Developing a Reporting Item Checklist for Studies of HIV Drug Resistance Prevalence: A Mixed Methods Study

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Introduction
- HIV drug resistance limits the effectiveness of antiretroviral therapy.3
- Adequate surveillance of HIV drug resistance prevalence is challenged by heterogeneous and inadequate data reporting.1,3
- Previous work has demonstrated the need for guidance on complete reporting for studies of HIV drug resistance.1

Objectives
1. Using survey methods, identify a list of potential reporting items for studies of HIV drug resistance prevalence.
2. Using focus group methods, explore the perspectives of HIV drug resistance researchers on what makes a reporting item is essential to HIV drug resistance research.
3. Using integrative methods, describe how group discussions with HIV drug resistance researchers can help explain the findings of the cross-sectional survey.

Methods
- A mixed-methods sequential explanatory design among content experts with research experience or work in the field of HIV drug resistance.
- Cross-sectional electronic survey sent to a purposeful convenience sample of HIV researchers (n=160) to identify reporting items on item wording, grammar, and grouping.
- Qualitative phase: Purposeful sample of survey respondents attended two focus groups to evaluate the initial list of reporting items on item wording, grammar, and grouping.
- Thematic analysis of discussion transcripts informed by grounded theory.

Results
- Quantitative phase: 51 participants responded to the survey (31.3% response rate).
- At least one participant from each WHO region was represented, with responses from over 24 countries.
- Six emergent themes were retained for further evaluation based on their content validity ratios.
- Qualitative phase: Participants agreed on a list of 36 essential reporting items and six emergent themes were identified.

Discussion
- Most participants suggested adding drug-resistance testing items to the checklist. Such items involve details on laboratory methods, data sources, and the year, version, and type of mutation list used.
- Our participants made several comments on the current lack of guidance for reporting HIV drug resistance prevalence data, reaffirming the need for reporting guidelines.
- Participants expressed concern regarding the ethics of requiring reporting of sensitive personal information for research conducted in settings where HIV is criminalized.
- Participants also voiced the importance of appreciating the diverse types of drug resistance testing methods being conducted across various cultural settings.

Strengths:
- Integration of qualitative and quantitative methodologies to generate insights.
- Validation checks made in both phases to improve data quality.

Limitations:
- Lower survey response rate than expected.
- Not all WHO regions were represented in the qualitative sample.

Conclusions
We have developed both a list of reporting items for prevalence studies of HIV drug resistance with qualitative understanding on what makes these items important to this research.

The resultant checklist and qualitative insights will directly inform the accompanying explanation and elaboration document.