Collaboratory

Epi Parameters Community
Informal drop-in session

18 December 2024

World Health Organization | HUB
Pandemic and Epidemic Intelligence

Meeting agenda

Timetable for drop in session December 2024 10:30AM CET		Lead
10:30 – 10:35	**Welcome and introduction to the new format session**	Chloe Rice, WHO Collaboratory
10:35 – 10:45	**Celebrating 2024!**	Chloe Rice, WHO Collaboratory
10:45 – 10:55	**Member update 1:** Best practices for estimating and reporting epidemiological delay distributions of infectious diseases	Kelly Charniga, Pasteur Institute
10:55 – 11:00	**Member update 2:** Training module on epidemiological parameters for Epiverse's Epi-Training Kit	Kelly Charniga, Pasteur Institute
11:00 – 11:05	**Member update 3:** Overview of PERG activities	Ruth McCabe, Imperial College London
11:05 – 11:10	**Open forum for updates**	All
11:10 – 11:15	**Wrap up and close**	Chloe Rice, WHO Collaboratory

Structure of these informal sessions

- The intention of these sessions is to provide an opportunity for you or your team to:
  - increase visibility on recently published works,
  - share updates, and/or
  - discuss common challenges that others may be also facing or are interested in collaborating on.
- Ahead of each informal drop in session we will put out a post on the Collaboratory platform requesting volunteers to come and present their work at this forum.
- Time is available after the updates for others to chime in with quick updates from their agency/institution.
- We particularly welcome presentations from early career researchers or junior analysts.
- These meetings will not be recorded.

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Overview of the Epi Parameter Community

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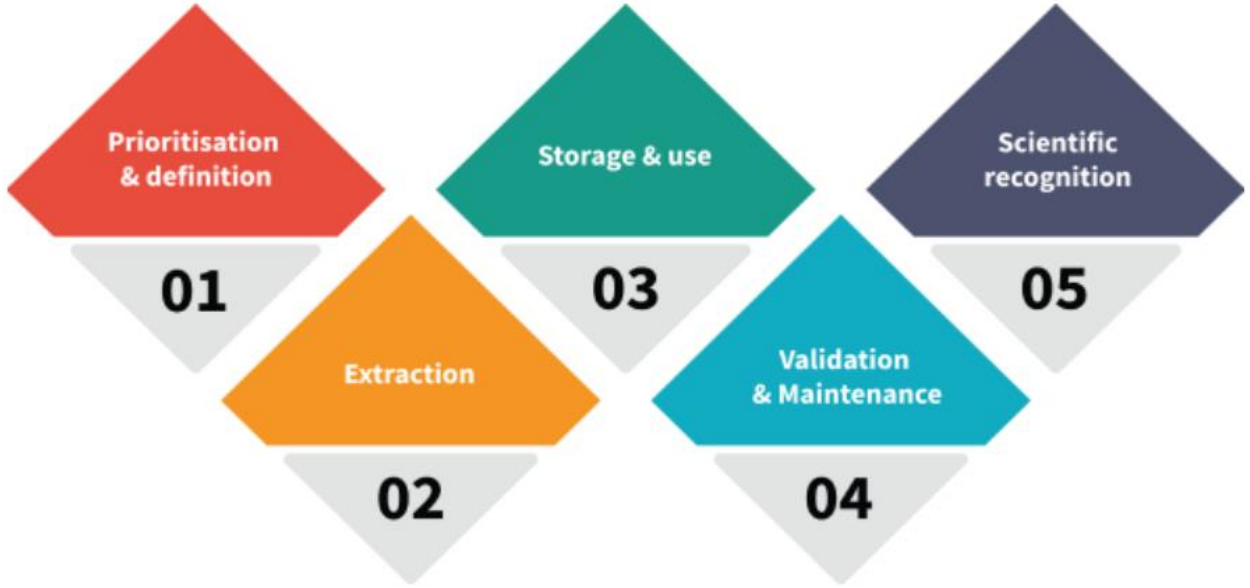
Problem Statement and project workstreams

Problem Statement

There is currently no global repository of epidemiological parameters that the global modelling community can access, use, and contribute to.

Future State

A global repository of epidemiological parameters that is publicly accessible by modellers, epidemiologist, subject matter experts and decision makers to inform public health response.



