

Concept Note

May 2022

I. PROPOSED TITLE: SYSTEMATIC REVIEW

The case for collecting, analysing and utilising sex-disaggregated data and gendered data to inform outbreak responses, a systematic review of the literature from 2012-2022

II. RESEARCH QUESTION FOR THE SYSTEMATIC REVIEW

What is the importance of systematically collecting, analysing and utilising sex-disaggregated data and gendered data in outbreak analytics and responses in low- and middle-income countries?

III. BACKGROUND

The inclusion of sex-disaggregated data and gendered data in outbreak analytics helps us to understand who and how individuals and communities are affected. Sex and gender are important factors that intersect with each other and with other social determinants to influence susceptibility and vulnerability to outbreaks (1). Understanding gendered roles and sex-related differences in outbreak dynamics and response interventions is critical to stopping transmission and delivering an effective response. However, despite pre-existing recommendations and minimum requirements (2,3,4,5), the automatic and consistent application of sex and gendered lens to global health data, including operational analytics has yet to be established in outbreak response (6,7).

The Adapting SAGER Guidelines for IOA project

Supported by [GENDRO](#), the Sex and Gender Ethics in Research (SAGER) guidelines were published in 2016 to support academic researchers and authors to integrate sex and gender dimensions in their research design, data collection, analysis and reporting. The SAGER guidelines were designed primarily to guide authors in preparing their manuscripts and to support publishers in their quality control. However, a need has been identified to develop a similar set of guidelines to support the better use of sex and gender lens in outbreak response.

Integrated Outbreak Analytics (IOA) aims to provide a more holistic, adapted, and timely analysis of outbreak dynamics to inform more appropriate outbreak responses. A key component of IOA is understanding the dynamics of both sex and gender within outbreaks and outbreak response. However, the critical importance and recurrent gaps in availability of sex-disaggregated data and gendered data collection, analysis, presentation and use continues to be highlighted.

Drawing from the structure and methodology of the SAGER guidelines, the Adapting SAGER Guidelines for IOA project aims to provide clear, concrete guidance for applying sex and gender lens in IOA during outbreak response. This project aims to support GOARN partners and guide teams working in outbreak response to collect, analyse, present and utilise sex-disaggregated and gendered data.

The Adapting SAGER Guidelines for IOA project will be conducted in the following four phases:

- **Phase I:** A systematic literature review to understand the importance of systematically collecting, analysing and utilising sex-disaggregated data and gendered data in outbreak analytics and responses in low- and middle-income countries
- **Phase II:** Operational research and consultations to identify practical mechanisms and systems to improve sex-disaggregated data and gendered data collection, analyses and use
- **Phase III:** Development and validation of the SAGER-IOA guidelines to support outbreak response actors and researchers to collect, analyse and use sex-disaggregated data and gendered data
- **Phase IV:** Pilot testing and revision of the SAGER-IOA guidelines

While the systematic review outlined in this concept note is a project unto itself, it also constitutes Phase I of the larger Adapting the SAGER Guidelines for IOA project. As such, this systematic literature review will contribute to the rational and guide the development of the operational research and participatory methods in Phase II.

IV. OBJECTIVE(S)

Key objective

- To understand the implications of integrating sex-disaggregated data and gendered data in outbreak analytics, research, and outbreak/public health emergency responses in low- and middle-income countries.

Secondary objectives

- To understand outbreak dynamics and considerations for preparing more appropriate and gender-transformative responses
- To describe current gaps in sex-disaggregated data and gendered data collection, analysis and utilisation in outbreak analytics and responses

V. STUDY TOPIC(S)

Following a screening process (see methods) the following topics were included in the review:

- Sex- and gender-related health outcomes
 - Maternal
 - Women's health
- Communicable/infection disease outbreaks sourced from International Health Regulation's declaration of public health emergencies on international concern (PHEIC) and the Sphere Standards
 - Cholera
 - Dengue
 - Ebola
 - Hepatitis E
 - Influenza
 - Zika
 - Yellow Fever
 - MERS

- SARS

VI. METHODS

The PRISMA guidelines for conducting a systematic literature review will be used throughout the entirety of the process (8). A search strategy and Boolean Operators will be utilised. Eight databases including Medline, Embase, Global Health, Scopus, Global Index Medicus (WHO), Google Advanced, Open Grey, and ProQuest Dissertations and Theses Global will be searched. All literature must meet the inclusion criteria listed below. Literature needs to include one or more communicable disease* outbreak(s) and discuss sex- or gender-specific outcomes.

