utilize the findings to address local needs. Lastly, on completion of the multi-country analysis where we examine governance and decision-making in seven countries, we will engage with research leaders in global health and other fields, to disseminate findings on how countries can prepare for future pandemics.

### **Authorship**

*11. How is the leadership, contribution and ownership of this work by LMIC researchers recognised within the authorship?*

All LMIC research staff who were involved in the partnership are authors of the manuscript (WSU, ACI and IBG). Additionally, we have acknowledged the respective roles of LMIC authors in the Contributor Statement.

We acknowledge, however, that approximately 60% of the authorship team is predominantly based in high-income countries. The primary reason for this is that the Principal Investigators (CJS, ALP) of Component 3 of the Cooperative Agreement and the early career post-doctoral researchers (SM and SA) are based in high income countries. Component 3 consisted of a multi-country analysis that incorporated data collection and research in both HIC and LMIC contexts.

*12. How have early career researchers across the partnership been included within the authorship team?*

The authorship team is comprised of researchers with a range of experience (early, mid-career and senior). We have included early career researchers as authors (SM and SA).

SM and SA were both involved in study conceptualization and design, data acquisition and analysis, and manuscript preparation and writing. We acknowledge that they are affiliated with organizations based in high-income countries.

*13. How has gender balance been addressed within the authorship?*

Six authors are female (SM, SA, WSU, ACI, ALP and CJS) and one author is male (IBG).

### **Training**

*14. How has the project contributed to training of LMIC researchers?*

LMIC research members (WSU and ACI) developed analytical skills in qualitative analysis and thematic content analysis, with support from senior members of the team. Additionally, while LMIC research members (WSU, ACI and IBG) have previous public health research and publishing experience, they have not previously conducted research on governance and decision-making during health emergencies. Thus, this study helped research members gain relevant skills in qualitative research and in the field of governance and decision-making in health crises.

### **Infrastructure**

*15. How has the project contributed to improvements in local infrastructure?*

This study has not directly contributed to improvements in local infrastructure. However, the findings from this study can be used by public health practitioners and policymakers in Nigeria for future pandemic preparedness efforts.

### **Governance**

*16. What safeguarding procedures were used to protect local study participants and researchers?*

Approval to conduct the study was provided via Georgetown University's Institutional Review Board (Ref: STUDY00005099; the study was determined to be exempt from full committee review) and the study was also approved by the National Health Research Ethics Committee of Nigeria (NHREC/01/01/2007).

The research team did not identify any more than minimal risks associated with participation, as no personal information was collected during the interviews. Participants were interviewed in their official capacity and all responses were anonymous unless participants actively permitted their names, job titles and institutional affiliations to be used. Furthermore, to maintain participant confidentiality, unique identifiers were assigned to the informants. Finally, data, in the form of interviews and FGD transcripts

were stored in a password protected cloud storage platform used by Georgetown University (Box cloud storage) with access only provided to research team members.