The Swiss Network for Infectious Disease Dynamics (SNIDDY)

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Symposium on “Emerging viruses and new vaccines - From research to public health”

Geneva, Switzerland, 7 April 2025

Conflict of interest

- I also work as the Deputy Head of the Section Emerging Infectious Diseases and International Cooperation, Federal Office of Public Health FOPH, Switzerland.

- I have no other potential conflict of interest to declare.

Infectious disease dynamics and modeling

A brief history

- **Daniel Bernoulli (1760):** *"I simply wish that, in a matter which so closely concerns the wellbeing of the human race, no decision shall be made without all the knowledge which a little analysis and calculation can provide."*
- **Kermack & McKendrick (1927, Proc R Soc A)** develop Susceptible-Infected Recovered (SIR) model
- **Klaus Dietz (1975, Tübingen):** *"The quantity R is called the reproduction rate, since it represents the number of secondary cases that one case can produce if introduced to a susceptible population."*

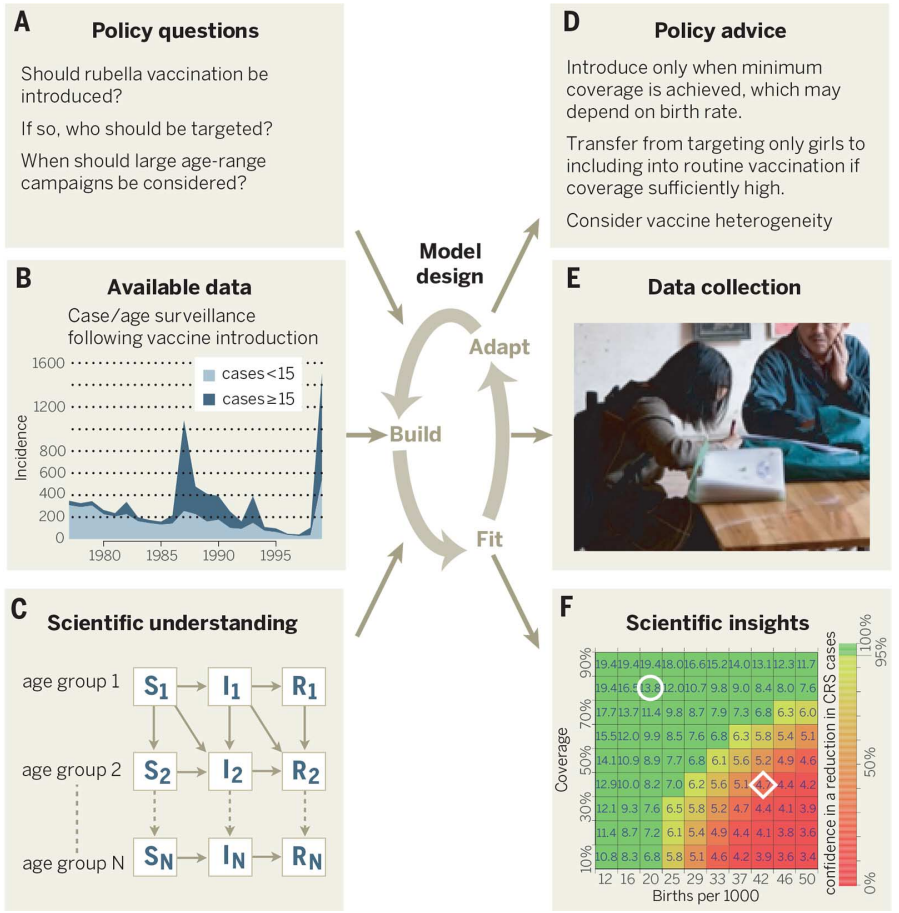
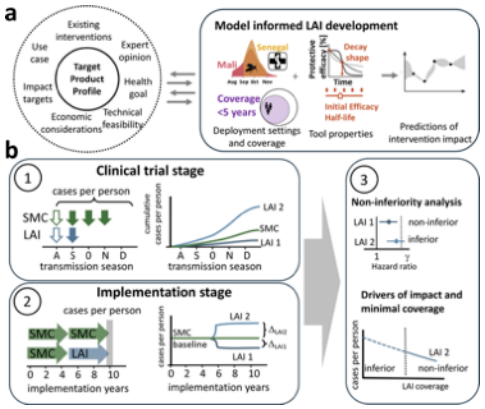