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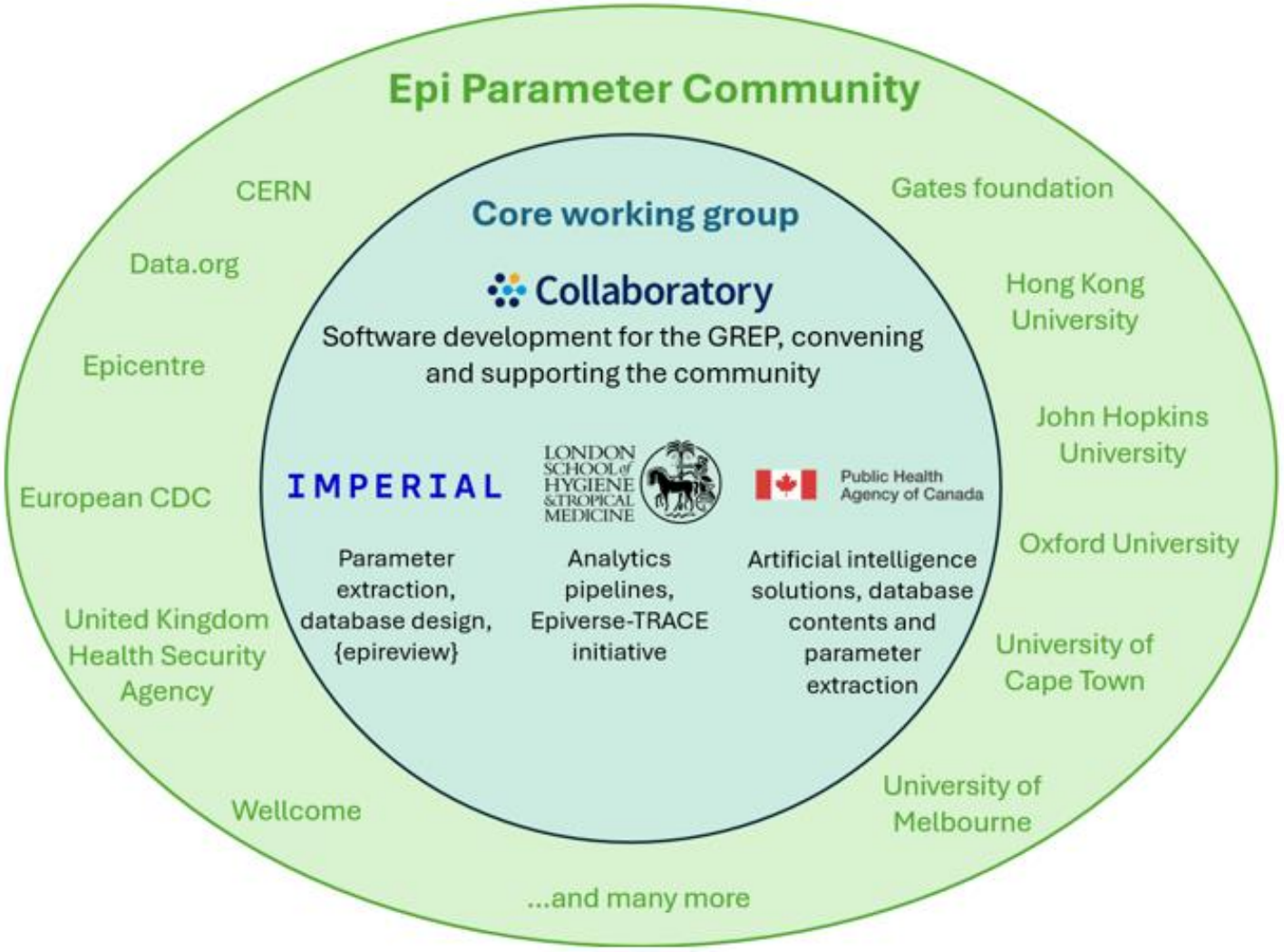
