

# Welcome to the Epi Parameter Community Webinar Series

## Artificial Intelligence to Automate Evidence Surveillance: Application to the Epidemiological Parameter Pipeline

Monday 25 March 2024, 16:00 -17:00 CET



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# Meeting agenda

<b>Timetable for TWG Meeting: 25<sup>th</sup> March 2024</b> <b>16:00 – 17:00 CET</b>	
<b>16:00 – 16:05</b>	<b>Welcome and introduction</b> – Patricia Ndumbi, WHO
<b>16:05 – 16:15</b>	<b>The role of AI in living systematic reviews and evidence surveillance</b> – Lisa Waddel, PHAC
<b>16:15 – 16:25</b>	<b>Evolution of AI Technology and Advancements for the Identification and Screening of Literature</b> – Emma Tomini, PHAC
<b>16:25 – 16:35</b>	<b>Systematic Review Automation for Airborne transmission model</b> – Elias Sandner, CERN
<b>16:35 – 16:45</b>	<b>CliZod, compiling the evidence on the climate sensitivity of zoonotic diseases</b> – Emilie Vallee, Massey University
<b>15:45 – 15:55</b>	<b>Questions and discussions</b> – Moderated by Lisa Waddel and Patricia Ndumbi
<b>15:55 – 16:00</b>	<b>Closing remarks and next steps</b> – Patricia Ndumbi, WHO

## Our presenters today...

**I'M NOT  
A REGULAR  
MOM**



**I'M A HOCKEY  
MOM**



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## Quick Community Survey (will take 2 minutes!)

AI to Automate Evidence  
Surveillance: Application to the  
EpiParameter Pipeline



### To let us know:

- If you'd like to be added to the mailing list
- If you'd like to actively contribute to a specific workflow
- If you'd like to connect or collaborate with one of today's presenters
- If you'd like to present or know someone who would like to present at our webinar series

# Global repository of epidemiological parameters – Collaborative approach

- Expertise in evidence synthesis methodologies
- AI tools for parameter extraction



- Extraction of parameters for 9 priority diseases
- {EpiReview} package



*Prioritization of diseases and parameters*

*Extraction of parameters*

*Storage and use of parameters*

*Maintenance and validation of parameters*

*Scientific recognition and other incentives*

**Epiverse**  
powered by **data.org**

GLOBAL  
*health*

Federated analytics

**Epiverse**  
powered by **data.org**

- Analytical tools
- {Epiparameter} package



# How to Join and Contribute to the WHO Epi parameter community

## Discourse

Collaboratory

Q Search

Welcome to the Collaboratory - Laboratory for Pandemic and Epidemic Intelligence

A world where an interconnected pandemic and epidemic intelligence community collaboratively responds rapidly with improved data, enhanced analysis and actionable insights.

Epidemiological parameters are used by mathematical models that are critical to understand the transmission dynamics of pathogens and to determine the potential impact of outbreaks in terms of morbidity, mortality, and geographical spread over time.

GitHub repo

Epidemiological Parameters

tags

Latest

Docs

+ New Topic

Topic

Replies

Views

Activity

Standardized Data Model for Epidemiological Parameters extraction

epi, data, modelling

Brings together experts and professionals in the field of epidemiology and infectious disease modelling to collaborate on creating a unified and consistent data model for the extraction and representation of essential ep... read more

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About the Epidemiological Parameters category

epi, data, modelling, parameter, analytics

Epidemiological parameters are used by mathematical models that are critical to understand the transmission dynamics of pathogens and to determine the potential impact of outbreaks in terms of morbidity, mortality, and g... read more

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Webinar - Artificial Intelligence to Automate Evidence Surveillance: Application to the

## GitHub

Search or jump to...

Pulls Issues Codespaces Marketplace Explore

WorldHealthOrganization / collaboratory-epiparameter-community Public

Edit Pins Watch 1 Fork 0 Star 0

Code Issues Pull requests Discussions Actions Projects Wiki Security

Announcements

First Working Group meeting - 26 April 2022

PatriciaRose963

Workstream 1: Prioritization and definition of parameters

Standardization of parameters definitions

PatriciaRose963

Sort by: Latest activity Label Filter: Open New discussion

isopen category: "Workstream 1: Prioritization and definition of parameters"

Categories

View all discussions

Announcements

General

Ideas

Polls

Q&A

Workstream 1: Prioritization and definition of parameters

This workstream will focus on the development of data taxonomy, data dictionary and model for the epidemiological parameter repository. Furthermore, we will identify priority parameters that are needed to inform decision making across various use cases as well as required contextual information for each parameter.

Which parameters should we prioritize for decision making?

PatriciaRose963 started 2 days ago in Workstream 1: Prioritization and definition of parameters

## TWG meeting reports

Report: Second TWG Meeting on the Establishment of a Global Repository of Epidemiological Parameters

June 20, 2023

WHO Hub for Pandemic and Epidemic Intelligence

More than 50 participants from diverse health intelligence and related fields or technical working group (TWG) meeting. The focus of this meeting was to advance a standardized data model designed to represent a critical step toward the critical epidemiological parameters off representation of key epidemiological public health professionals, infectious disease researchers globally.

Report written by: Patricia Rose963, Megan Forman and Publishing: John Foss

World Health Organization | HUB

Report: First TWG Meeting on the Establishment of a Global Repository of Epidemiological Parameters

April 26, 2023

Report produced June 2023

More than 30 participants from varied academic and public health backgrounds joined the first Technical Working Group meeting held on 26th April 2023. The meeting focused on the establishment of a global epidemiological parameter repository which will serve as an essential global public tool to inform and guide public health interventions designed to mitigate the spread of diseases and reduce their impact on affected populations.

World Health Organization | HUB

## TWG virtual meetings

## Outbreak analytics Hackathon

## Website

Collaboratory

Pandemic and Epidemic Intelligence

EpiParameter Community

About Community News Resources GitHub

Community

Community members

The epidemiological parameter community is an inclusive, interdisciplinary and multisectoral global network of mathematical modelers, epidemiologists, librarians, information specialists, disease experts, decision makers and software developers. Community members span academia, NGOs, industry, and national and international public health agencies. The goals of the community are to collaboratively develop a global repository of epidemiological parameters as well as tools to support their use in analytical pipelines.

How to join and contribute

We welcome you to join and engage with the community via our GitHub. You can contribute by posting questions, participating in discussions as well as sharing ideas, tools, resources, and best practices. You can also contribute technically to specific workstreams (e.g., systematic reviews, parameters extraction, development of analytic packages, etc.). Please contact [collaboratory@who.int](mailto:collaboratory@who.int) if you wish to discuss specific technical contributions.

# What is Next?

## AI to Automate Evidence Surveillance: Application to the EpiParameter Pipeline



- Next Monthly Webinar in April – topic and date TBD.
- Workstream 2 specific working group on AI – to be coordinated by Lisa Waddell, PHAC.
- In person Workshop on refining the GREP database schema – May 14-16, Berlin.

Thank you



# What is Next?



## *EpiParameter Collaboratory Workshop: Refining the GREP database schema*

- In-person Hackathon on May 14-16<sup>th</sup> , Berlin.
- Test Public Health use cases to inform /refine the database schema and structure
- Identify challenges and solutions related to parameters extraction
- Enhance interoperability between parameter data storage solutions and analytical tools