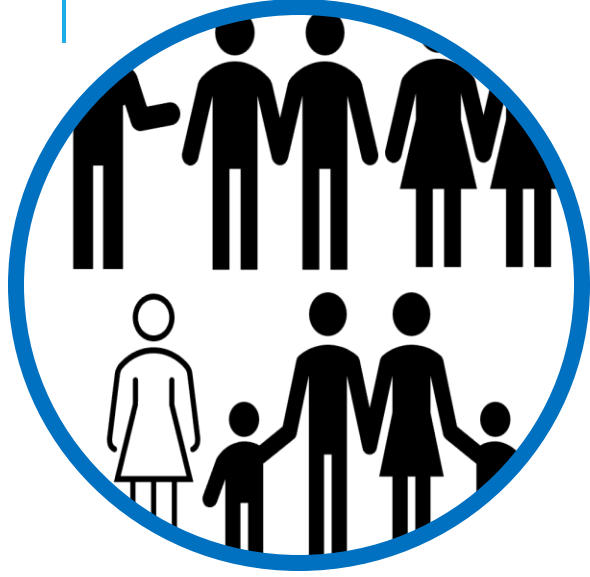# Clusters of post-acute COVID-19 symptoms: a latent class analysis across 9 databases and 7 countries

Kim López Güell

CSM – NDORMS, University of Oxford
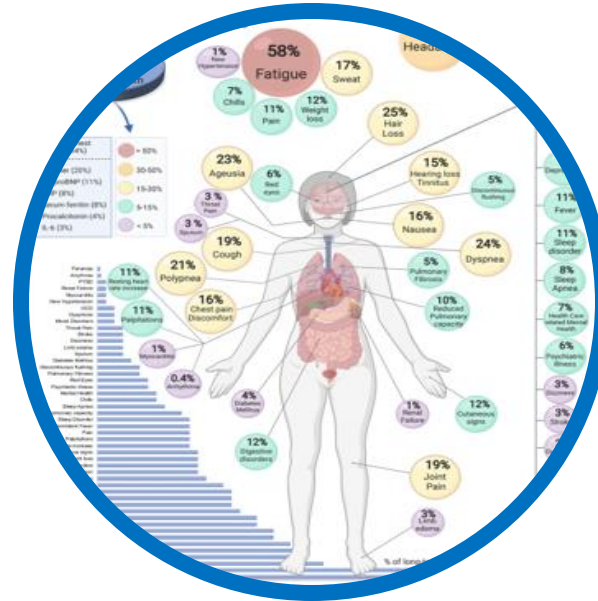
UNIVERSITY OF OXFORD

Around 1 in 10 people are expected to develop post-acute COVID-19 symptoms.

