EVALUATION PRACTICES FOR PUBLIC HEALTH ENVIRONMENTAL SURVEILLANCE SYSTEMS: A SCOPING REVIEW

Carol Bennett
cbennett@ohri.ca

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BACKGROUND

Surveillance system evaluation is essential for effective public health planning and implementation

- Health surveillance involves the systematic collection and analysis of health data for planning, implementing, and evaluating health conditions
  - Early warning system
  - Informing public health policies and strategies
  - Documenting the impact of interventions
- Wastewater-based surveillance longstanding history and an important component of SARS-CoV-2 surveillance
- Despite the benefits, uncertainties regarding optimal scope and use
- Evaluation to support sustainability of environmental surveillance systems

APPROACH

- Public Health Environmental Surveillance Evaluation Framework (PHES-EF)
- Collaboration - multidisciplinary, multinational consensus
- Open science
- High quality methods
- Concept of consensus

METHODS – SCOPING REVIEW

- Identify the research question
- Identify relevant studies
- Screening
- Data abstraction
- Summarize results
- Consultation with expert group

RESEARCH QUESTION

What is known from the existing literature about the evaluation of public health, environmental, and One Health Surveillance systems?

IDENTIFICATION OF STUDIES

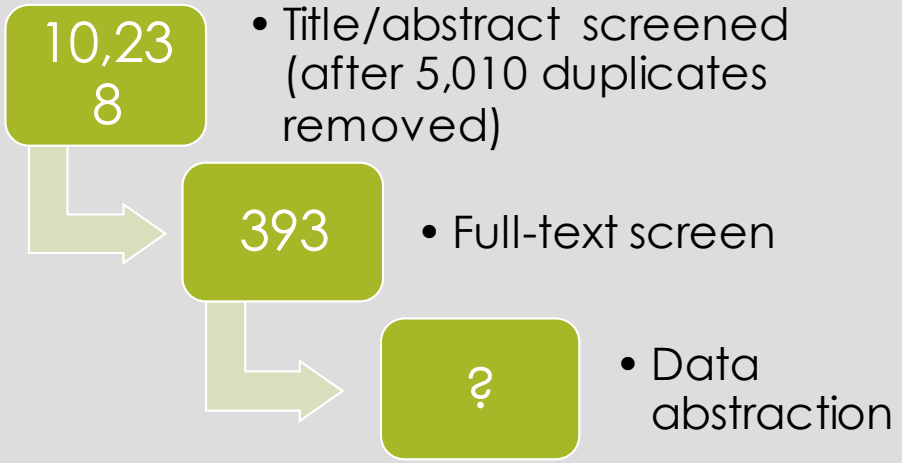
Balancing feasibility with breadth and comprehensiveness

- Medline search strategy developed by research librarian (PRESS guidelines) and modified for other databases (4+ databases)
  - Medline (OVID)
  - Embase (OVID)
  - Global Health (EBSCO)
  - Scopus (Elsevier)
  - Pre-print servers
- Grey literature search
  - Websites of national public health institutes (>100)
  - Websites of international IGOs (5)
  - Existing networks
- General internet search (google, DuckDuckGo) using key search terms

SCREENING

Inclusion criteria:

Provides guidance or a framework for evaluating surveillance systems



PRELIMINARY RESULTS

Goal is the identification of key criteria for the evaluation of public health environmental surveillance to inform the e-Delphi study

- Most studies identify the CDC Framework for evaluating public health surveillance systems
  - Simplicity
  - Flexibility
  - Data quality
  - Acceptability
  - Sensitivity
  - Predictive Value Positive
  - Representativeness
  - Timeliness
  - Stability
  - Usefulness
  - Portability
  - Costs
- Emerging areas
  - Equity
  - Trust
  - Open science
  - Community engagement
  - One Health

NEXT STEPS

- Consultation with Executive Group
  - Inform/refine framework
- Recruitment of e-Delphi panel
  - Interested in participating? Contact us at:

    phes-ef@ohri.ca
- Delphi study

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Executive Group

*Co-chair

- Doug Manuel*
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THANK YOU

https://big-life-lab.github.io/PHES-EF/