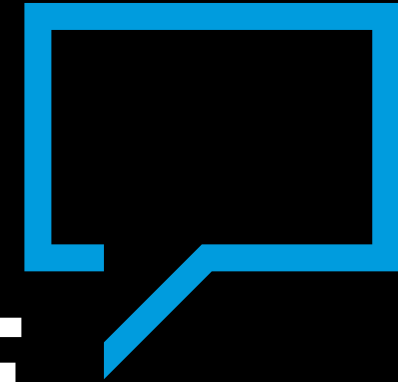


POST ACUTE SEQUELAE OF SARS-COV-2 (PASC)



FOCUS ON 'LONG HAULERS'

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Project ECHO Clinical Rounds Critical Care

April 13, 2021

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**PASC VS 'LONG HAULERS' VS
POST COVID SYNDROME
- WHAT'S IN A NAME?**

POST ACUTE SEQUELAE OF SARS-COV-2 INFECTION

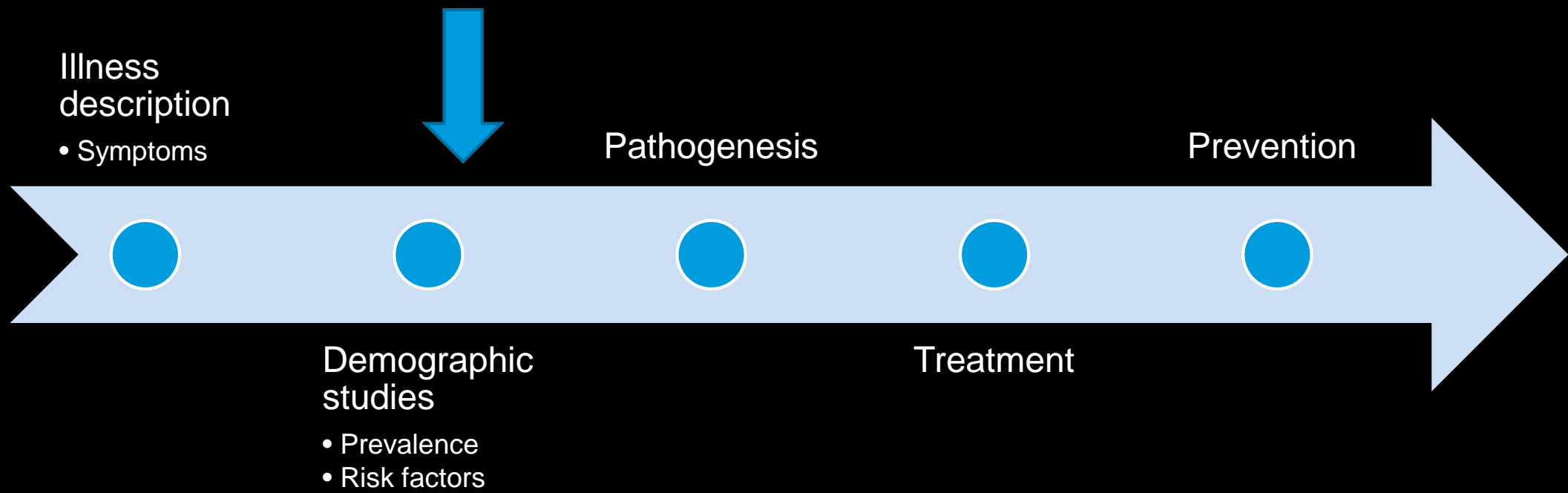
PASC


- NIH term (2021)
- Encompassing term for all persistent symptoms post-acute COVID infection
- May be due to tissue damage and dysfunction
 - Myocarditis
 - Pulmonary fibrosis
 - VTE
- May be more syndromic
 - Long hauler syndrome
 - AKA **Post COVID syndrome**, Long COVID, Post-Acute COVID

POST COVID SYNDROME

- Term for the syndromic manifestations seen by many patients who experience stereotypical symptoms after the end of the acute infection.
- Symptoms similar to many other post infectious syndromes.
 - Post-Lyme
 - Post- SARS
 - Post-EBV
 - Post-Zika
 - Post-Chikungunya
- Symptoms overlap with central sensitization disorders
 - POTS
 - Fibromyalgia
 - Chronic Fatigue Syndrome