The symptomatology is very broad, with >200 symptoms reported in some articles.
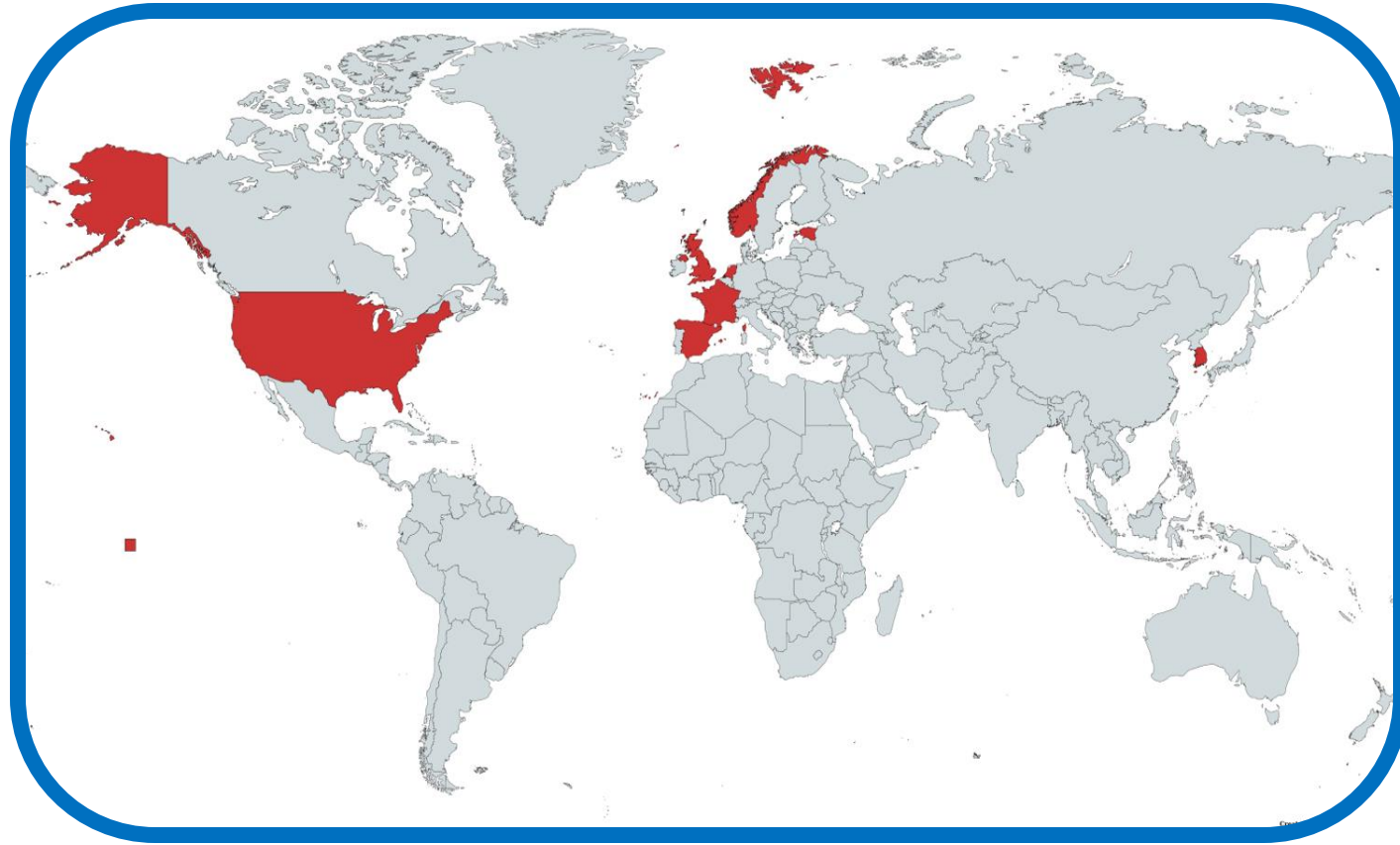
Figure from: Lopez-Leon, S., Wegman-Ostrosky, T., Perelman, C. *et al.* More than 50 long-term effects of COVID-19: a systematic review and meta-analysis. *Sci Rep* **11**, 16144 (2021). https://doi.org/10.1038/s41598-021-95565-8

