

The Great Corona Study: an example of citizen science with potential for syndromic surveillance during a pandemic

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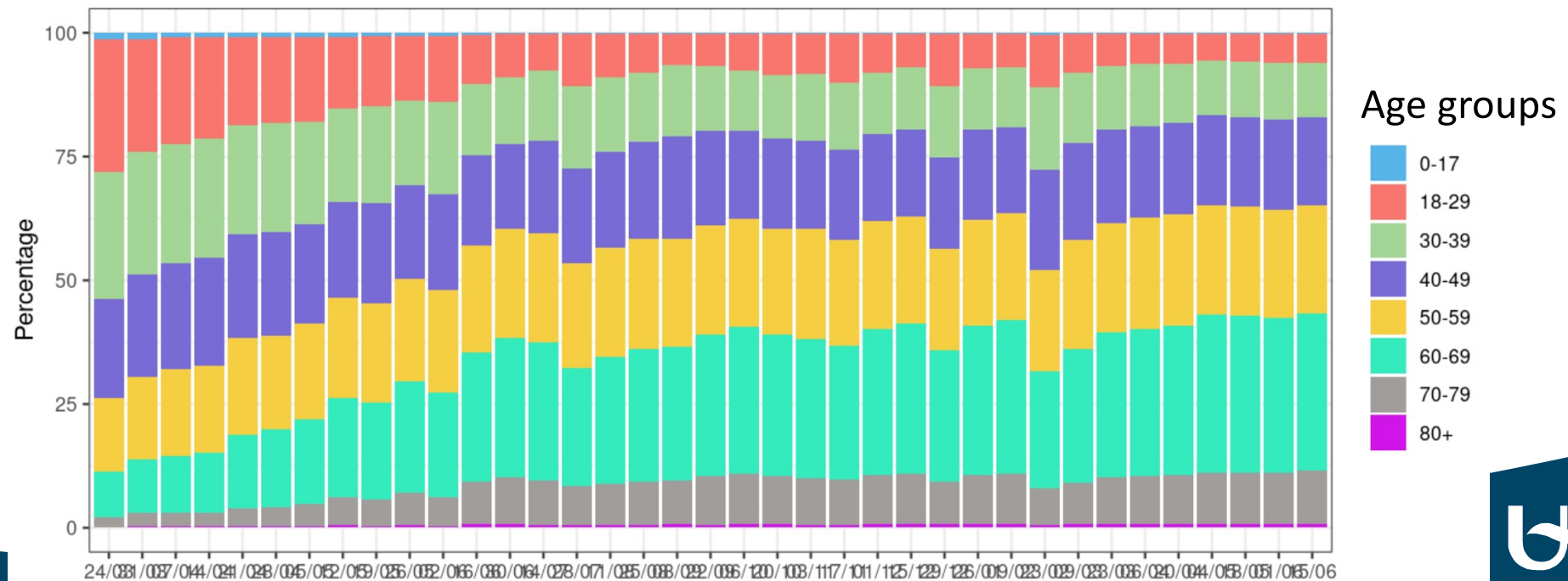
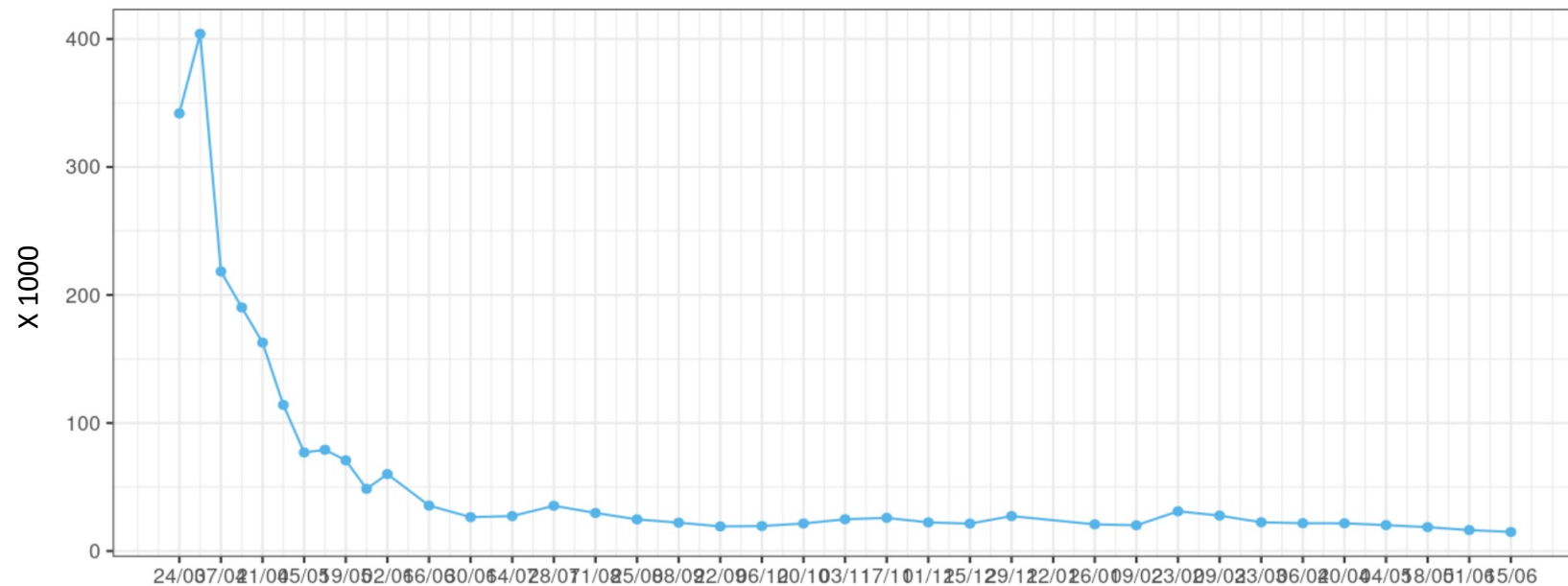


