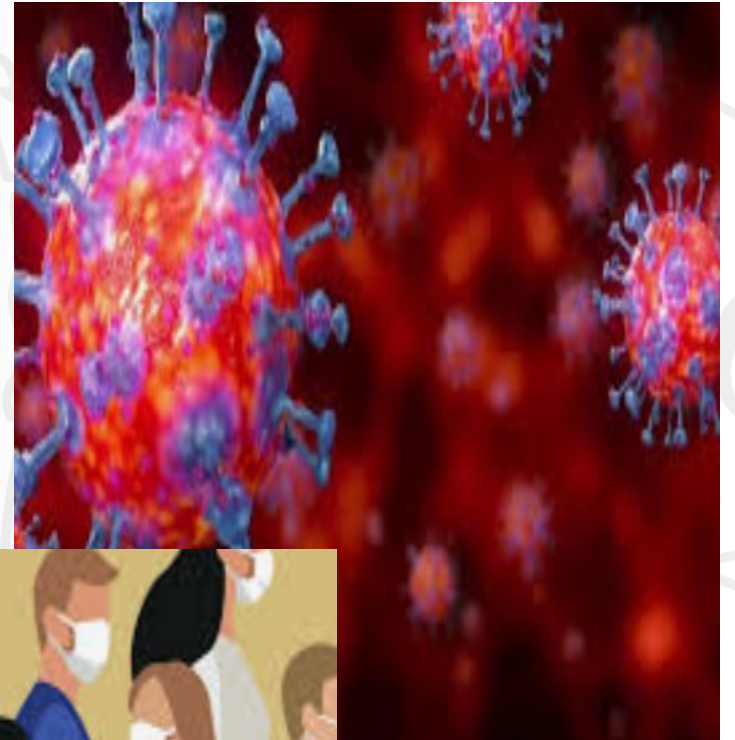


Long COVID in migrants and ethnic minorities

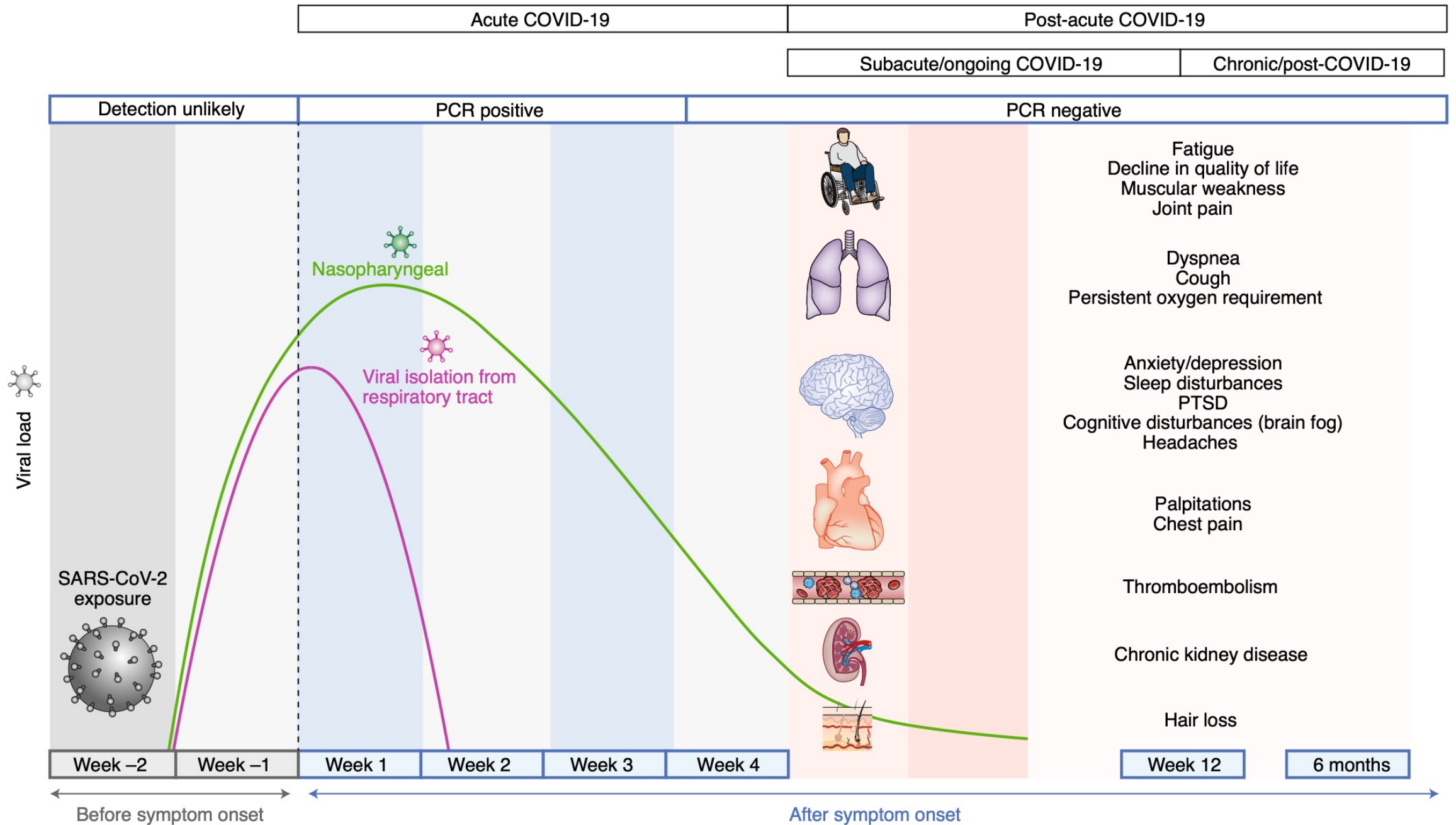
Prof. Marie Norredam,
Danish Research Centre for Migration,
Ethnicity and Health,
University of Copenhagen, Denmark