UNDERSTANDING POCOS



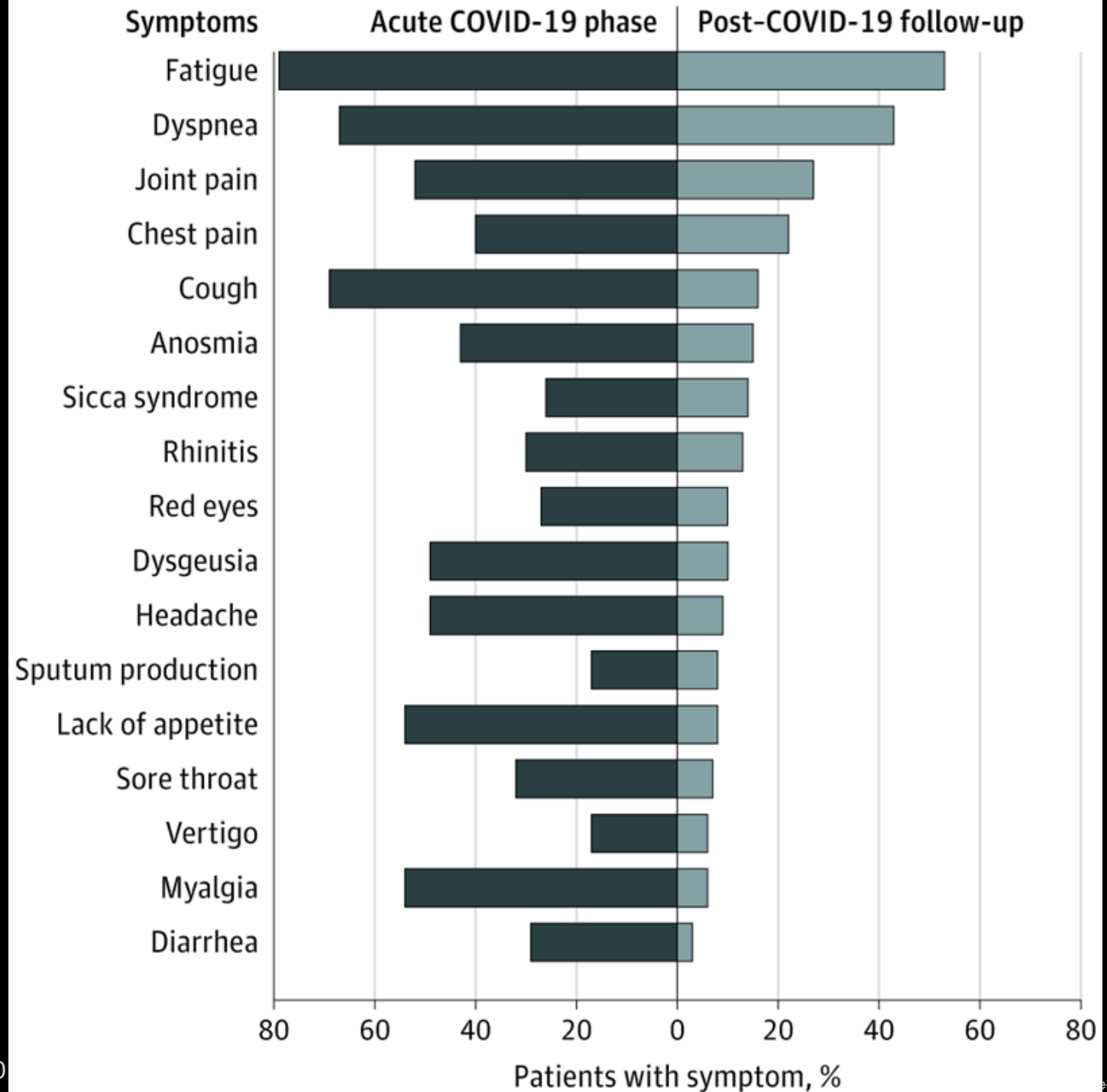


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POST COVID SYNDROME - SYMPTOMS