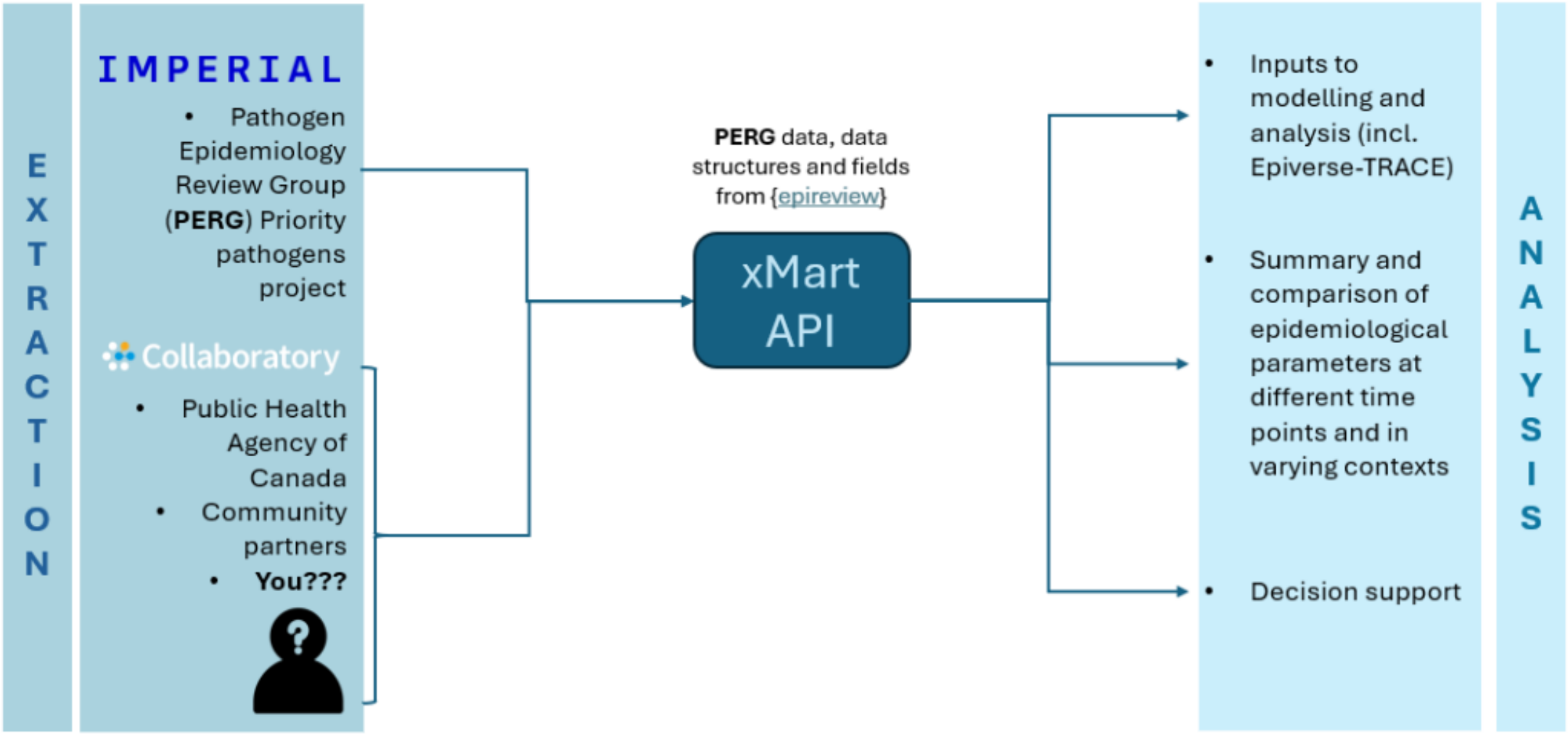
Community structure