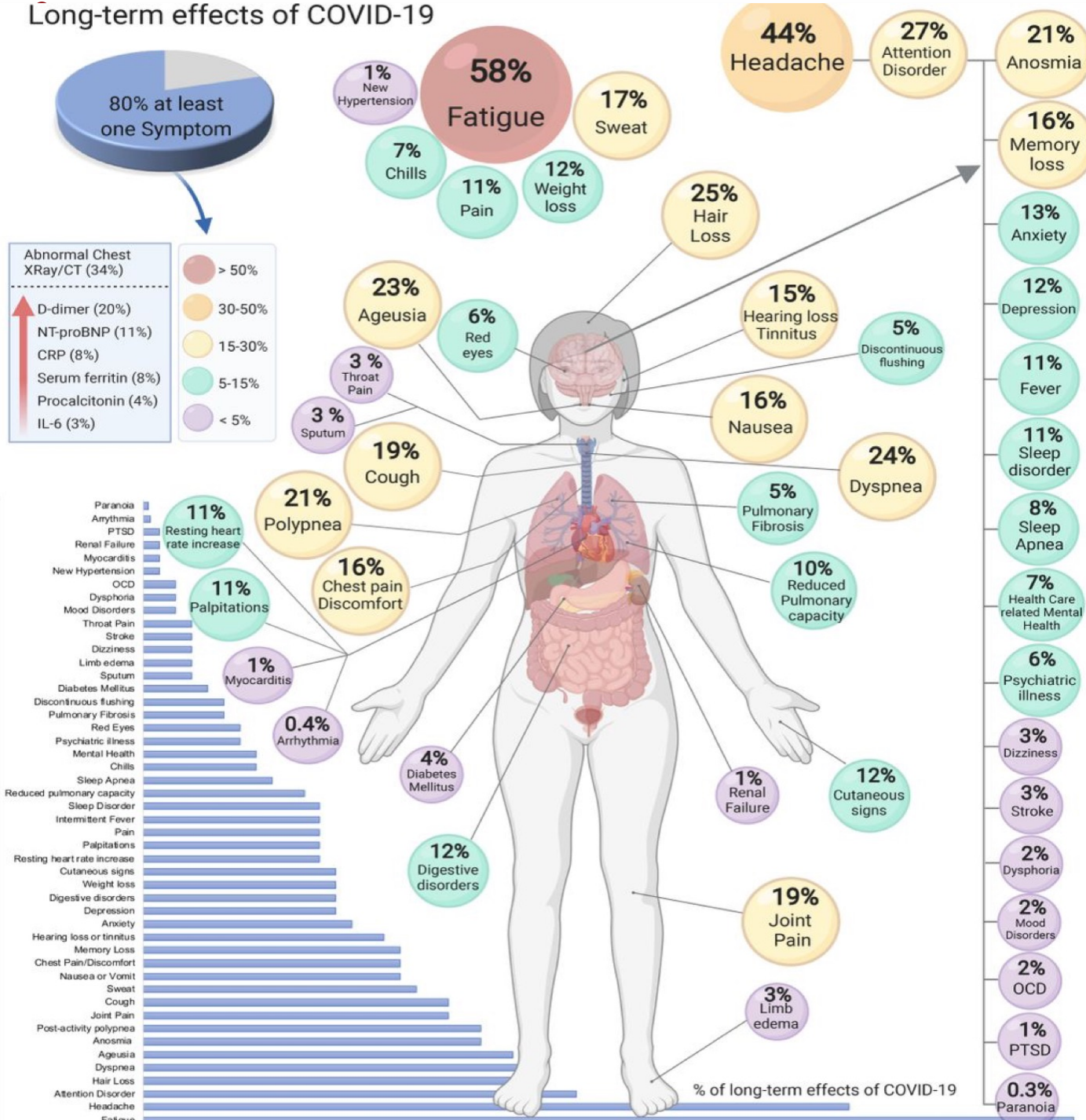
UNIVERSITY OF COPENHAGEN



How do we define long COVID?

- The British National Institute for Health and Care Excellence (NICE) defines COVID-19 into **three** clinical case definitions:
- *acute COVID-19* for signs and symptoms during the first 4 weeks after infection with SARS-CoV-2 is the first, and the other two are for
- *new or ongoing symptoms 4 weeks or more after the start of acute COVID-19*, both of which it includes under the term '**long COVID**', and divides into:
 - *ongoing symptomatic COVID-19* for effects from 4 to 12 weeks after onset, and
 - *post-COVID-19 syndrome* for effects that persist 12 or more weeks after onset.