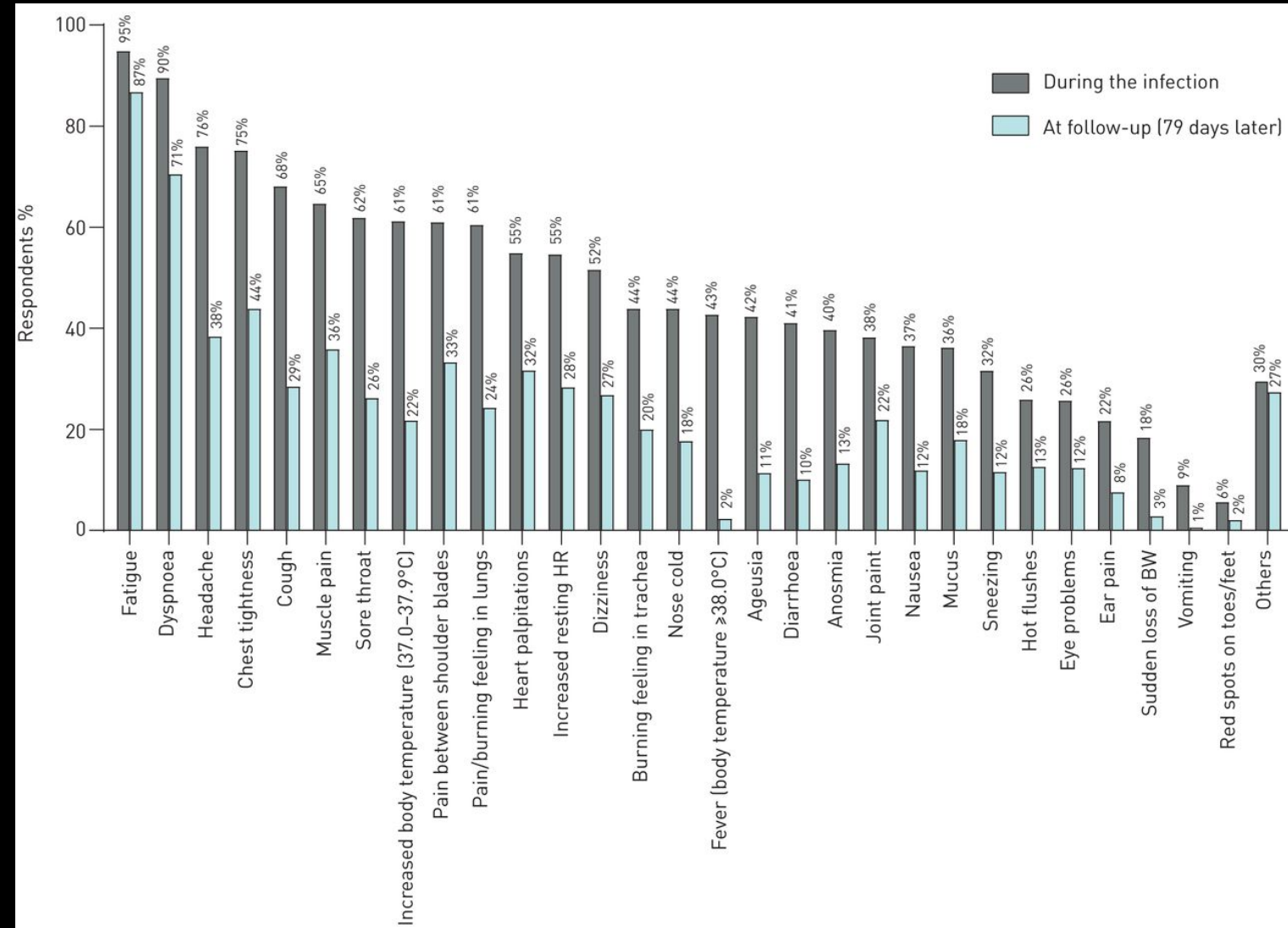
POCOS SYMPTOMS

- July 2020
 - Carfi et al (Italy)
- 143 patients post hospital follow up
 - Patients with persistent + excluded
- 60.3 days after onset of symptoms
- 87.4% had at least one symptom
- 44.1% reported worse QOL



