Author(s)' Responses to Peer Review Reports

Godfrey Katumba, Herman Mwanja, Jonathan Mayito, Betty Mbolanyi, Fred Isaasi, Daniel Kibombo, Judith Namumbya, David Musoke, Jonathan Kabazzi, Musa Sekamatte, Lillian Idrakua, Richard Walwema, Mohammed Lamorde, Francis Kakooza, Simon Etimu

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Author(s)' Responses to Peer Review Reports

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Abstract

This is the author(s)' responses to peer review reports related to MS ID 50588

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Original Manuscript

Author Responses to Peer Review Reports

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Establishing Antimicrobial Resistance Surveillance in the Water and Environment Sector in a resource-limited Setting: A Methodical Qualitative and Quantitative Description of Uganda’s Experience from 2021 to 2023

DOI: N/A

Preprint URL: http://preprints.jmir.org/preprint/50588

Review Round 1:
Dear Editor,
Thanks for inviting revision in response to comments received on the manuscript JPH ms#50588 titled “Establishing Antimicrobial Resistance Surveillance in the Water and Environment Sector in a resource-limited Setting: Uganda’s Experience from 2021 to 2023”.

Please refer to the responses below.
Editorial comment 1: Please modify the title to be in line with our guidelines for titles ("Issue or Intervention in Demographic/Disease/Condition: Method/Study Design"). https://jmir.zendesk.com/hc/en-us/articles/115002943791-What-are-JMIR-s-guidelines-for-article-titles-
RESPONSE: This has been modified and now reads as “Establishing Antimicrobial Resistance Surveillance in the Water and Environment Sector in a resource-limited Setting: A Methodical Qualitative and Quantitative Description of Uganda’s Experience from 2021 to 2023”. Please see page 1 of the revised manuscript.

Editorial comment 2: Please make your abstract more robust. As many readers only read abstracts, JMIR prefers abstracts that are robust and reflective of the manuscript as a whole. Author guidelines allow for up to 450 words in an abstract.
RESPONSE: The abstract has been modified as guided. Please see pages 1 and 2 of the revised manuscript.

Editorial comment 3: Please a provide a more detailed background in the topic in the Introduction section and cite more scholarly references - more pertinent/related articles in the past 2-3 years could be cited
RESPONSE: The Background section has been revised as advised. Please see pages 2 and 3 of the revised manuscript.

Editorial comment 4: All tables and figures must have detailed, stand-alone captions; please include study design, disease, study population, location, time frame, etc.
RESPONSE: These were included in the Methodology section of the manuscript. Please see page 3 of the revised manuscript.

Editorial comment 4: Please let us know on revision if you would agree to a manuscript transfer to one of the suggested JMIR Publications journals, and which journal you prefer (List of partner journals: https://jmir.zendesk.com/hc/en-us/articles/115001442707). Note: Failing to address the suggested journal transfer options may result in delays in making an editorial decision.

RESPONSE: The work in the manuscript is suited for the JMIR PH & surveillance (JMIR Public Health and Surveillance (JPHS, ISSN 2369-2960) http://publichealth.jmir.org. We are okay with the work being published in this section.

Editorial comment 5: Please add a section on Data Availability. Please add these data sharing statements after the Acknowledgements. -- We encourage authors to ensure that their data sets are either deposited in publicly available repositories (where available and appropriate) or presented in the main manuscript or additional supporting files whenever possible. For example, these can be added as a URL to a repository and a URL to code used, attached as a Multimedia Appendix, or submitted/published separately in JMIR Data (https://data.jmir.org/). A Data Availability statement should still be provided even if access is restricted. In this case, a reason should be provided and possible steps for requesting access could be provided. For example statements which may be applicable to your data type(s) and study design, visit: https://support.jmir.org/hc/en-us/articles/360030832631-What-is-your-data-sharing-policy-
RESPONSE: The section on data availability was added to the manuscript ad it reads as “The data generated from the water and environment sector is a preserve of the Uganda MWE. It can be accessed by placing a request and concept on use to the Commissioner Water Quality Management Department in the Directorate of Water Resources Management, MWE.” Please see page 9 of the revised manuscript.

Editorial comment 6: Ensure that all statements in the Discussion/Conclusions appropriately match the conclusions that can be drawn. This applies to the Abstract and the manuscript text.
Response: These have been revised as recommended in the different sections of the manuscript.
Editorial comment 7: Please upload a revised version with tracked changes (or highlighted sections of text where changes were made) as a supplementary file, in addition to providing a clean version under "Revised Ms". See https://jmir.zendesk.com/hc/en-us/articles/115001400448 for details on how to respond to reviewer comments and upload a revised manuscript. Supplying a version of the manuscript with tracked changes facilitates the review process
RESPONSE: These have been provided.