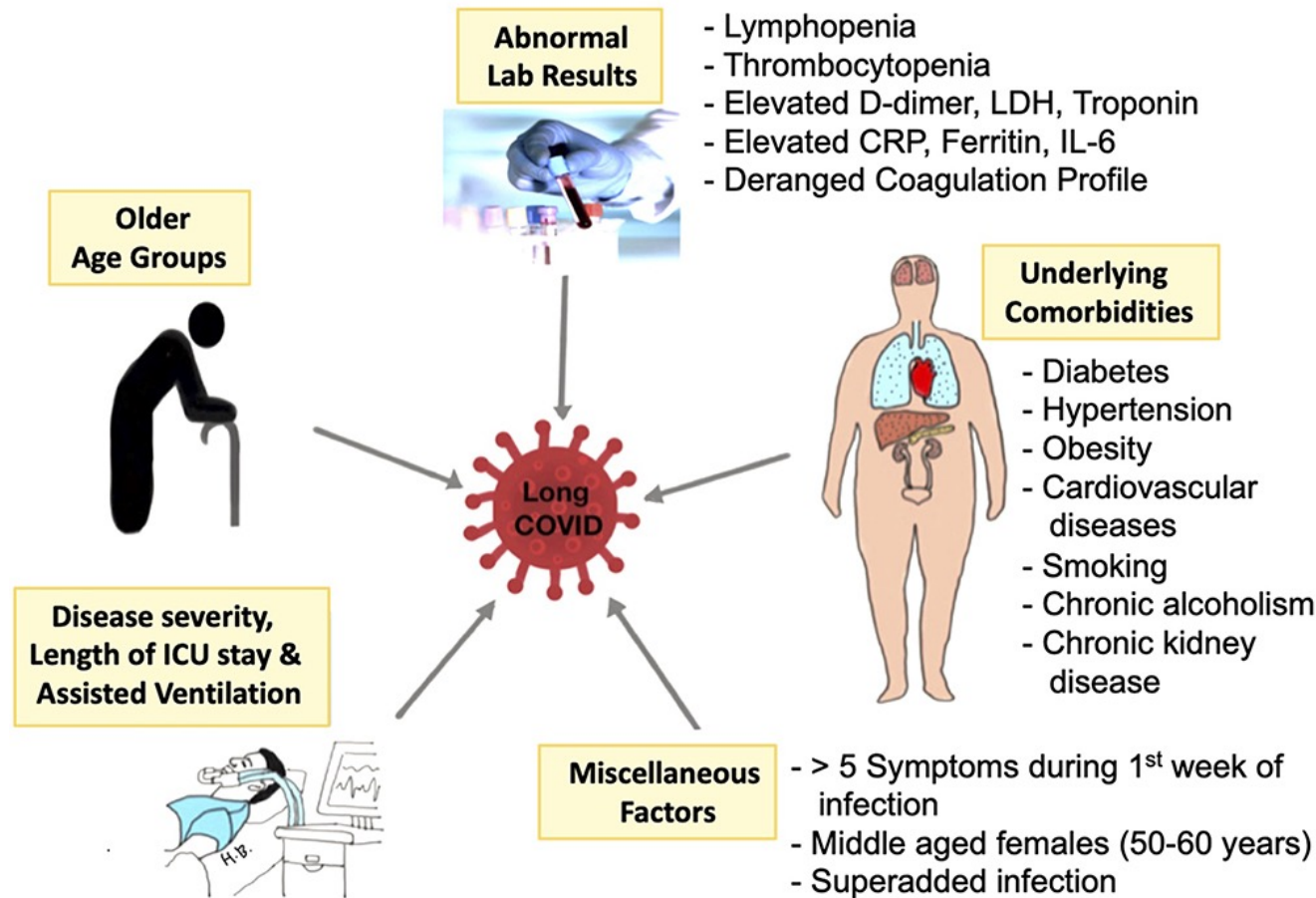


- Meta-analysis assessing long-term effects
- Including 15 studies with 100-44,799 patients
- 6/15 studies hospitalized patients
- Follow-up was 14-110 days post-viral infection
- 80% had at least one symptom
- Most common fatigue (58%), headache (44%), , attention disorder (27%), hair loss(25%) and dyspnea (24%)

Lopez-Leon et al. Nature. Scientific Reports. 2021

Predictors of long COVID

Predictors / Risk Factors for Long-COVID



Methods of studying Long COVID

DATA SOURCES

- Self-reported surveys
- Medical records
- Clinical evaluations
- Qualitative studies
- Registry data

OFTEN NO COMPARISON GROUP

MEASURES

- Symptom prevalence
- Laboratory parameters
- Radiology
- Readmissions
- Other health care contacts
- All cause mortality

Post-acute effects of SARS-CoV-2 infection in individuals not requiring hospital admission: a Danish population-based cohort study



Lars Christian Lund, Jesper Hallas, Henrik Nielsen, Anders Koch, Stine Hasling Mogensen, Nikolai Constantin Brun, Christian Fynbo Christiansen, Reimar Wernich Thomsen, Anton Pottegård

- Aim: To identify indicators of late COVID from 2 weeks to six months after a positive PCR-test among non-hospitalised individuals
- Based on Sociodemographic registers, the National Patient Registry and the Medication Registry
- Population based (n=9,000 positive and n= 80,000 negative)
- Comparison of: i) prescription medicine; ii) new relevant hospital diagnoses/symptoms; iii) health care contacts (inpatient, outpatient, ER, GP)