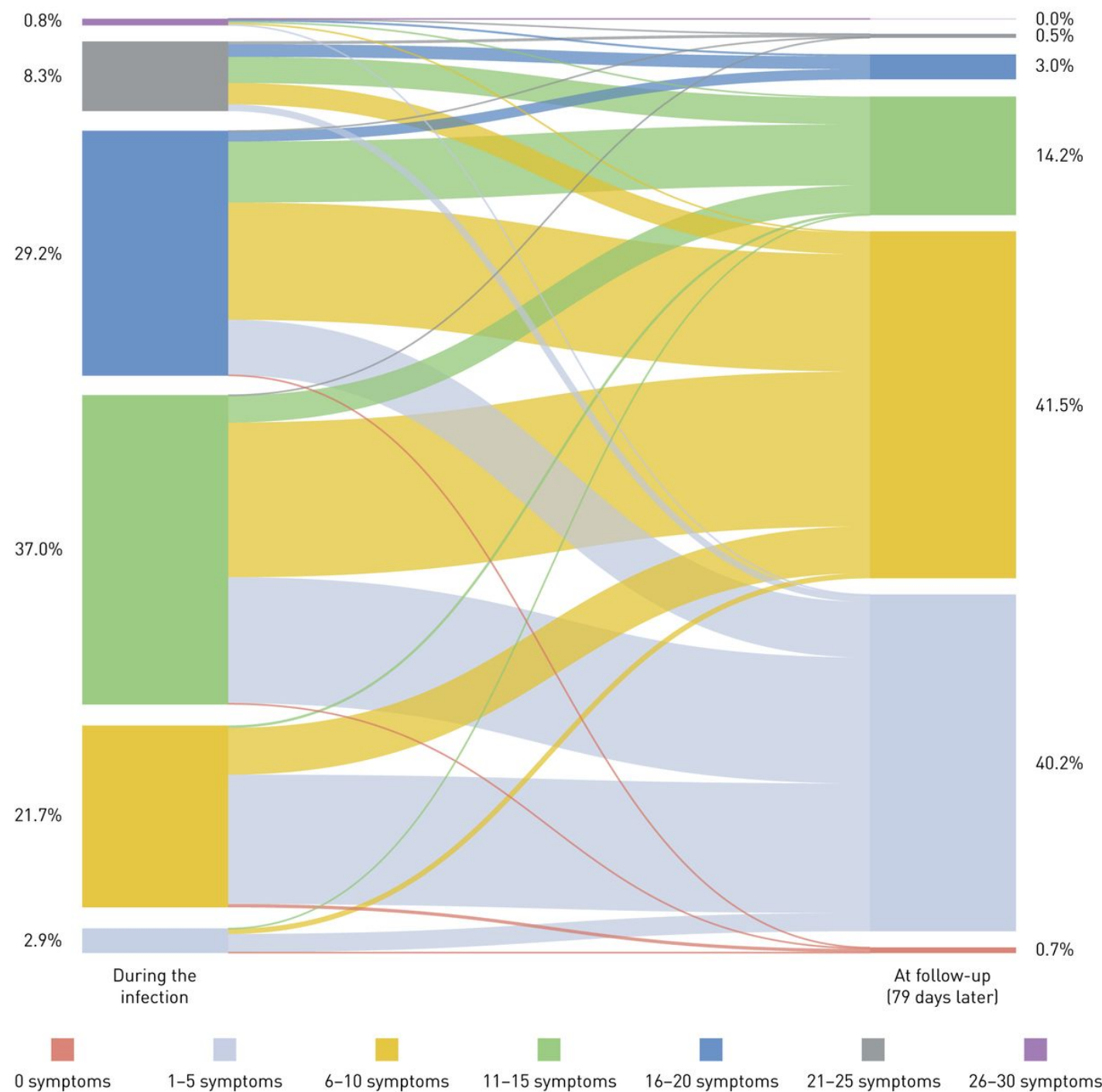
POCOS SYMPTOMS

- Netherlands & Belgium
- 2113 patients from 2 Facebook groups
 - 112 hospitalized
 - 2001 non hospitalized
- 79 +/- 17 days after onset of symptoms