- **Study Design(s):** Any peer reviewed literature.
- **Report Status:** Published literature.
- **Language:** English
- **Dates of Publication:** January 1, 2012 – April 12, 2022
- **Geographical Setting:** Low- and middle-income countries (World Bank List of Economies, 2012)

**Communicable diseases that were included in this systematic review were influenza, VHF (Ebola, Lassa, and Marburg), dengue, cholera, measles, zika, polio, yellow fever, malaria, hepatitis E, pneumonic plague, MERS, SARS, meningitis, tuberculosis, diphtheria, and pertussis. List of communicable diseases were sourced from the IHR declaration of PHEIC and the Sphere Standards.*

After the literature search is completed, duplicates will be removed using EndNote 20 and Covidence. Titles, abstracts, and full texts will be independently screened by two researchers. Conflicts are to be reconciled by consensus. Reference lists of final records will be screened (snowball method) to identify additional relevant literature for inclusion. Prior to data extraction, this systematic review will be registered in PROSPERO. A data extraction template will be created in Covidence and data extraction, analysis and synthesis will follow.

VII. STUDY DETAILS

Type of Study: Systematic Literature Review

Location: This study is a systematic review and no designated study sites have been assigned. All work is being conducted from global, remote locations. None of these remote locations are in a conflict zone.

Proposed Timeline and Status: The Adapting SAGER Guidelines for IOA working group will begin the systematic literature review early March 2022. The research question and methodology are to be drafted by mid-April. Subsequently, the literature search will commence and be completed in a two-week time period. The title, abstract and full text screening are anticipated to be completed by the end of May. A data extraction template and data extraction will be completed by the end of June. Data analysis and synthesis should begin by early July. The working group aims to have a report finalized by August 2022. It is estimated that the systematic literature review will take five or six months to conclude.

Benefits: No participants are included in this systematic literature review. This review will provide guidance for the adaptation of the SAGER guidelines for IOA. The purpose of adapting the SAGER guidelines for IOA is to improve outbreak response efforts, thus, benefiting populations affected by future outbreaks.

Risks: There are no risks to patients or individuals. No data or research will be conducted on individuals. Data will only be sourced through review of peer-reviewed and grey literature

Resources/Costs: The systematic literature review will be conducted by two researchers, a Fellow affiliated with the Centers for Disease Control and Prevention (CDC) and a lead research associate from Epicentre. The CDC and Epicentre will assume all staffing costs related to respective staff members. All costs associated with advisory and partner roles will be covered by their respective institutions. No other costs or overheads are predicted at this time.

Principle investigator (PI): Simone Carter, UNICEF

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Competing interests: None.

Data management and sharing: No human subject personal identified data is being collected. All data used in this systematic literature review is sourced from published, peer reviewed literature that is publicly available. For questions about data management and sharing, contact the study principal investigator, Simone Carter at scarter@unicef.org

VIII. DISSEMINATION AND IMPLEMENTATION OF RESEARCH FINDINGS

Responsibility:

Simone Carter

Lead Integrated Outbreak Analytics

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Dissemination: Findings from this systematic literature review will be published in a peer-reviewed paper and disseminated through presentations at conferences and meetings to internal and external partners/stakeholders.

Implementation: Findings from this systematic literature review will be used to guide the workplan for Phase II: Operational Research and Consultation of the larger Adapting the SAGER guidelines for IOA project.

IX. Sources

- (1) <https://gh.bmj.com/content/5/10/e003848>
- (2) <https://ease.org.uk/communities/gender-policy-committee/the-sager-guidelines/>
- (3) <https://apps.who.int/iris/rest/bitstreams/920807/retrieve>
- (4) <https://www.who.int/csr/resources/publications/SexGenderInfectDis.pdf>
- (5) https://ec.europa.eu/info/publications/gendered-innovations-2-how-inclusive-analysis-contributes-research-and-innovation_en
- (6) <https://gh.bmj.com/content/5/9/e003607.info>

- (7) <https://theconversation.com/zika-and-ebola-had-a-much-worse-effect-on-women-we-need-more-research-to-address-this-in-future-64868>
- (8) <http://prisma-statement.org/prismastatement/>