30th June 2021

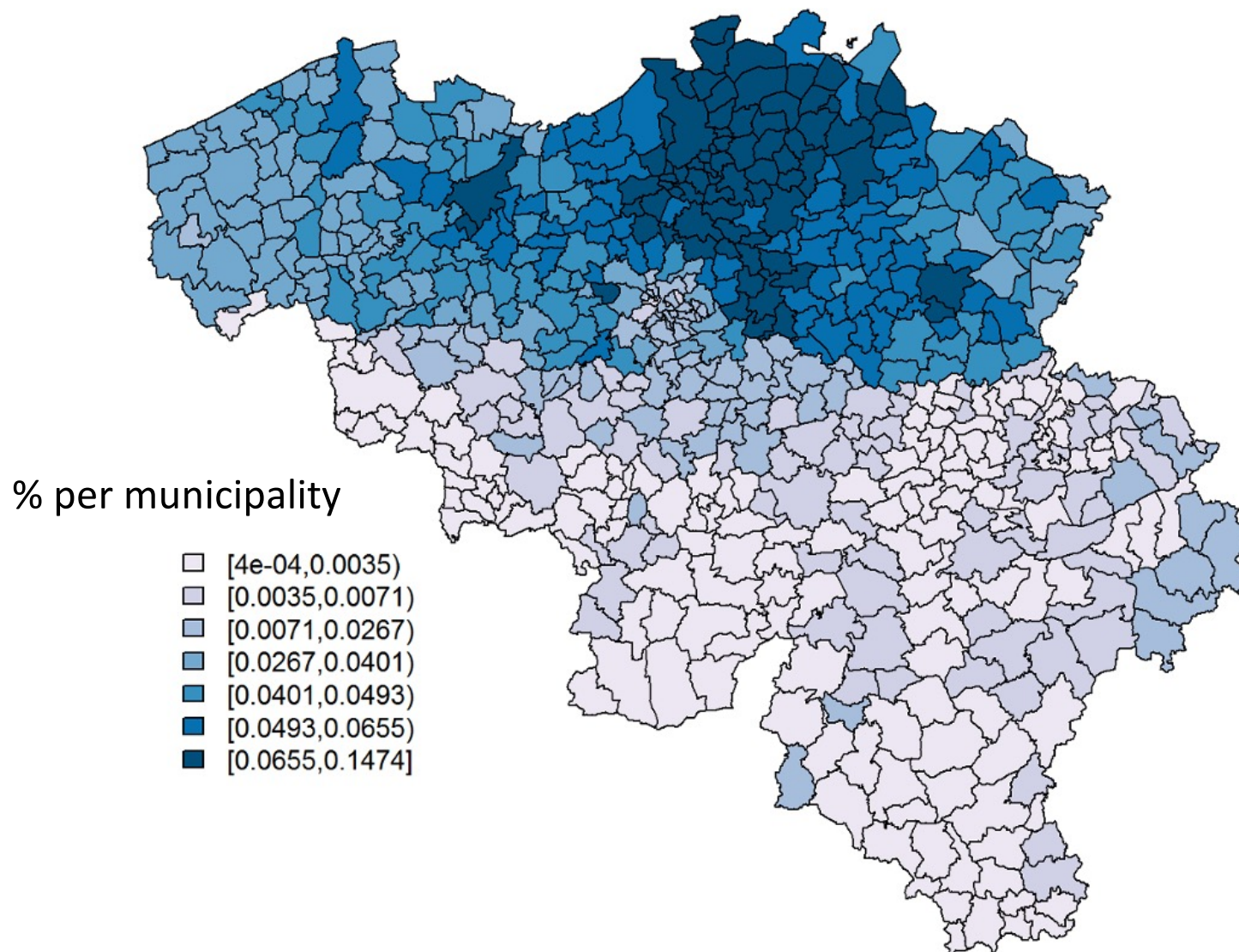
Great Corona Study (GCS)

- Initiative UAntwerpen, with UHasselt and KULeuven, ULB
- Anonymous open call, Tuesday, 10h-22h
- Pc, tablet, smartphone
- Belgium: NL, FR, D, EN
- 40 times executed: 17th March 2020 – 29th June 2021
 - 12 times weekly, from 2nd June every other week
- >3 million completed surveys; >2700 unique questions
- (Self) selection bias unavoidable
 - Representative weighting (age, gender, education, province)
 - See <https://covid-en-wetenschap.github.io/2021/04/grote-coronastudie-kadering>