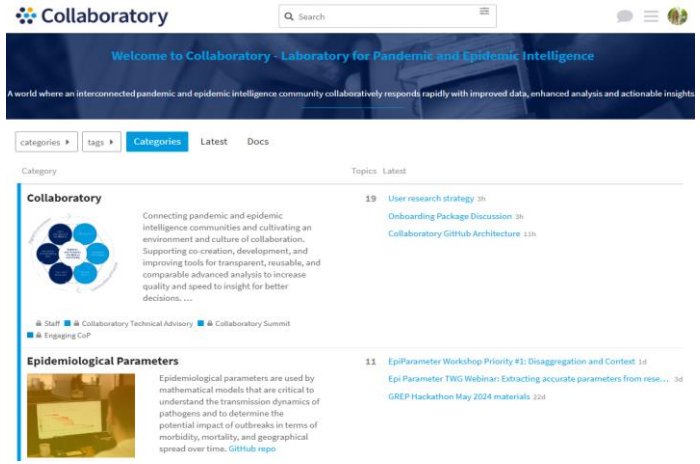


GREP sources and pipelines

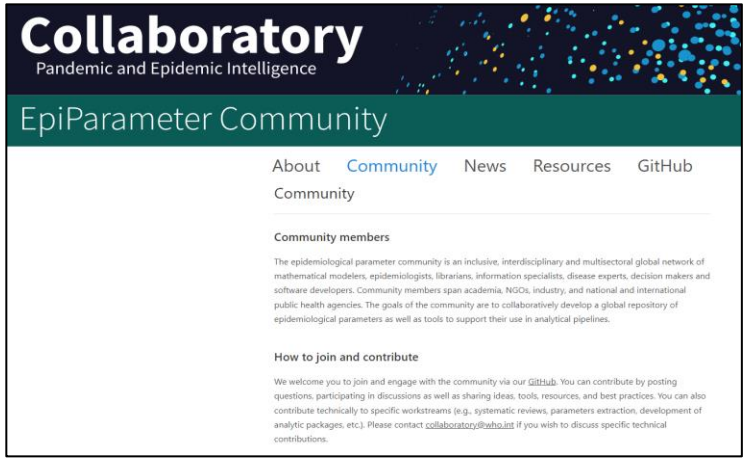


How to join the community

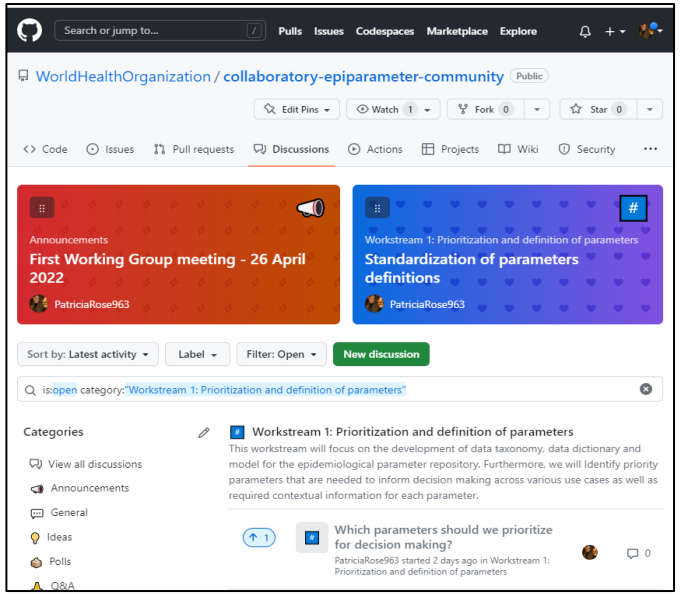
Discourse



Website



GitHub



TWG virtual and in-person meetings

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Celebrating 2024!

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Achievements

In early 2024 we launched the Collaboratory Platform where we now have **63 members!**

In May 2024 the Collaboratory hosted an in-person hackathon in Berlin to refine the Global Repository of Epidemiological Parameters – a massive effort by Patricia Ndumbi Ngmala, Julia Fitzner, Lisa Waddell, Carmen Tamayo Cuartero, Ruth McCabe, Anne Cori, Adam Kucharski and Joshua Lambert!

GREP was presented at a special session at the Infectious Disease Modelling Conference 2024 in Bangkok – thank you to Ruth McCabe from Imperial College London for organising this engaging session!

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Achievements

We've also had several thought provoking and engaging virtual meetings, including:

- **February:** Epidemic modelling and preparedness presented by Anne Cori and Sangeeta Bhatia from Imperial College London
- **April:** *Lassa Fever and Ebola mathematical models and epidemiological parameters* presented by Patrick Doohan, Christian Morgenstern, Sangeeta Bhati and Juliette Unwin
- **June:** Accurate extraction of parameters from research papers presented by Maciej Polak and Dane Morgan from the University of Wisconsin Madison
- **September:** Quality of Reporting Questions virtual workshop hosted by Lisa Waddell, Tricia Corrin, Mrinal Lad and Abhinand Thai from the Public Health Agency of Canada
- **October:** SARS epidemiological parameters presented by Christian Morgenstern from Imperial College London
- **November:** Guidelines for parameter extraction in infectious disease modelling studies presented by Antonia Bartz from the University of Munster

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Achievements

The Epi Parameters AI community has also been going from strength to strength with their aims to progress work on the automation of GREP data ingestion pipelines. A big thank you to the leadership of Lisa Waddell for pushing along this community!