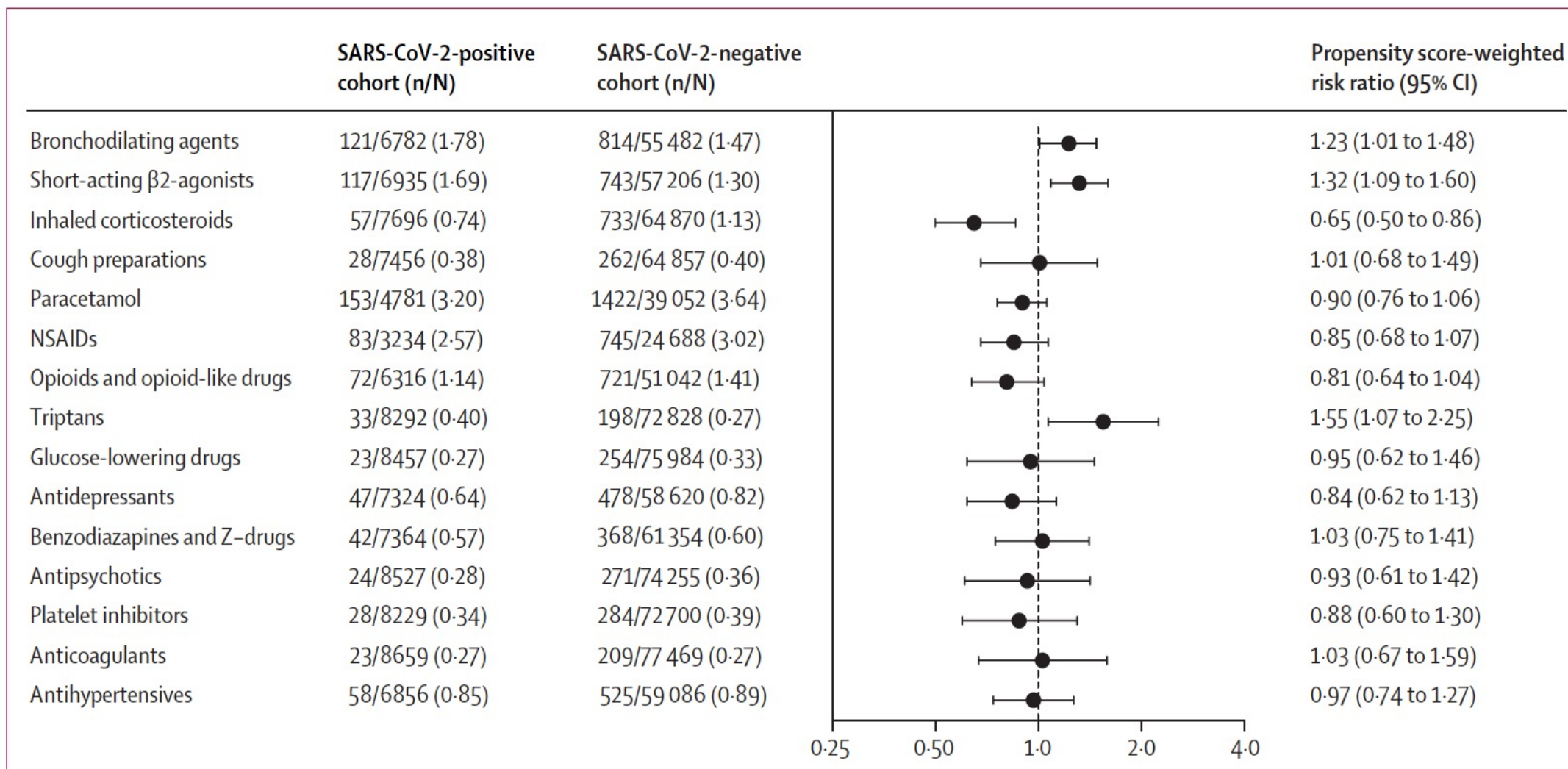


Figure 3: Risks and risk ratios for the initiation of new medication 2 weeks to 6 months after a SARS-CoV-2 test in individuals not admitted to hospital
NSAIDs=non-steroidal anti-inflammatory drugs.