>0,5 million – 15,000 respondents per wave



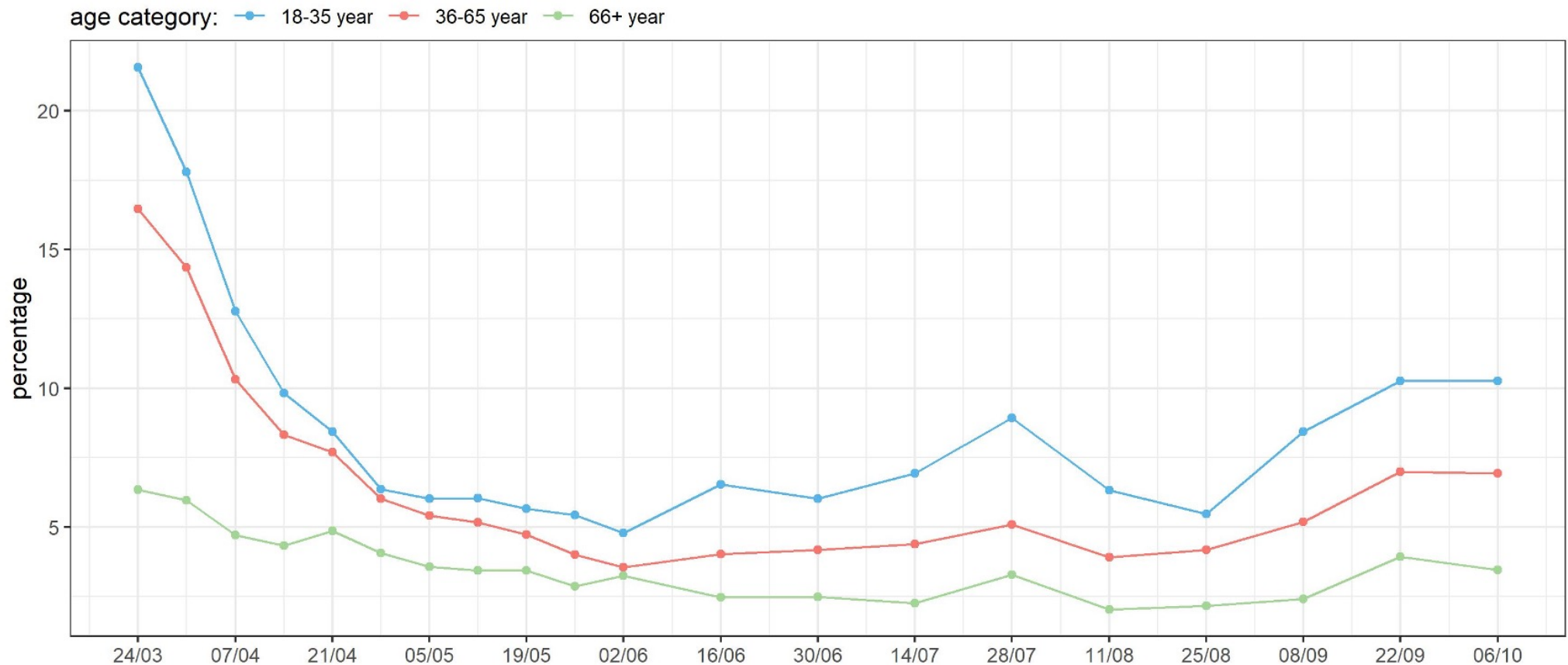
Wave 3 (31/03/2020) : 415,000 respondents



Themes

- Socio demographics
- Postponement of care non-COVID19
- Contact tracing and testing
- Social contacts
- Telework and working conditions
- (Home) education
- Day-care
- Financial impact
- Trust
- Adherence to measures
- Vaccine refusal/hesitance
- Psychosocial impact and well-being
- Masks / catering / travel / shopping / parties / vaccines / app
- ...
- **Syndromic surveillance: CAVEAT - WORK IN PROGRESS**

Weighted % reporting at least two symptoms of a respiratory infection

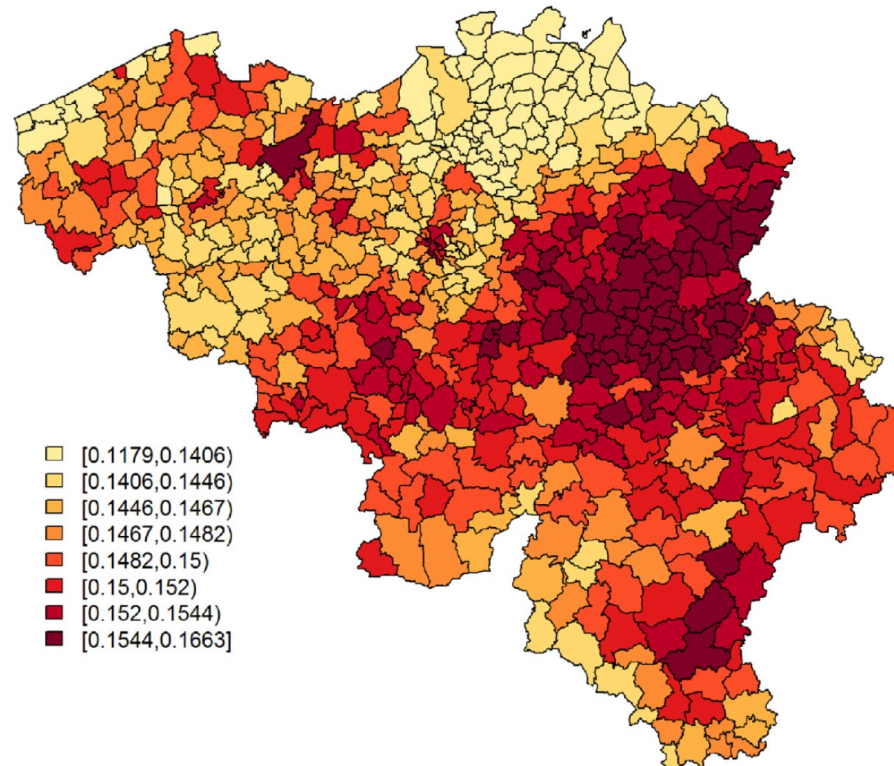


Can COVID-19 symptoms as reported in a large-scale online survey be used to optimise spatial predictions of COVID-19 incidence risk in Belgium?