Editorial comment 8: Please disclose whether generative AI was used in any portion of the manuscript writing. https://support.jmir.org/hc/en-us/articles/13387268671771-Do-you-allow-the-the-use-of-ChatGPT-or-other-generative-language-models-and-how-should-this-be-reported-
Response: No generative AI was used in any portion of the manuscript writing. Please see page 9 of the revised manuscript.
Further editorial/ peer- reviewer comment: Some reviewers recommended a transfer to the following journal(s): JMIRx Bio (https://xbio.jmir.org) Please let us know on revision if you would agree to a manuscript transfer to a sister journal and which journal you prefer.
RESPONSE: The work in the manuscript is suited for the JMIR PH & surveillance (JMIR Public Health and Surveillance (JPHS, ISSN 2369-2960) http://publichealth.jmir.org. We are okay with the work being published in the JPHS.

External Peer-reviewer comments
Reviewer B specific comment 1: A stepwise approach was employed. Governance structures were streamlined and sector-specific AMR surveillance guiding documents developed >> were developed
Conslusion > check this spelling
RESPONSE: This section was revised and now reads as “The Government of Uganda, through the MWE, with support from the Infectious Diseases Institute at Makerere University through the Fleming Fund Country Grant 2 project, instituted a step-wise approach with incremental targets and sequential phases from August 2021. This involved establishing a foundation; consolidating and

refining gains; scaling up and further expansion of the surveillance system." Please see page 3 of the revised manuscript.

The spelling for "Conclusion" was also corrected. Please see page 9 of the revised manuscript.
Reviewer B specific comment 2: CONFLICTS OF INTEREST >> CONFLICT OF INTEREST
Response: The suggested edit has been adopted. Please see page 10 of the revised manuscript.

Reviewer B specific comment 3: To streamline the AMR governance in the water and environment sector, a sector-specific AMR technical working group (TWG) was instituted with identified a focal person to coordinate the surveillance activities in the sector (rewrite this).
RESPONSE: This statement has been rewritten and now reads as "A sector-specific AMR technical working group (TWG) and a focal person position were established to coordinate AMR containment efforts including surveillance activities in the sector."

Reviewer B major comments
Reviewer B major comment 1: Enhancement of the microbiology capacity of the NWQRL
I would like to see a description of the testing platforms in this lab and plans for genomic surveillance of AMR since it reveals more about the complexity, evolution, and transmission of these pathogens as seen here
RESPONSE: The current testing platforms were described in the methodology section under the "Pre-test and rollout of the AMR surveillance documents sub-section". Please see page 3 of the revised manuscript.

Reviewer B minor comments
Reviewer B minor comment 1: The developed sector specific AMR surveillance documents were pre-tested (how was this done?)
RESPONSE: The steps followed during the pre-test were included. This section now reads as "The developed sector specific AMR surveillance documents were pre-tested through an active survey. This involved collection of samples from the Kampala- Wakiso region and analysing them at the NWQRL. Nine strategic surface water (non-point sources) and waste water (point sources) sampling sites were identified in Kampala and Wakiso and fifteen grab samples collected using the standard procedures as stipulated in the different surveillance documents. The samples were transported to the NWQRL under appropriate conditions and analysed using standard conventional culture-based procedures. The lessons learned during the pre-test were used to refine the surveillance documents." Please see page 3 of the revised manuscript.

Reviewer B minor comment 2: Figure 1. It would be important to share this data via a public dashboard like here (https://aslm.org/what-we-do/maap/maap-country-reports/)
Liguori et al. have described the methods as fairly standardized, and an avenue for further analysis of the recovered isolates including sensitivity testing, sequence-based typing and whole genome sequencing, which aid in detecting and identifying antibiotic-resistant genes and genetic elements [27] and virulence factors (https://www.frontiersin.org/articles/10.3389/fmicb.2022.835403/full).
RESPONSE: The section on data availability was added to the manuscript ad it reads as "The data generated from the water and environment sector is a preserve of the Uganda MWE. It can be accessed by placing a request and concept on use to the Commissioner Water Quality Management Department in the Directorate of Water Resources Management, MWE." Please see page 9 of the revised manuscript.

Reviewer B minor comment 3: Authors should also discuss making. a sentence on the contribution of environmental wastewater sequencing

RESPONSE: This has been included as advised and read as “Thus, the AMR surveillance systems in the sector require appropriate expansion to include whole genome sequencing and environmental wastewater sequencing.” Please see page 8 of the revised manuscript.

Reviewer B minor comment 4: As a way forward: I wish to request the authors to set up a public dash board to share this important AMR surveillance data to stakeholders beyond the TWG as seen here (https://aslm.org/wp-content/uploads/2023/07/AMR_REPORT_UGANDA.pdf?x89467)
RESPONSE: The section on data availability was added to the manuscript ad it reads as “The data generated from the water and environment sector is a preserve of the Uganda MWE. It can be accessed by placing a request and concept on use to the Commissioner Water Quality Management Department in the Directorate of Water Resources Management, MWE.” Please see page 9 of the revised manuscript.