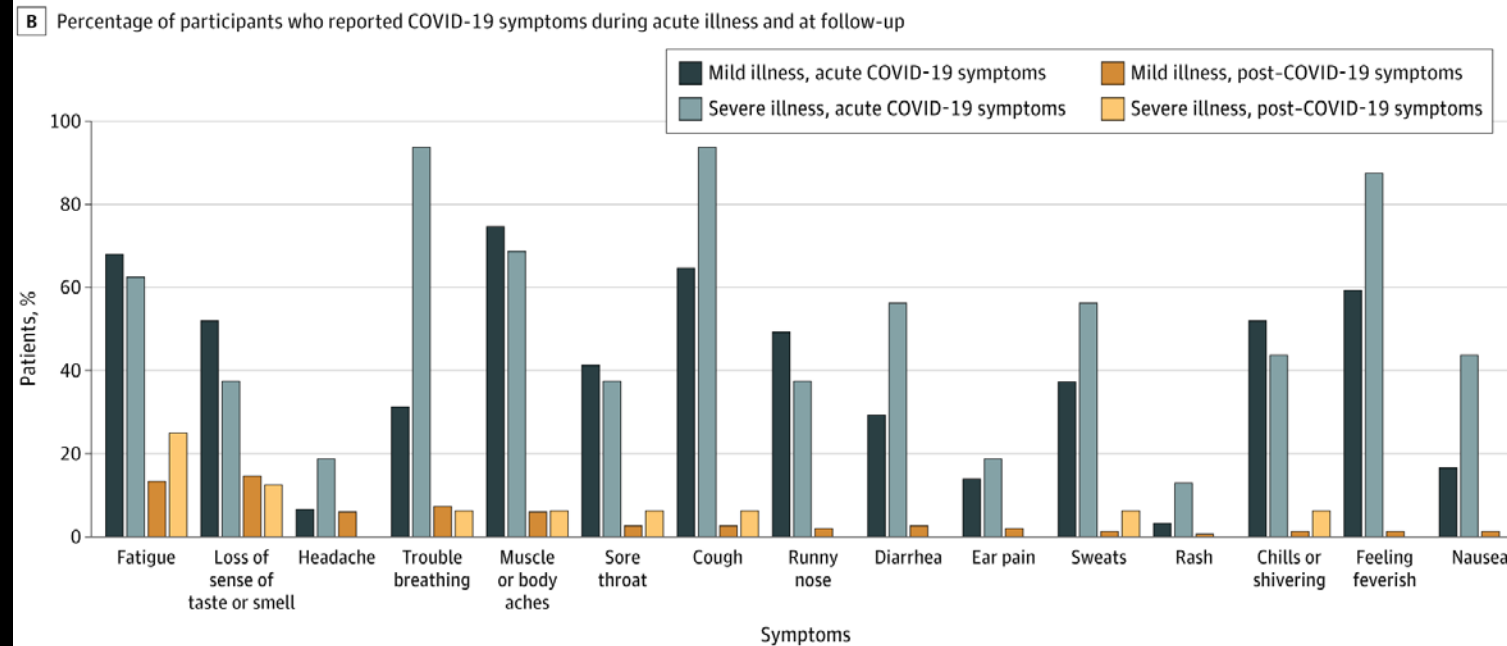
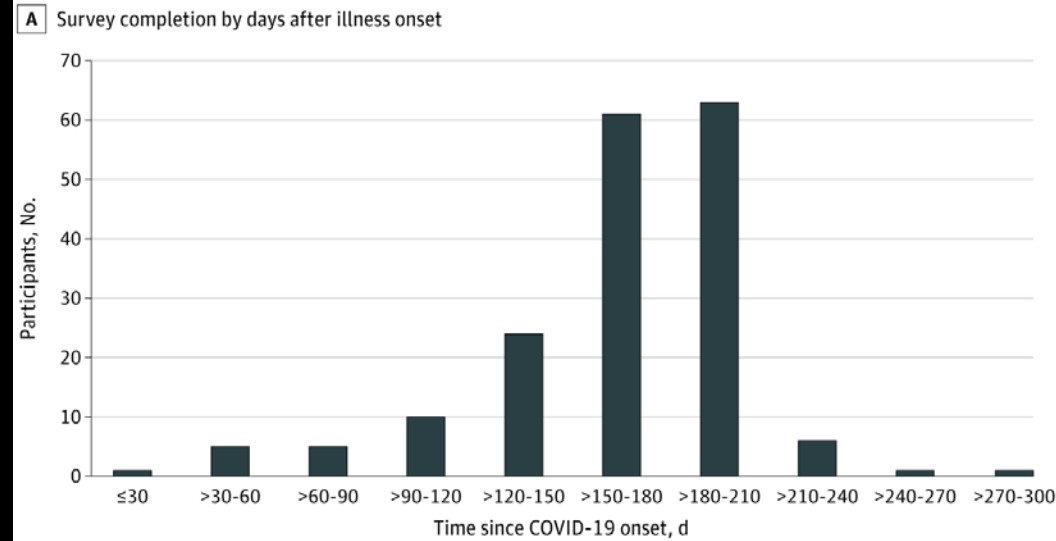
POCOS SYMPTOMS

- Netherlands & Belgium
- 2113 patients from 2 Facebook groups
 - 112 hospitalized
 - 2001 non hospitalized
- 79 +/- 17 days after onset of symptoms
- Symptoms did tend to decrease over time.



