Newsletter Collaborating Platform for Epidemic Modelling and Data Analytics

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Wishing you a happy and prosperous New Year on behalf of the Platform!

Connecting Modellers and Policymakers: Highlights from the Infectious Disease Models in Crisis Decision-Making Workshop

On Friday, December 12th 2025, a half-day workshop was held at VWS in The Hague, bringing together infectious disease modellers from various institutes and academic groups, and policymakers. The event, "Infectious Disease Models in Crisis Decision-Making: Roles, Pathways, and Realities in the Policy Arena," was organized together with VWS, as part of the Collaborative Platform for Epidemic Modelling and Data Analytics.

This interactive workshop created a valuable opportunity to connect the worlds of infectious disease modelling and policymaking. The workshop provided an overview of the national crisis structure and highlighted the roles of modellers at RIVM, research institutes, and universities, as well as their interaction with the policy arena. Participants gained greater insight into each other's roles, needs, and contributions. The programme began with a welcome from Andres Dijkshoorn (VWS), followed by an introduction to the Collaborative Platform by Valérie Eijrond (RIVM). Presentations were delivered by Katja van Ewijk (LCI- RIVM) on outbreak response procedures, Jacco Wallinga

Phaeton Project Workshop on Pandemic Preparedness

On October 31st 2025, a workshop on the Phaeton Project was held at TNO in Leiden as part of the ZonMw initiative "Modelleren voor Pandemische Paraatheid." The project is a collaboration between TNO, Leiden University, and LUMC, and the workshop was co-organized with the Collaborative Platform for Epidemic Modelling and Data Analytics.

The event featured presentations by Don Klinkenberg (RIVM) on RIVM's COVID-19 forecasting model, Barteld Braaksma (CBS) on the potential of synthetic data within and beyond Statistics Netherlands, and Olivier Blanson Henkemans (TNO) on another ZonMw project focusing on data workspaces and privacy-enhancing technologies (PETs) for local health data analytics with GGDs.

Serdar Özsezen (TNO), Eugene van Someren (TNO) and Marieke Vinkenoog (Leiden University) also demonstrated the Phaeton platform and the software we developed for crowdsourced, privacy-by-design data analysis modeling for pandemic preparedness. Participants explored the platform's features, tested its capabilities, and provided valuable feedback to help refine the approach.

For more information about the project, please

(RIVM) on the role of modellers, and Marino van Zelst (Policy Officer for Pandemic Preparedness, VWS) and Stephanie Wiessenhaan (Coordinating Policy Officer for Crisis Management and Infectious Diseases, VWS) on policy needs during outbreaks.

The morning concluded with an interactive Q&A session that encouraged dialogue between modellers and policymakers, followed by a breakout session where participants collaborated in mixed groups and exchanged different perspectives.

contact Eugene van Someren (eugene.vansomeren@tno.nl) or Serdar Özsezen (serdar.ozsezen@tno.nl).

Annual Meeting on HIV, mpox, and STI Modelling 2026

9 March 2026

On March 9th, 2026, the annual meeting on HIV, mpox, and STI Modelling will be held at the RIVM. This event will focus on modelling studies related to the transmission of mpox, HIV, and other STIs, as well as the impact of public health interventions. If you are interested in attending, please send an email to: collabforepidemodatanalytics@rivm.nl.

Collaborating ZonMw-funded project: Refining pandemic strategies for schools – multiscale modeling of their societal & public health impact

Project leader: Ganna Rozhnova (University Medical Center Utrecht)

Collaborating partners: UMC Utrecht, Wageningen University and Research, RIVM, Maastricht University, Amsterdam UMC, Delft University of Technology, Utrecht University

Programme: ZonMw Pandemic Preparedness Knowledge Program

Schools are a critical setting for transmission of newly emerging respiratory pathogens and, thus, are among the primary targets for pandemic measures. However, interventions such as masking or school closures can be contentious: they may disrupt learning and wellbeing, and their population-level impact on transmission can vary widely by pathogen and context. Our project develops an integrated modelling framework to support pathogen-adaptive, evidence-informed school intervention strategies, explicitly accounting for both public-health and societal trade-offs. This framework is designed to assist policymakers in making well-informed decisions so that they adopt evidence-based interventions that account for both types of outcomes (infections and children's learning loss).

Our project aims to:

1. Quantify transmission dynamics across multiple scales (classroom, school, and school-household network) for a range of respiratory pathogen scenarios.
2. Evaluate both epidemiological (infections among children and the wider community) and societal (children's absenteeism and learning outcomes, with particular attention to socio-economically disadvantaged groups) impacts of school-based transmission and interventions.
3. Co-develop and assess intervention strategies across multiple scales (e.g., classroom ventilation, quarantine policies, and country-wide school closures) in collaboration with stakeholders, using simulation studies and tabletop exercises to support preparedness and decision-making for future pandemics.

Methodology

We combine three linked modelling layers: (i) At classroom scale, an individual-based indoor transmission model represents interactions in indoor spaces under setting-specific activity patterns; (ii) At school scale, we model heterogeneity between classrooms across primary and secondary education, incorporating realistic schedules and school-size variation; (iii) At community scale, a stochastic agent-based model captures transmission in a school-household network, with school, household, and community transmission pathways. To represent the Dutch context, we will construct a synthetic school-household population consistent with public school-network and demographic data (DUO, CBS) and integrate it into the network model.

Cross-scale coupling is achieved through functional relationships (classroom to school and school to network-level spread). Analyses will span hypothetical pathogens varying along four axes: transmission efficiency, importance of aerosol transmission, severity risk in school-aged children, and the contribution of asymptomatic transmission.

Next steps

Calibrate model components to early SARS-CoV-2 dynamics in the Netherlands.
Perform multi-criteria trade-off analyses quantifying epidemic control versus learning loss and absenteeism.

Save the Date: On May 29th, a workshop will be held to bring together stakeholders for practical table-top exercises focused on preparing for various pandemic-related school intervention scenarios. For more information about the project or the upcoming workshop, please contact Ganna Rozhnova g.rozhnova@umcutrecht.nl.

Recent Publications

- **Ainslie, K. E., Hooiveld, M., & Wallinga, J.** (2025). Estimation of the epidemiological characteristics of scabies. Nature Communications, 16(1), 10524. https://doi.org/10.1038/s41467-025-65544-y
- **Jung, S.-M., Miura, F., Murayama, H., Funk, S., Wallinga, J., Lessler, J., & Endo, A**. (2025). Preemptive mpox vaccine deployment: Aligning strategy with reality. The Journal of Infectious Diseases, jiaf365. https://doi.org/10.1093/infdis/jiaf365
- **de Wit, M. M., van Zelst, M., Boere, T. M., van Gaalen, R. D., de Jong, M. C., van Hoek, A. J., & Ten Bosch, Q. A.** (2025). Disentangling the force of infection of SARS-CoV-2 in Dutch long-term care facilities. BMC Public Health, 25(1), 3878. https://doi.org/10.1186/s12889-025-25015-x

Upcoming Events

- **March 9, 2026:** Meeting on HIV, mpox, and STI Modelling, *RIVM*, *Bilthoven*
- **May 29, 2026:** Workshop on Pandemic Strategies in Schools, *Utrecht*

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