A clinical case definition of post COVID-19 condition by a Delphi consensus

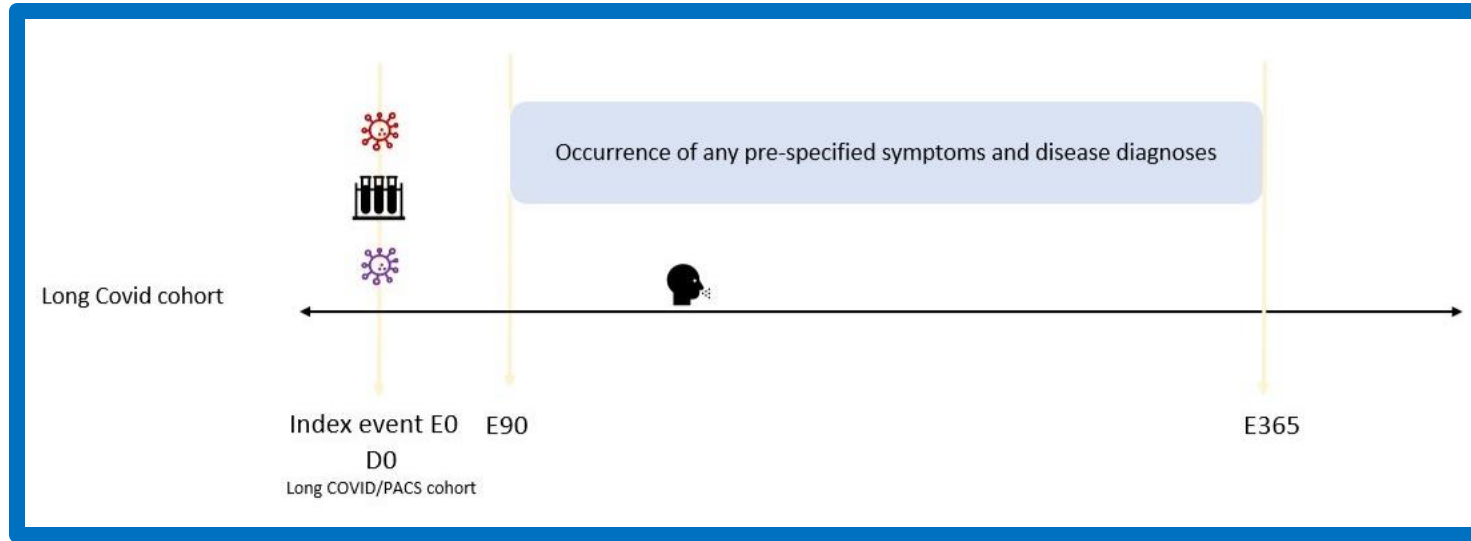6 October 2021

World Health Organization

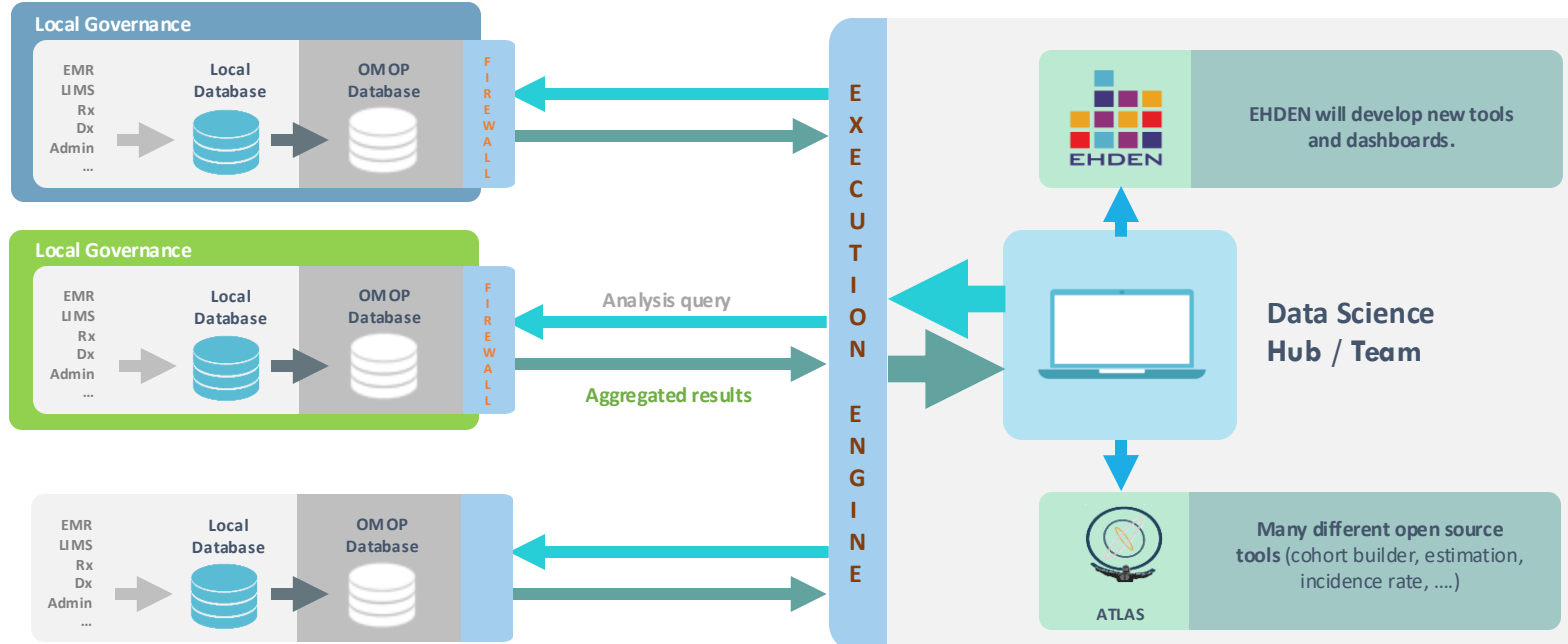SARS-CoV-2 infection plus relevant symptoms 3 months from the onset of COVID-19 with no alternative explanation.