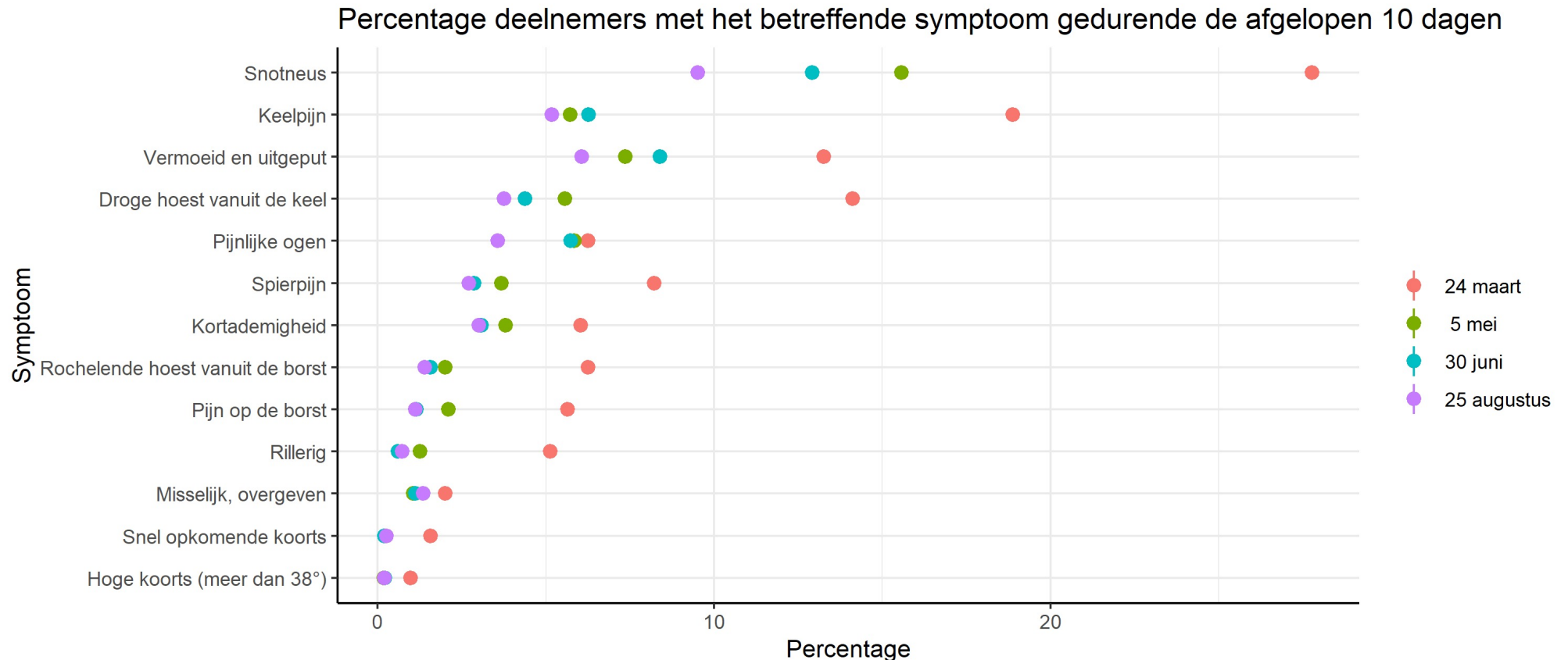
Thomas Neyens^{a,b,*}, Christel Faes^a, Maren Vranckx^a, Koen Pepermans^c, Niel Hens^{a,d},
Pierre Van Damme^d, Geert Molenberghs^{a,b}, Jan Aerts^a, Philippe Beutels^d

- Significant (limited) predictive effect on incidence of reported Covid
- Spatial resolution important when transmission is localised