POCOS SYMPTOMS

- University of Washington
- 234 patients contacted between 3 and 9 months after symptom onset
 - 16 hospitalized
 - 150 non hospitalized symptomatic
 - 11 asymptomatic
- Median 169 days after onset of symptoms





3

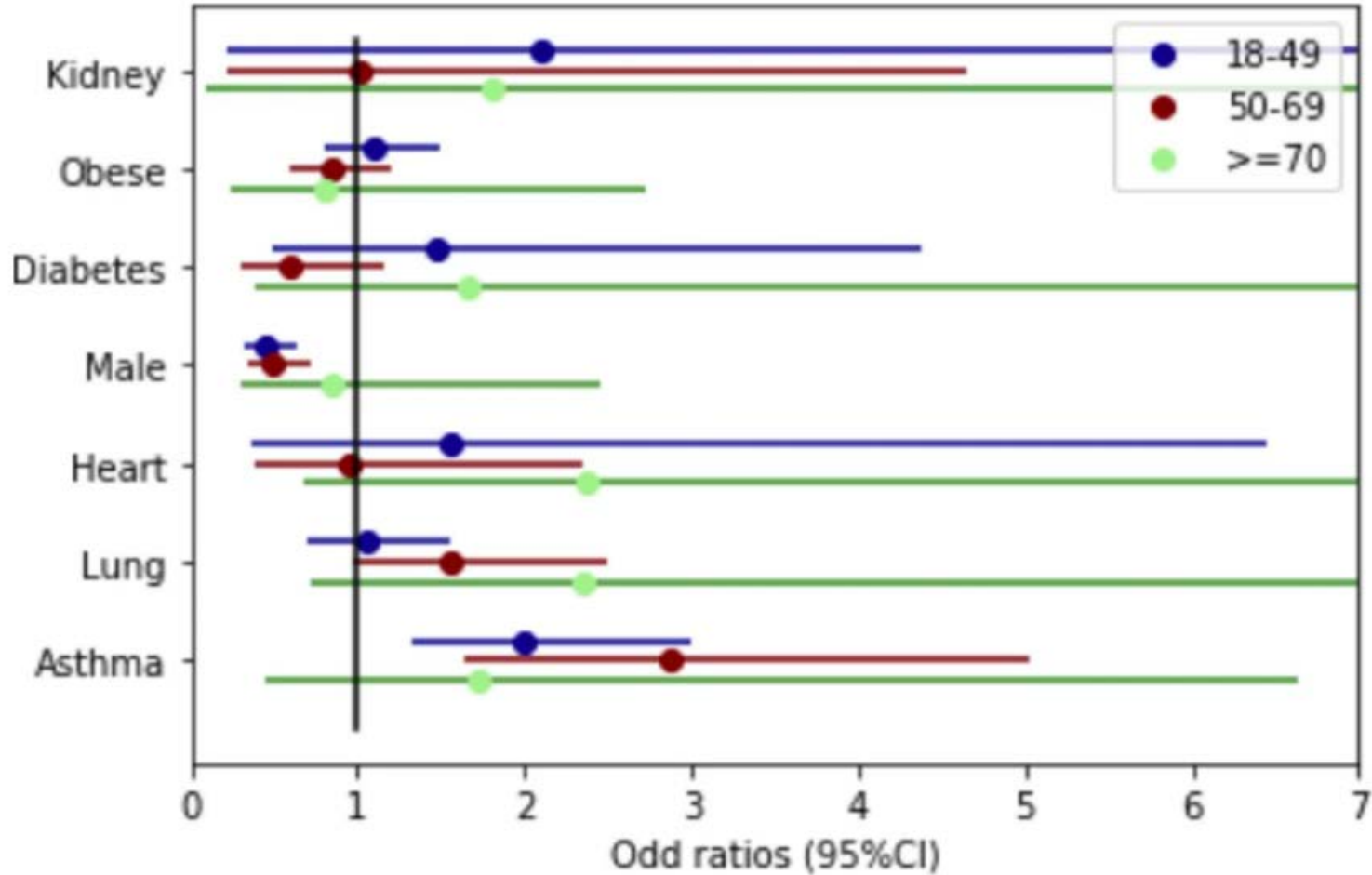
POST COVID SYNDROME - DEMOGRAPHICS

POCOS DEMOGRAPHICS

- 4182 patients in COVID symptom study
- Predictors
 - Female
 - Heart, lung, kidney disease
 - Age risk modifier
- Obesity not predictive

Extended Data Fig. 3: Odds ratio of LC28 per comorbidity.