To identify clusters of individuals with long COVID based on the presence and combination of post-acute COVID-19 symptoms

Latent class analyses on:
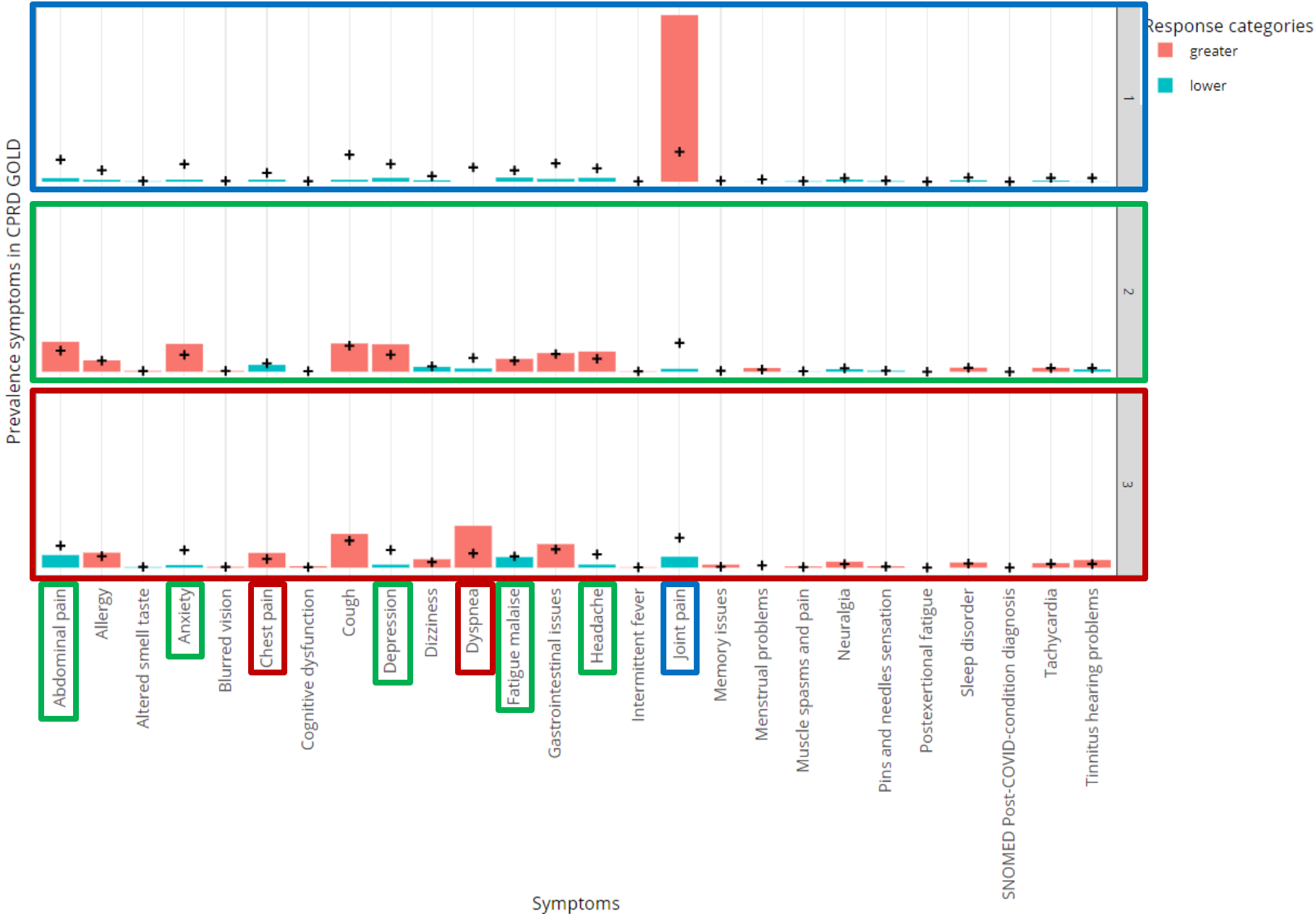
- long COVID cohort
- ≥ 2 symptoms
- ≥ 3 symptoms
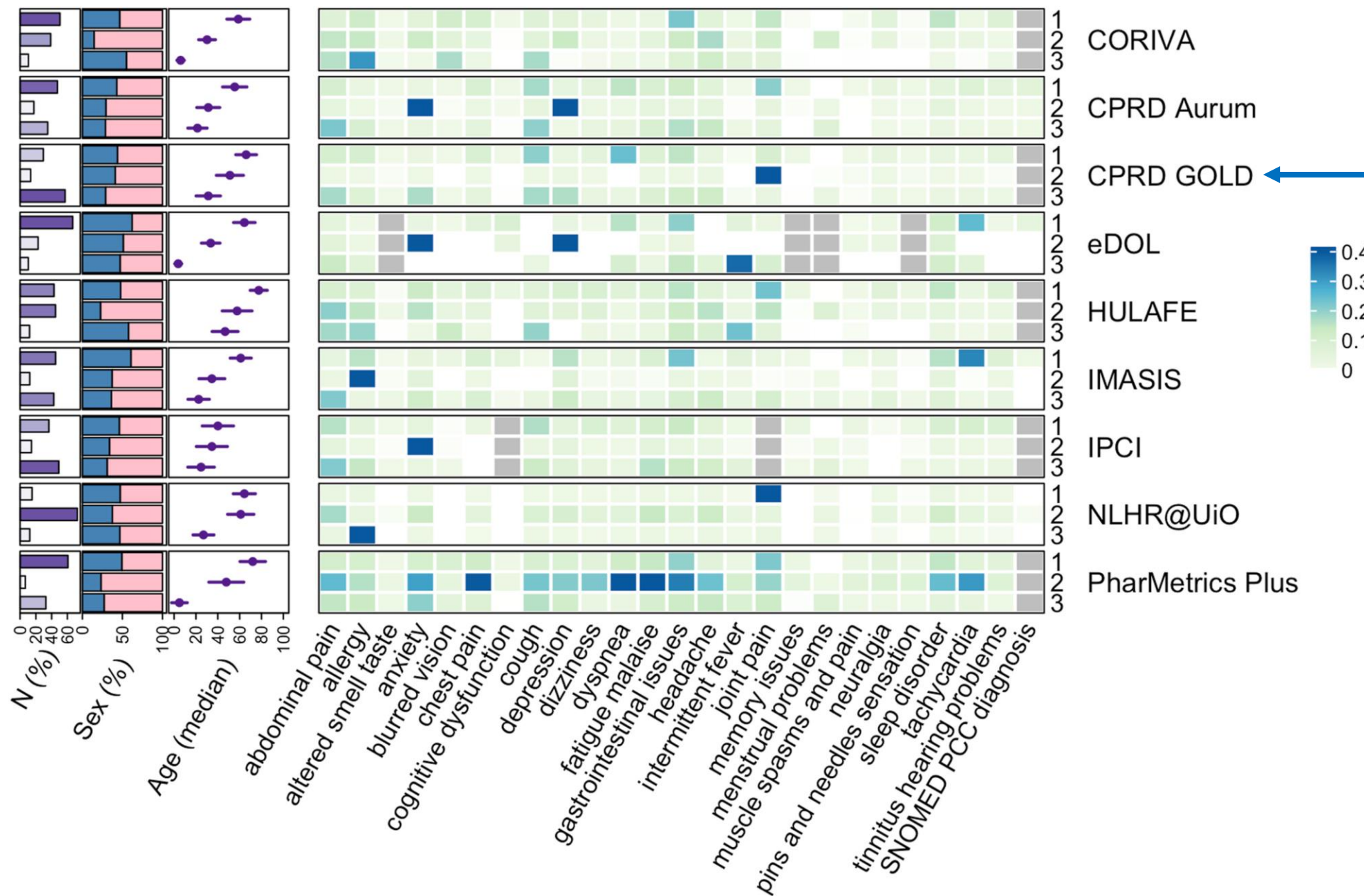
Characterisation of final clusters:

- demographics
- vaccination status
- comorbidities
- healthcare utilisation

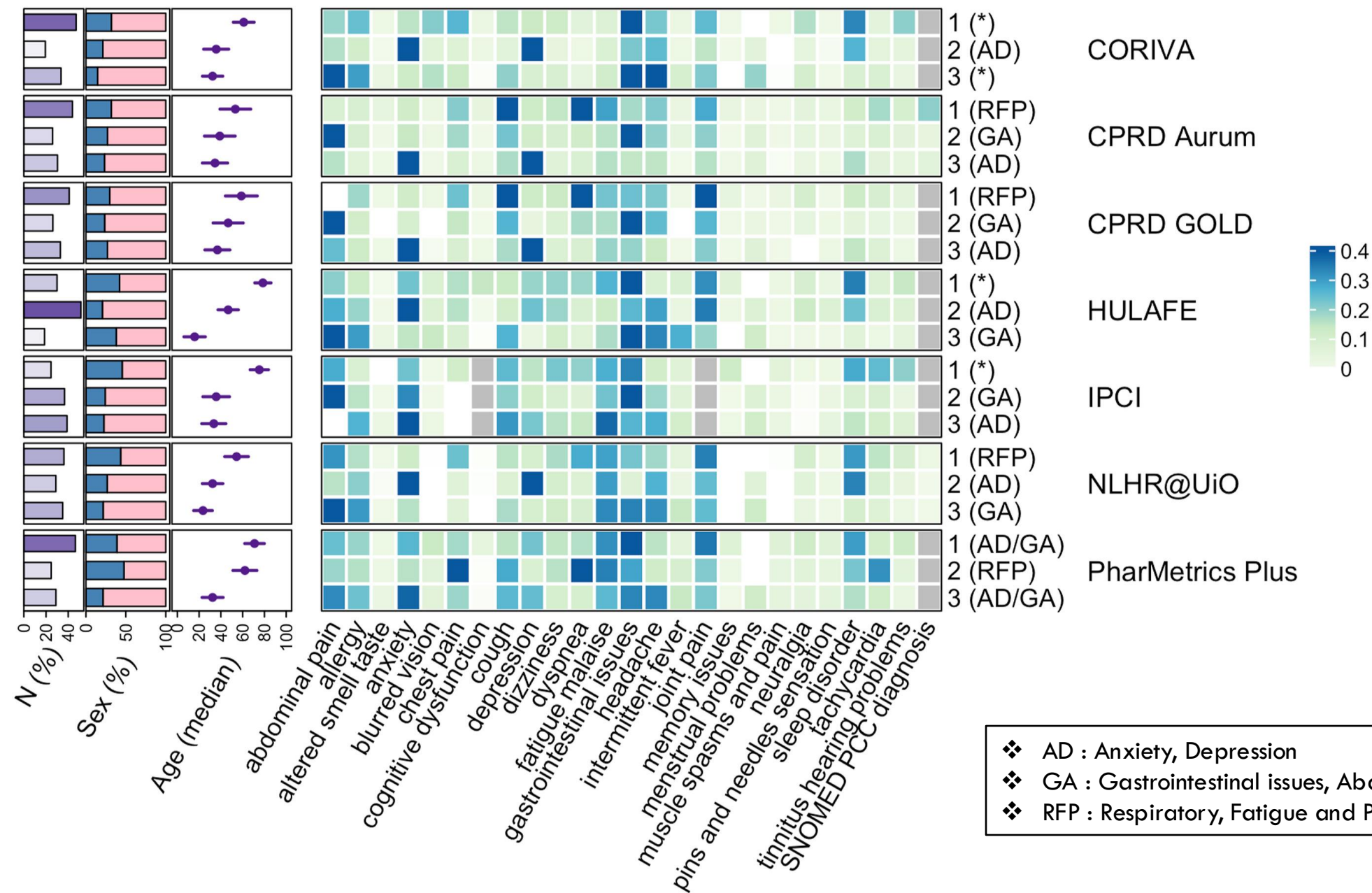Clusters of post-acute COVID-19 symptoms: a latent class analysis across 9 databases and 7 countries

Clusters of post-acute COVID-19 symptoms: a latent class analysis across 9 databases and 7 countries

Clusters of post-acute COVID-19 symptoms: a latent class analysis across 9 databases and 7 countries

❖ AD : Anxiety, Depression
❖ GA : Gastrointestinal issues, Abdominal pain
❖ RFP : Respiratory, Fatigue and Pain symptoms

TAKE HOME MESSAGES

First multinational study(-a-thon) on long COVID, using the WHO definition across real-world datasets.

Found broadly reproducible clusters across databases, but with some heterogeneity. Mainly GA, AD and RFP.

Some studies have clarified risk factors/subtypes, but mechanisms/therapeutics are still mostly unknown.

Scan for publication

Scan for Shiny App

kim.lopez@spc.ox.ac.uk