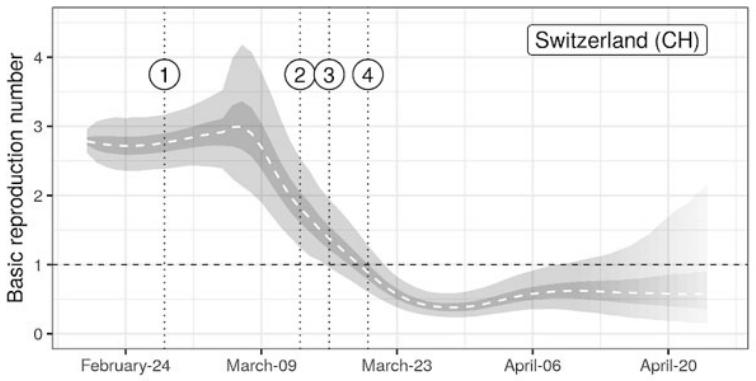
Figure: Heesterbeek et al. (2015, Science)

Infectious disease modeling in Switzerland

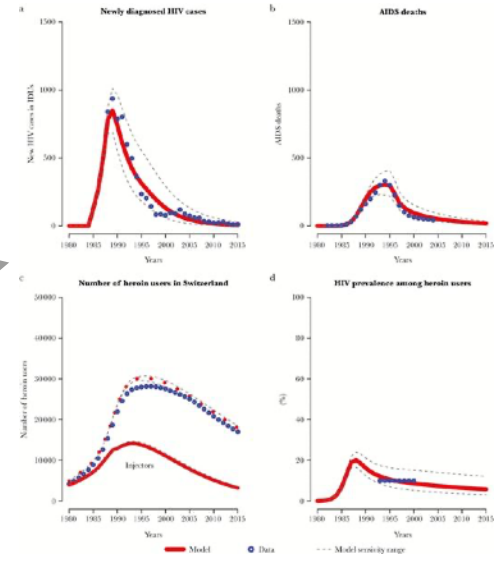
Past and present



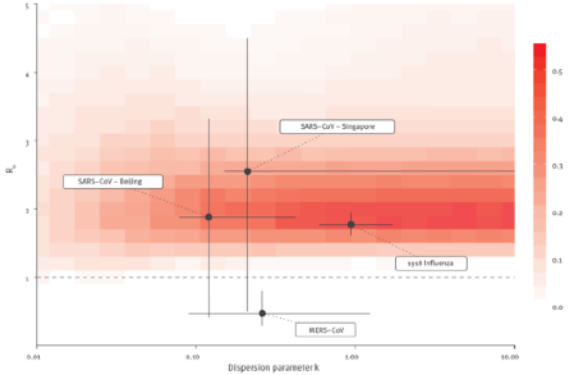
Modeling malaria prevention (Burgert et al., 2022, PLOS Glob Public Health)



Assessing the impact of NPI's on SARS-CoV-2 transmission (Lemaitre et al., 2020, Swiss Med Wkly)



Modeling the Swiss HIV epidemic (Marzel et al., 2018, Open Forum Infec Dis)



Estimating the reproduction number of SARS-CoV-2 (Riou & Althaus, 2020, Euro Surveill)