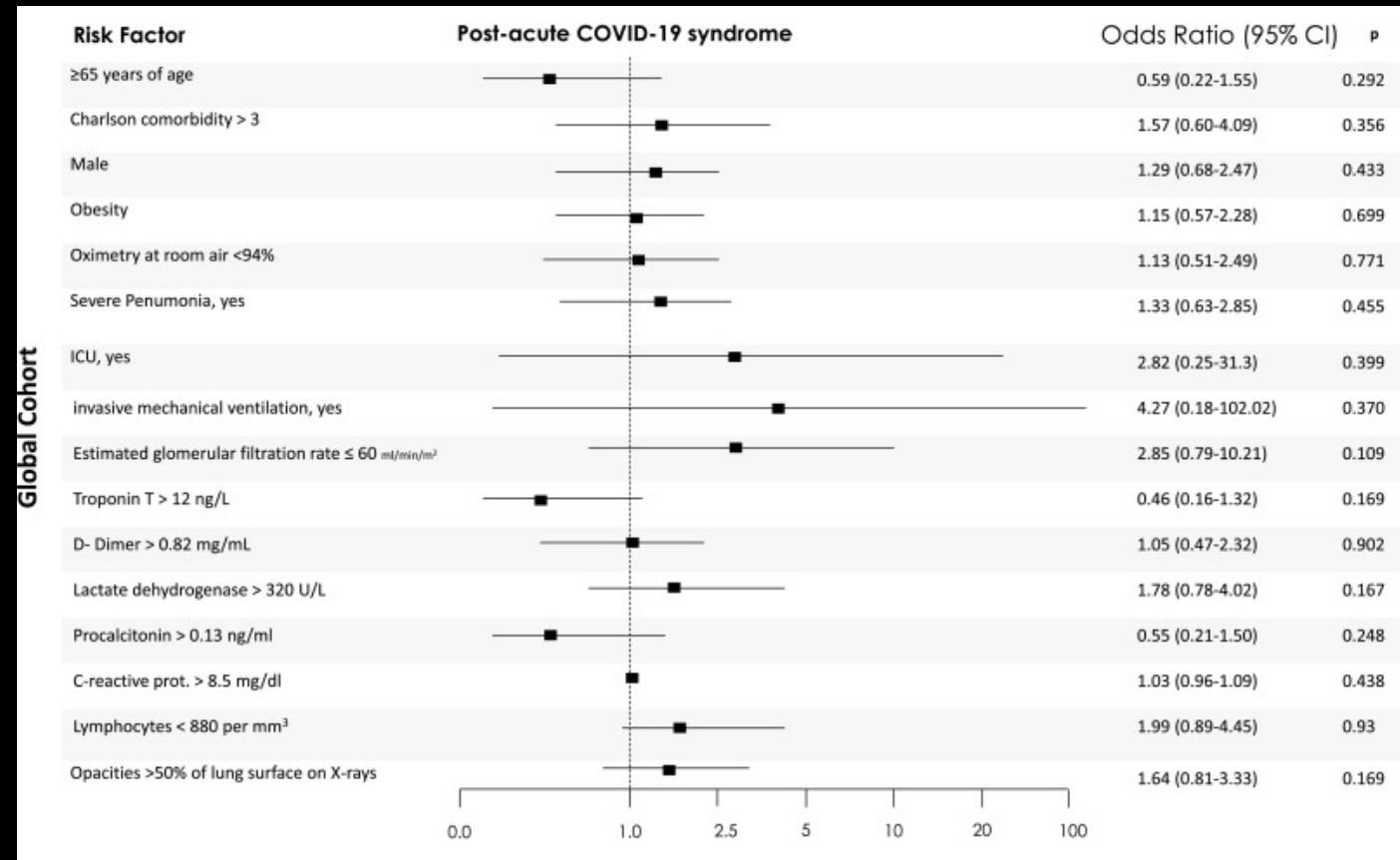
From: Attributes and predictors of long COVID



Odds ratios and associated 95% confidence interval for the risk of developing Long Covid 28 for each comorbidity or risk factor, correcting for age and gender in each age group (18-49 n=1466, 50-69 n=621, ≥70 n=62).