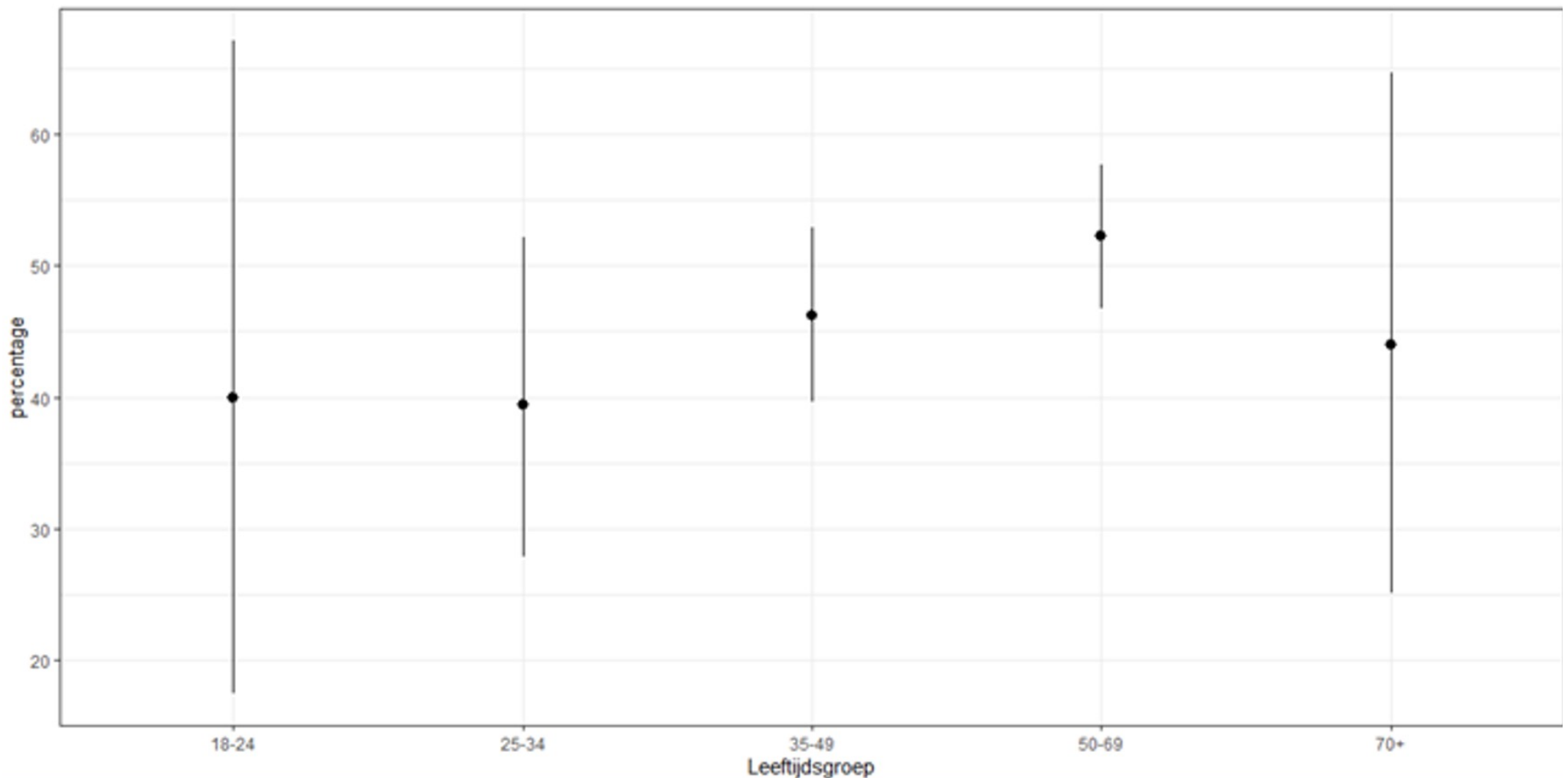
Further work in progress

Specific symptoms in respondents reporting symptoms over the last 10 days

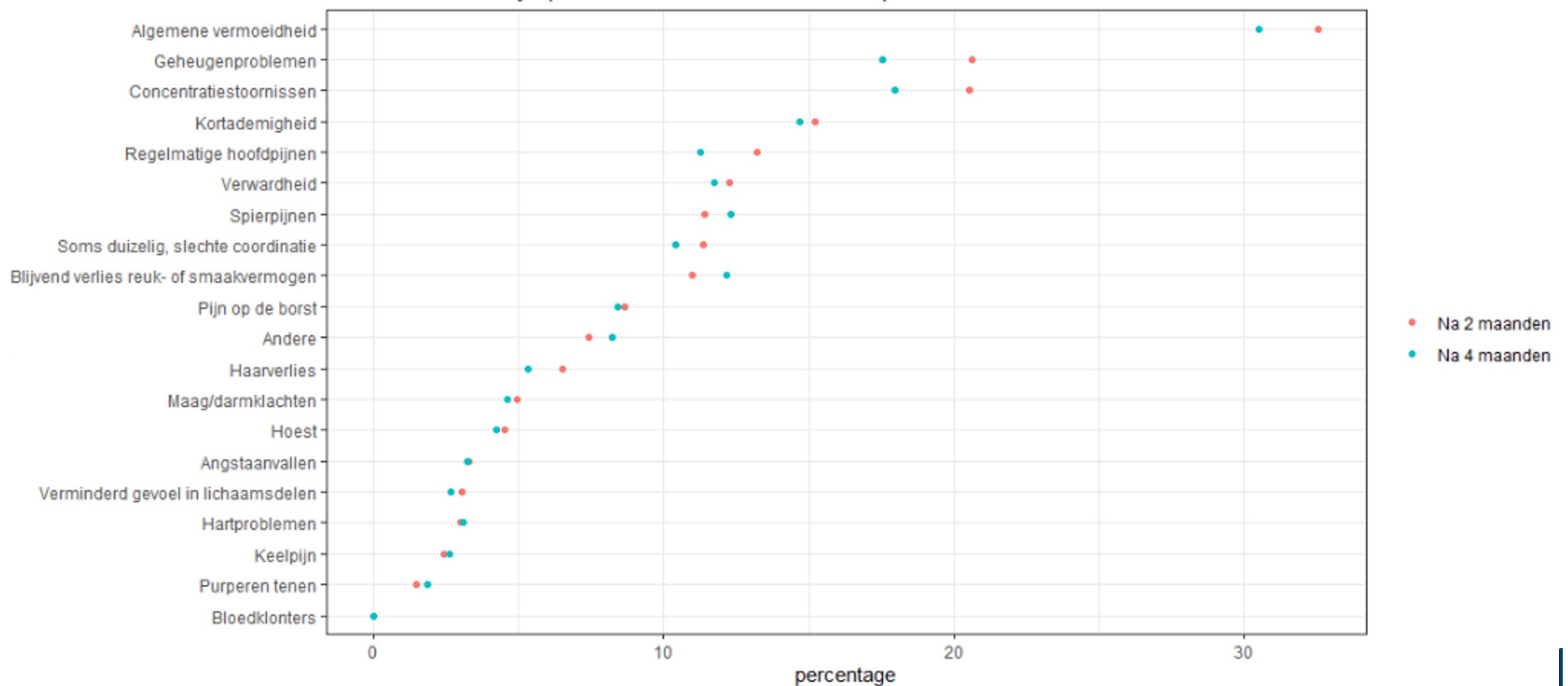