Post-acute effects of SARS-CoV-2 infection in individuals not requiring hospital admission: a Danish population-based cohort study

09/11/2021



9

Lars Christian Lund, Jesper Hallas, Henrik Nielsen, Anders Koch, Stine Hasling Mogensen, Nikolai Constantin Brun, Christian Fynbo Christiansen, Reimar Wernich Thomsen, Anton Pottegård

General practitioner: Rate ratio: **1.18** (95%CI.1.15-1.22)

Outpatient: Rate ratio: **1.10** (95%CI.1.05-1.16)

Emergency room: Rate ratio: 1.07 (95%CI.0.88-1.30)

Inpatient: Rate ratio: 1.00 (95%CI.0.87-1.14)

Studies on long COVID and ethnicity are lacking

Ethnic minorities at higher risk of contracting COVID-19, says new study

By Natasha Foote | EURACTIV.com

📅 7 May 2020 (updated: 📅 18 May 2020)

Blog

Ethnic minority deaths and Covid-19:

what are we to do?

3ME groups will continue to be overexposed to coronavirus

ison Bloomer

aws, 05 August 2020

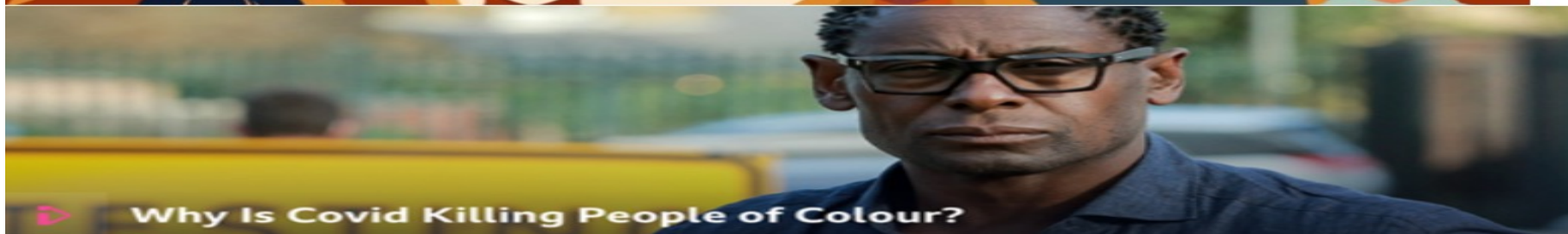


FIGURE 1 Patients at Highest Risk for PASC

DRIVERS OF INCREASED SUSCEPTIBILITY

Racial and Ethnic Minorities

- Increased risk for exposure & severe manifestation of COVID-19
- Socioeconomic factors prevent proper self-isolation
- Less access to primary and specialty care
- Distrust of medical institutions
- Higher rate of pre-existing conditions
- Multimorbidity

Clinical Complexity

- Pre-existing conditions (obesity, diabetes, heart/lung disease, etc.)
- Multimorbidity
- Severe COVID-19 manifestation
- Prior mental health history
- Women

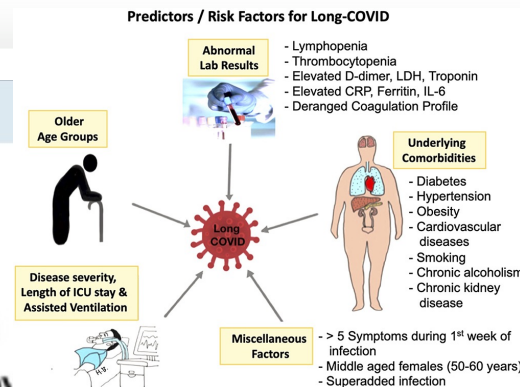


Older Population

- Increased risk for severe COVID-19
- Higher rate of pre-existing conditions
- Multimorbidity

Rural Residents

- Increased risk for exposure to COVID-19
- Decreased healthcare infrastructure
- Older population
- Higher rate of pre-existing conditions
- Multimorbidity



Whereas data on risk factors for postacute sequelae of severe acute respiratory syndrome coronavirus 2 infection (PASC) are scarce, early published reports suggests several clinical and sociodemographic risk factors. COVID-19 = coronavirus disease-2019.