The GREP MVP is under active development thanks to the wonderful efforts of Mia Zivkovic and Robin Panganiban! We are very much looking forward to seeing a MVP iteration of the repository in early 2025!

The WHO Hub also released an early iteration of the GREP, titled *Additional Parameters for Mpox analysis* which was made available to support the ongoing Mpox outbreaks worldwide. This product continues to be updated and currently has 49 parameters available for analysis via the API.

So much to celebrate!!

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1 **Member update 1:** Best practices for estimating and reporting epidemiological delay distributions of infectious diseases

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2 **Member update 2:** Training module on epidemiological parameters for Epiverse's Epi-Training Kit

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3 **Member update 3:** Overview on PERG activities

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4 Open forum for discussion

Raise your hand or put your comments in the chat to share any updates, new publications or challenges you would like to share with the group!

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Current status of the GREP project

The MVP of the global repository of epidemiological parameters (GREP), including a data entry and point-and-click interface, is planned for release in Quarter 1, 2025.

Obtain a copy of the MPOX guidance →

Upcoming events | draft schedule

27 January 2025
Virtual TWG
Epi Scanner: Real Time Epidemic Scanner

No meetings
February 2025

March 2025
In-person meeting to test the GREP MVP prior to release

TBC May 2025
Virtual meeting to evaluate the GREP MVP

…Expression of interest to participate in GREP evaluation will be posted on the Collaboratory platform in coming weeks

Feedback form for Epi Parameter Community Events

Christmas themed Epi Parameters

Accepted: 8 July 2016
DOI: 10.1111/irv.12416

ORIGINAL ARTICLE

WILEY

Influenza-like illness-related emergency department visits: Christmas and New Year holiday peaks and relationships with laboratory-confirmed respiratory virus detections, Edmonton, Alberta, 2004–2014

Leah J. Martin[1] | Cindy Im[1] | Huiru Dong[1] | Bonita E. Lee[2] | James Talbot[3] | David P. Meurer[4] | Shamir N. Mukhi[1,5] | Steven J. Drews[6,7] | Yutaka Yasui[1,8]

Key findings

The median number of holiday influenza like illness-related emergency department visits/day (42.5) was almost twice the non-holiday median (24)

…and was even higher in 2012–2013 (80) and 2013–2014 (86).

In contrast, lower visit volumes occurred during the holidays of pandemic-affected years (2008–2010).

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Christmas themed Epi Parameters

PNAS

Unraveling the seasonal epidemiology of pneumococcus

Matthieu Domenech de Cellès[a,1], Hélène Arduin[a], Daniel Lévy-Bruhl[b], Scarlett Georges[b], Cécile Souty[c], Didier Guillemot[a], Laurence Watier[a], and Lulla Opatowski[a]

[a]Biostatistics, Biomathematics, Pharmacoepidemiology and Infectious Diseases (B2PHI), INSERM, Université de Versailles Saint-Quentin-en-Yvelines, Institut Pasteur, Université Paris-Saclay, F75724 Paris, France; [b]Direction des Maladies Infectieuses, Santé Publique France, F94415 Saint-Maurice, France; and [c]Institut Pierre Louis d'Épidémiologie et de Santé Publique (UMR-S1136), Sorbonne Université, INSERM, F75012 Paris, France

Edited by Burton H. Singer, University of Florida, Gainesville, FL, and approved December 6, 2018 (received for review July 19, 2018)

$A_{christmas}$

Overall amplitude of contact rates increase during Christmas
0.74 (0.69, 0.79)

Best model parameter estimates with CI based on 144 bootstrap replicates

Key findings

This model estimated a large (7 [6–9]-fold) increase of contacts between children and the elderly during Christmas

…carriage prevalence was more uniform in adults, except for a marked, but transient increase in the elderly during Christmas and the start of the new year. This pattern of seasonal carriage prevalence, combined with the seasonally varying invasion rate, resulted in large-amplitude variations of invasive pneumoccal diseases

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Thank you and see you in 2025

Hope you have a safe and relaxing holiday break!