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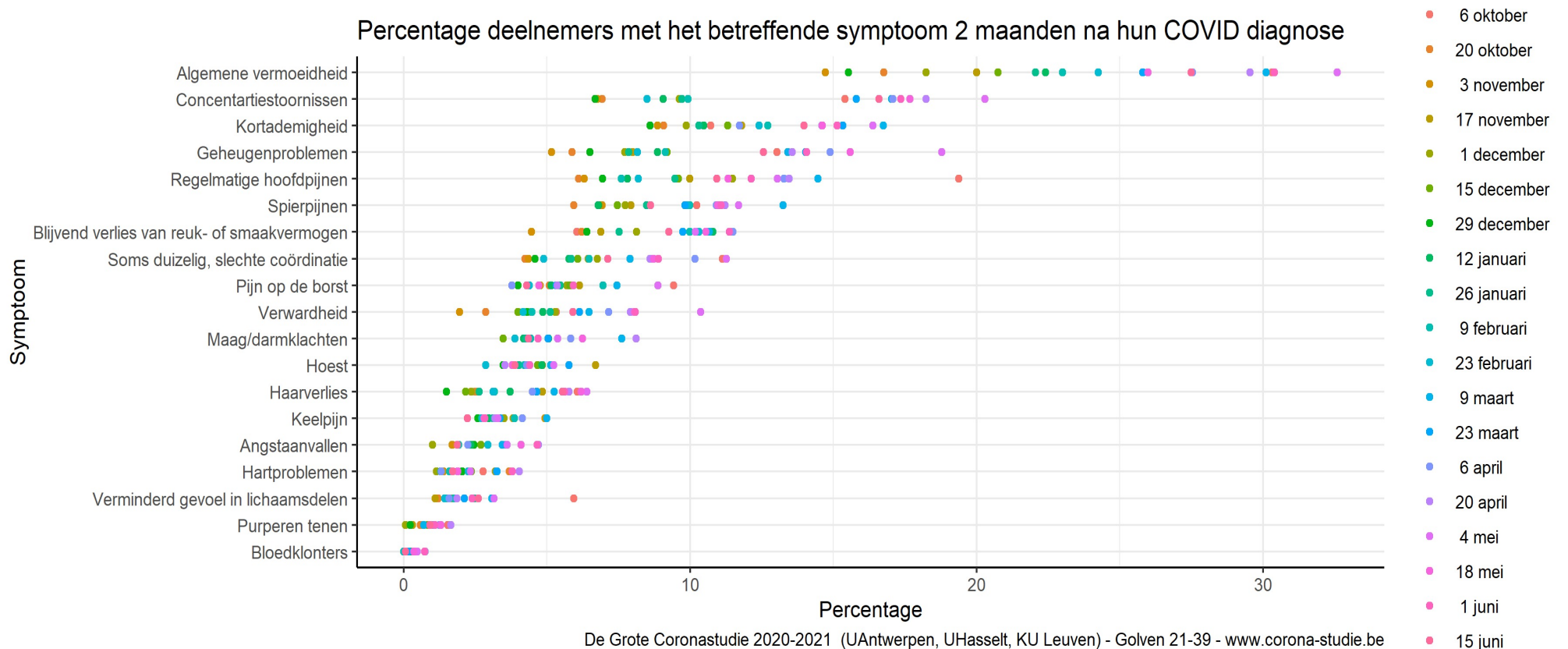
% of respondents with a positive test result > 2 months ago, still experiencing symptoms (Wave 36)