Post-Acute Sequelae of SARS-CoV-2 Infection Among Adults Aged ≥ 18 Years — Long Beach, California, April 1–December 10, 2020

Kyle Yomogida^{1,2}; Sophie Zhu^{1,2,*}; Francesca Rubino, MSc^{1,2,*}; Wilma Figueroa, MPH¹; Nora Balanji, MPH¹; Emily Holman, MSc¹

Methods

- Survey of 366 individuals
- Tested positive at least 2 months before
- Participants were interviewed October 1, 2020–March 3, 2021, by telephone
- Using a standardized survey instrument
- Interviews were conducted in English, Spanish, or Khmer

Results

Black persons were at higher risk of having **any symptom** compared to White (aOR: 1.95 ; 95%CI 1.02-3.73)

Black persons were at higher risk of having **dyspnea** (aOR: 2.52) and **arthralgia/myalgia** (aOR:3.67) compared to other ethnic/racial groups

Postdischarge symptoms and rehabilitation needs in survivors of COVID-19 infection: A cross-sectional evaluation

Stephen J. Halpin^{1,2,3}  | Claire McIvor⁴ | Gemma Whyatt² | Anastasia Adams² | Olivia Harvey² | Lyndsay McLean⁵ | Christopher Walshaw⁵ | Steven Kemp⁶ | Joanna Corrado² | Rajinder Singh² | Tamsin Collins³ | Rory J. O'Connor^{1,2}  | Manoj Sivan^{1,2,3} 

Methods

- 100 survivors
- Assessed by telephone interview
4-8 weeks after discharge
- Using standardised survey tools
- Division by ethnicity

Results

- Individuals belonging to BAME were more likely to experience **dyspnea** than White individuals (42.1% versus 25%)
- Rates of **PTSD** were similar in BAME and White individuals

Research Agenda for long COVID among migrants and ethnic minorities includes investigating:

- if MEM are **disproportionately affected** by long COVID and risk factors hereof compared to the majority population
- the impact of long COVID on **socio-economic circumstances** among MEM i.e. work life, disability, income etc
- the impact of long COVID on **well-being** i.e. stigma, discrimination, marginalisation etc.
- **access** to diversity sensitive multidisciplinary rehabilitation care
- support structures of **data collection** globally on long COVID among MEM

EXAMPLE: Long-term health consequences of COVID-19 among patients with migrant and ethnic minority background

NOVO foundation call on Long-term effects of COVID-19



Study aims

- **Incidence, nature, duration, risk factors** of long COVID among MEM compared to the majority population
- **Experiences** of symptoms of long COVID among MEM
- **Health care seeking behaviour** including referral to rehabilitation among MEM with long-COVID compared to the majority population
- **Social and labour market implications** for MEM with long-covid compared to the majority population

When possible performing cross country analyses

Multiple methods study

Register	Nationwide register-based data (SW, DK, NL)
Survey	Survey data from COVID-19 follow-up cohorts (DK, SW, NL)
Interview	Individual interviews with long COVID patients (DK, SW, NL)
Clinical data	Clinical data from COVID-19 follow-up cohorts (DK, SW, NL)

Data is needed on long COVID among MEM across all world regions

- to **avoid the negative socioeconomic impacts** of long COVID like job insecurity, lack of income, social isolation and stigma
- to **reduce inequalities in health** by providing data for policy makers and caregivers enabling them to intervene with targeted health care interventions



Thank you

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www.mesu.ku.dk