Reviewer “BS” Major comments
Reviewer “BS” major comment 1: It also lacks a numerical comparison between the AMS values reported for the microbial isolates collected from point sources and non-point sources. The readability of the text is very satisfactory, however, there are still some parts that could be further improved!
RESPONSE: A comparison of the resistance observed among isolates collected from point and non-point sources was done. This section has been included and it reads as this “Overall, there was no significant difference between the resistance observed in E. coli and Klebsiella spp isolates recovered from point and non-point sources. Among the Enterococcus spp isolates, a significant difference (OR 5.318182 (95% CI 1.793498- 15.76977), p=0.003) was observed in the resistance to chloramphenicol between the isolates recovered from point and non-point sources. The Enterococcus isolates recovered from point sources were five times more likely to be resistant to chloramphenicol than those recovered from non-point sources.” Please see page 6 of the revised manuscript.

Reviewer “BS” Minor comments
Reviewer “BS” minor comment 1: The objective section was missed in the structured abstract.
RESPONSE: The objective section has been included in the structured abstract and it reads as “To describe Uganda’s experience in establishing AMR surveillance in the Water and Environment sector.” Please see page 1 of the revised manuscript.

Reviewer “BS” minor comment 2: The abbreviation should be relocated before the reference section.
RESPONSE: The list of abbreviations and acronyms used in the manuscript has been provided before the references section. Please see page 10 of the revised manuscript.

Reviewer “BS” minor comment 3: The map of study area with the georeferenced location of the monitoring sites along with the compactness of the surveillance site per unite of area were not presented!
RESPONSE: A map of the study area has been developed and provided as a figure PNG file.

Reviewer “BS” minor comment 4: No indicator was presented for assessment of limit of generated AMR data.
RESPONSE: An explanation for this has been provided in the Discussion section. It reads as “The representativeness of the AMR data generated is still limited as the active surveys are conducted in only the Kampala- Wakiso region. Therefore, the data may not be sufficient to generalize the prevalence of AMR in Uganda's water and environment sector. However, the data marks the first

efforts to generate AMR data in the sector, but more efforts are required to increase the quantity of the sector AMR data." Please see page 9 of the revised manuscript.

Reviewer "BS" minor comment 5: Comparisons of many AMR values are reported to be similar to other studies, while a significant difference as high as two times was noticed during the peer-review. It is recommended that to include the values from other studies in the table to facilitate the comparison. Re-write this section.
RESPONSE: The section has been rewritten as suggested. Please see page 7 of the revised manuscript.

Reviewer "BS" minor comment 6: Some points like "The program needs to be consolidated and expanded to include more sentinel sites, sample types, advanced AMR surveillance methodologies and techniques, and the surveillance of antimicrobial residues" presented in conclusions are not supported in the main area of the paper.
RESPONSE: The methodology and results sections were revised to include the suggestions. Please see pages 3 to seven of the revised manuscript.

Reviewer "BS" minor comment 7: Some information in abstract like 27% (n=160) of recovered isolates exhibited the MDR and XDR was never presented in the main text.
RESPONSE: This text in the abstract was changed. The statement now reads—"Up to 254 (64%) of the priority pathogens recovered exhibited multi and extensive resistance to the different antibiotics set." Please see pages 1 and 7 of the revised manuscript.

Reviewer "BS" minor comment 8: Data analysis section was totally unclear to me. Mainly I can't understand what steps taken to analyze the data. It is recommended that the author add some description with regard to that.
RESPONSE: The data section was revised and more description was added. The section now reads as "Microsoft Excel 2016 and Stata 16 were used for data entry, cleaning and analysis. Percentage resistance of the isolates to each antibiotic was generated and visuals (charts and graphs) developed. The Chi-square test and binary logistic regression were used to test whether resistance of the priority pathogens (E. coli, Klebsiella and Enterococcus spp) to the different antibiotics were significantly different across the point and non-point sources. A p-value of less than 0.05 indicated a significant statistical difference." Please see pages 4 of the revised manuscript.

Review Round 2:
Comment 1: As a result, and after discussing this manuscript with the Editor in Chief of the Journal, the only way that this manuscript can be reconsidered for publication in JPHS is if it is a viewpoint.
Response: The paper can be published in another sister journal (JMIRx Bio) as this is currently work in progress and more data will be provided on an annual basis so as to update the current body of research in the field.

Comment 2: Please disclose whether generative AI was used in any portion of the manuscript writing.
Response: No generative AI was used for any portion of the manuscript writing.

Supplementary Files

TOC/Feature image for homepages

Untitled.