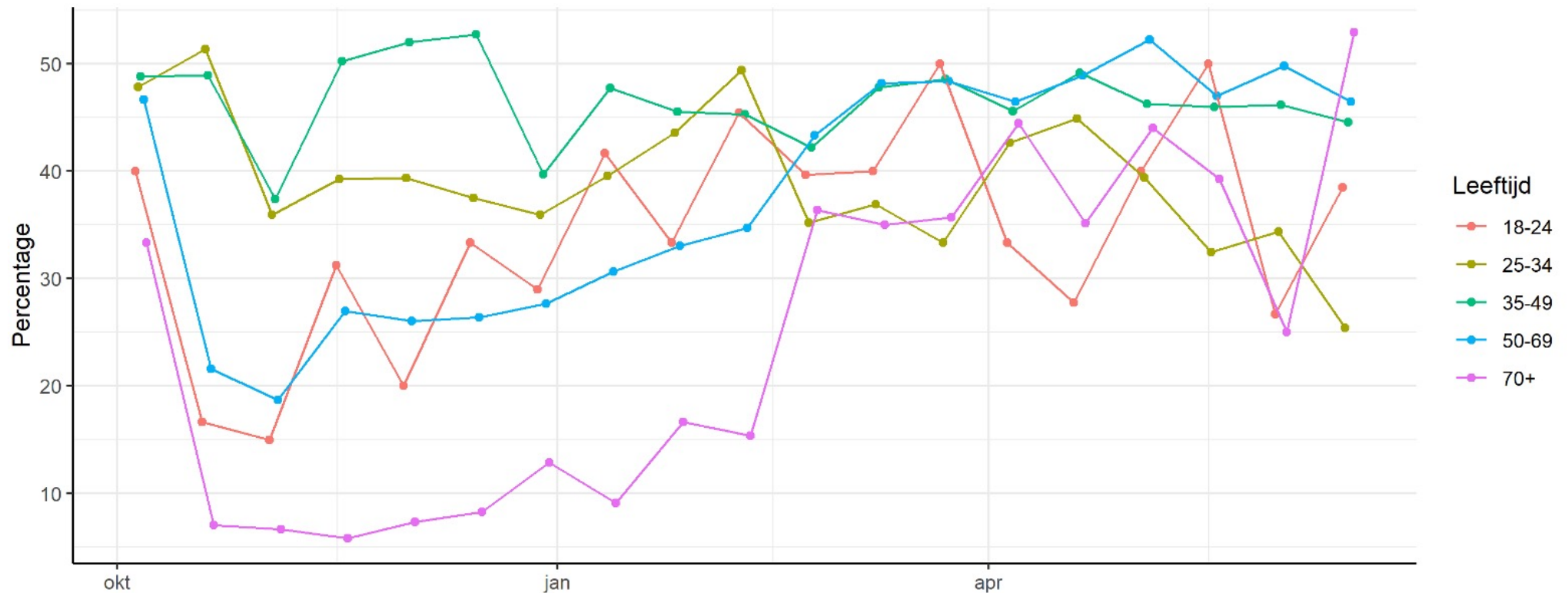
Specific symptoms in respondents reporting symptoms they think are related to their positive Covid diagnosis (tested positive > 2m ago and experience symptoms they think are related)



Specific symptoms in respondents reporting symptoms they think are related to their positive Covid diagnosis (tested positive >= 2m ago and experience symptoms they think are related)

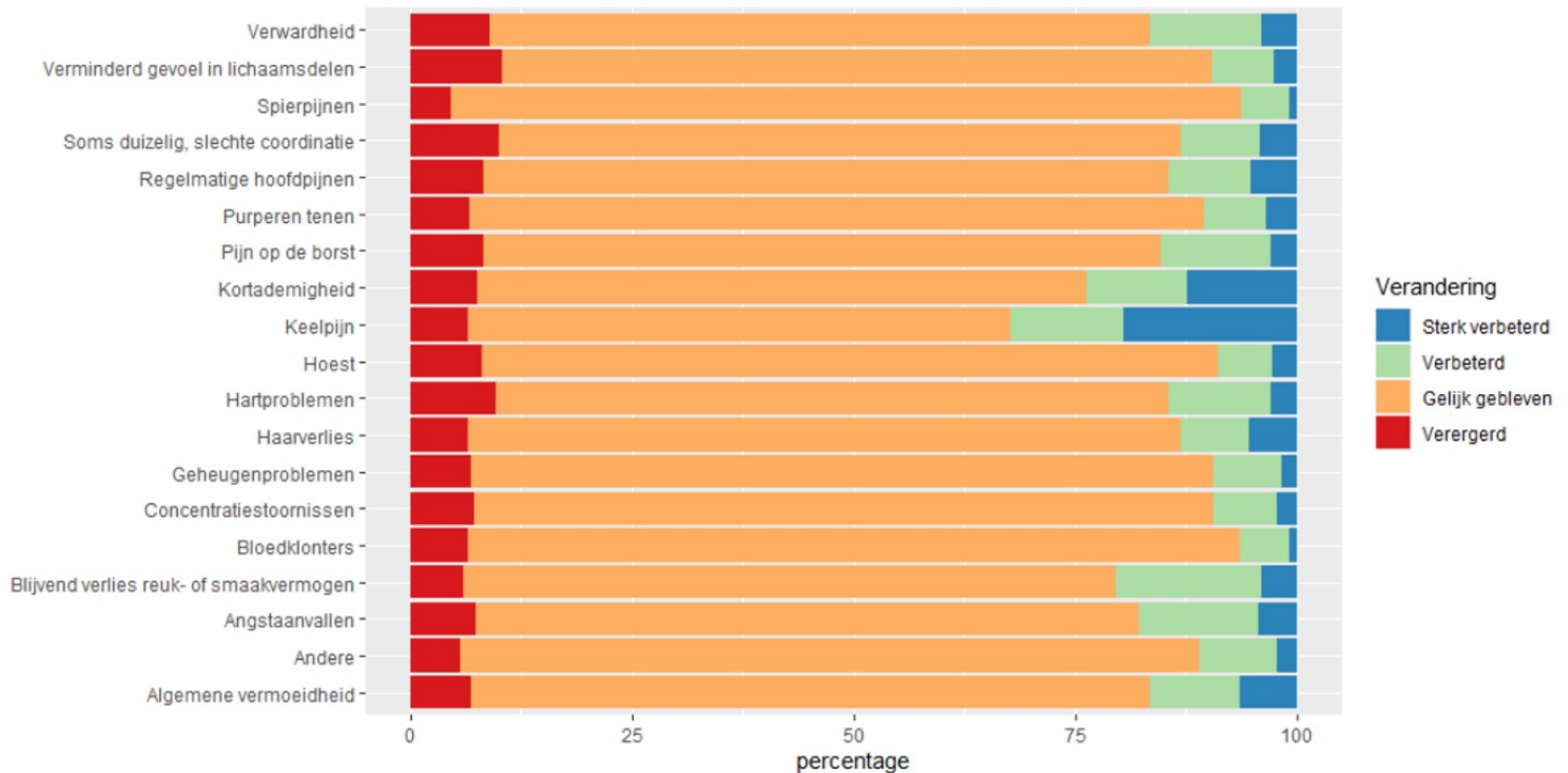


% of respondents with a positive test result > 2 months ago, still experiencing symptoms