The birth of SNIDDY

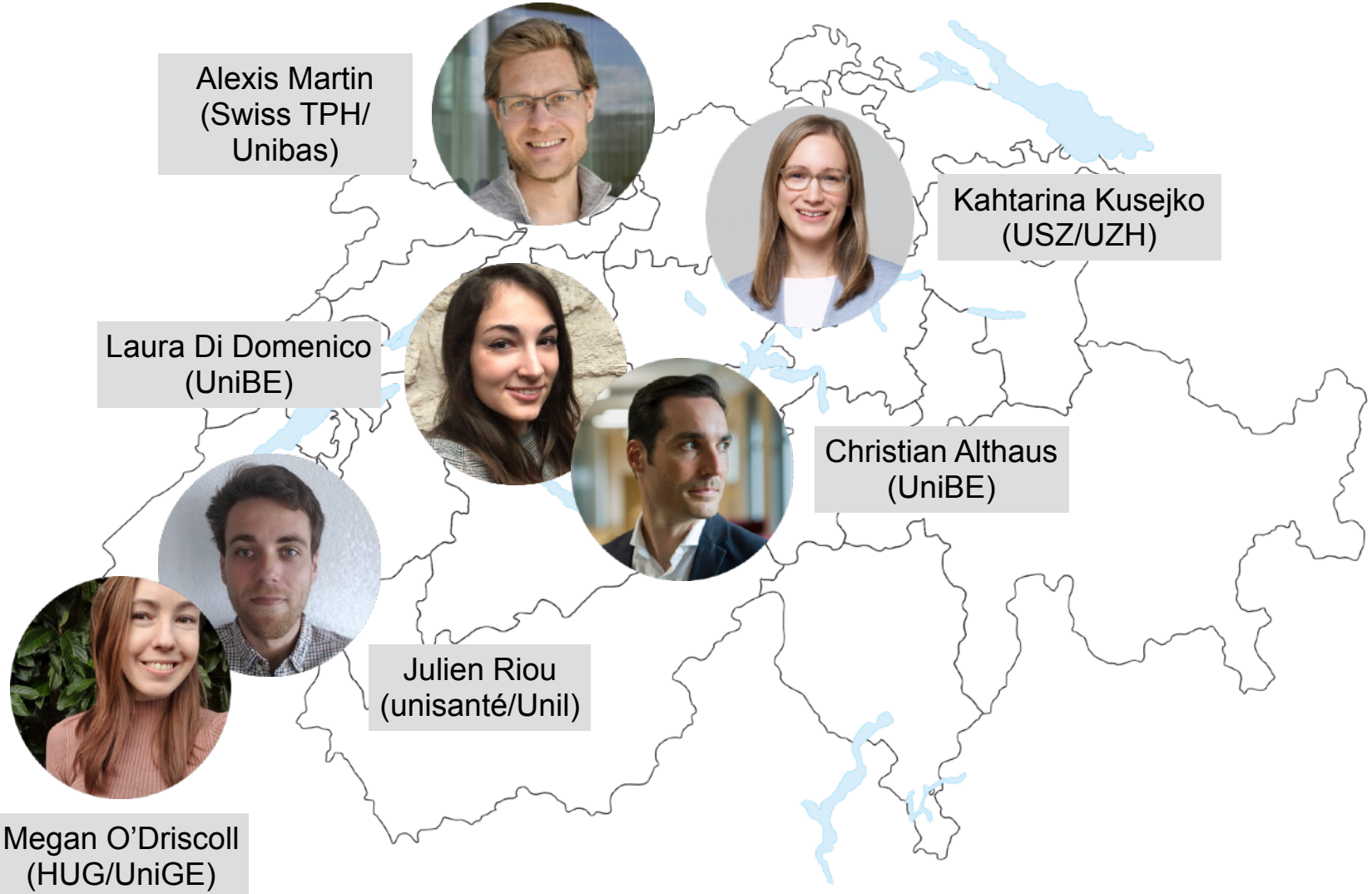
From SMIDDY to SNIDDY

- Since 2010, the local infectious disease modeling community has held nine editions of the **Swiss Meeting on Infectious Disease Dynamics (SMIDDY)**.
- The Swiss National COVID-19 Science Task Force's Expert Group on Data and Modelling underscored the critical role of infectious disease modeling in ensuring pandemic preparedness.
- In November 2024, we founded the association **Swiss Network for Infectious Disease Dynamics (SNIDDY)** that aims to promote scientific exchange, research, and dissemination in the field of infectious disease dynamics in Switzerland.

Founding meeting in Orselina

Executive Board of SNIDDY

Joseph Lemaitre
(University of North Carolina at Chapel Hill)



Membership and upcoming events of SNIDDY

- Membership will open soon!
- SMIDDY 2025 is scheduled to take place in Zurich this autumn.
- Visit github.com/sniddy-ch for more information.

SMIDDY 2024 at Swiss TPH in Allschwil