

# Self-sampling to assess respiratory viruses in households is feasible and will be extended to the full BEready cohort.

**BEready – a population based cohort study to assess viral respiratory infections within households**

## Background

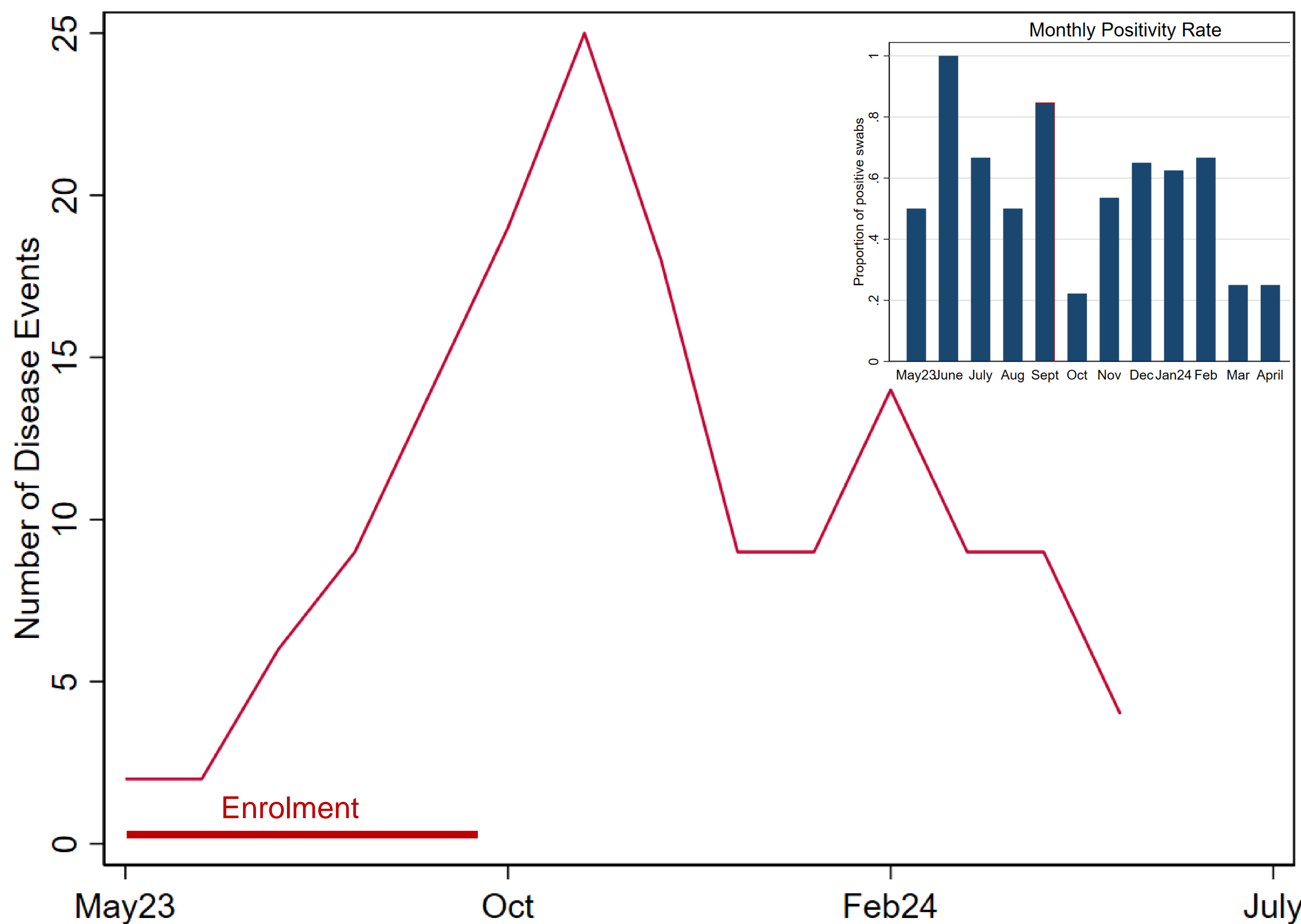
During the COVID-19 pandemic, many countries lacked **research infrastructure** to study emerging pathogens and their transmission patterns within the population from the start of the pandemic.

## Aim

- to study the **feasibility** of self-sampling and mailing of nasal swabs for respiratory symptom episodes
- to study the distribution of **respiratory viruses** in humans and animals

## Methods

- BEready pilot study of **108 households**: 161 adults, 32 children, 29 cats, 15 dogs
- May 2023 – May 2024, self-taken nasal swab mailed by:
  - Index case, at least one of: **cough, runny nose, sore throat, shortness of breath**
  - Household members: a week later to detect **secondary cases** (including pets).
- Multiplex PCR panel for 12 **respiratory viruses** in batches at end of study



## What did we find?

- **151 disease events** among 79 households.
- **190x index cases & 35x family contacts with symptoms** (mean age 38 (SD 24), 52% women)
- most frequently **runny nose** (n=161, 56%), **cough** (n=118, 41%), **sore throat** (n=112, 39%).
- We received **323 samples**
- 231 samples analysed (index/contact) **so far**:
- 92 (40%) **positive**: **51 rhinovirus** (34/17), **22 SARS-CoV2** (19/3), 5 human parainfluenzavirus (3/2), 6 seasonal coronavirus OC43 (4/2), 3 influenza A virus (3/0), 4 human respiratory syncytial virus (RSV) (4/0) and 1 bocavirus (1/0).
- **139 negative (60%)**, including all **specimens from pets** (n=24, 10%).

Authors: K. Grimm, Eva Maria Hodel, Lea Gasser, Selina Wegmüller, Simone Schuller, Ursula Magyar, Franziska Iff, Emily Lim, Lavinia Furrer, Pascal Bittel, Nicola Low, Gilles Wandeler