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Effect of vaccination on long term symptoms? (Wave 38-39)



Effect of vaccination on long term symptoms? (Wave 38-39)

- Improvement reported more often by:
 - Men
 - Fully vaccinated
 - AZ>Pfizer>J&J
 - Positive C19 test
 - Younger

Discussion

- Based on early waves in which we surveyed for Longcovid symptoms, and first time participants in subsequent waves we CURRENTLY estimate the % of people having Long Covid symptoms 2 months after a positive test result at 15%-30%. Most important covariate is gender (women>men).
- Top 5 symptoms:
 - General tiredness, concentration problems, memory problems, shortness of breath, recurring head aches
- Limitation of anonymised self selection cross sectional survey to report symptoms, especially with a long recall period:
 - % of respondents with a positive test result > 2 months ago indicating related lingering symptoms is higher if they participated in previous waves of the survey
 - For these types of research questions there is a need to set up a different design
 - Important esp for health care use and Quality of Life impairment
- **www.infectieradar.be**

Great Corona Study team



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Pierre Van Damme; Jonas Crèvecoeur;

Jan Aerts; Marc Aerts; Lisa Hermans; Anna Ivanova; Oluwafemi
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www.corona-studie.be



Next survey Tuesday 27th July



Epidemic intelligence to minimize 2019-nCoV's public health, economic and social impact in Europe



European
Commission

CORDIS
EU research results

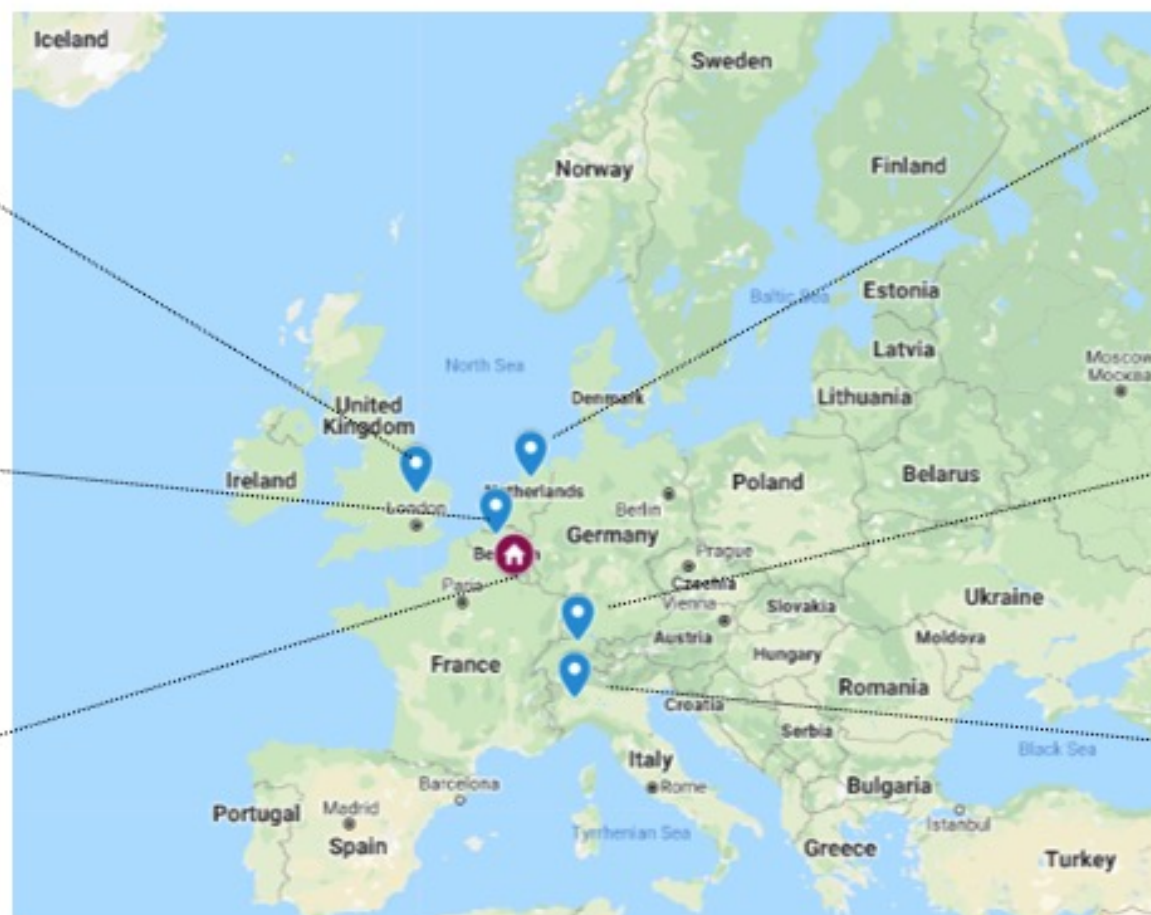
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University
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Coordinator



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

u^b

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ISI

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