POCOS DEMOGRAPHICS

- 277 patients in recovered cohort
 - 34.3% mild disease
 - 65.7% severe disease
- Predictors
 - Male
 - Severity of illness
 - ICU
 - Ventilation
 - Opacities >50% lung CXR



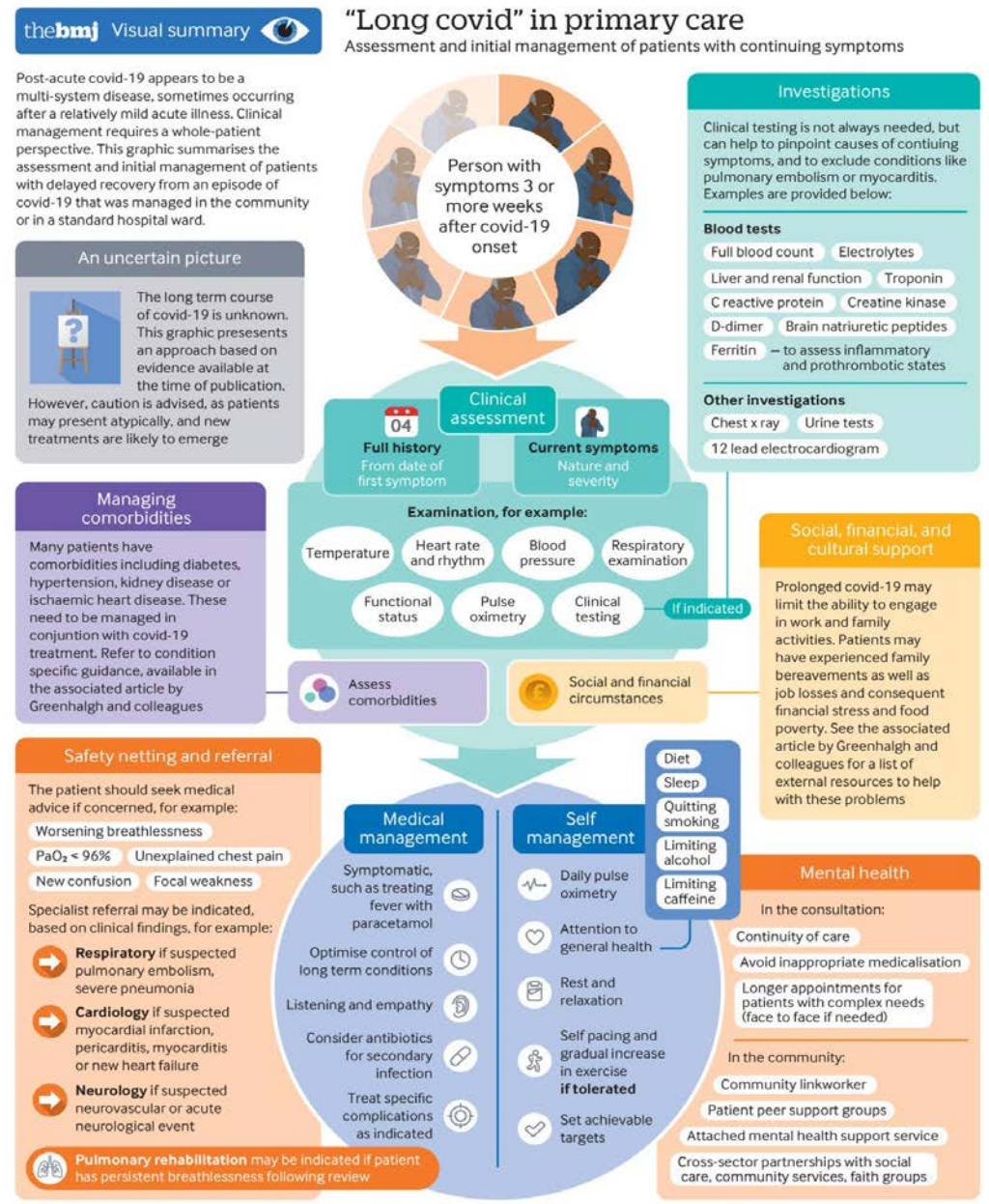


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POST COVID SYNDROME - MANAGEMENT

POCOS MANAGEMENT

- Very few clear guidelines
 - NICE
 - Greenhalgh
- Evaluate for tissue damage based on symptoms
 - Cardiac
 - Pulmonary
 - Neurologic
 - Rheumatologic
- Supportive care
 - Rehab
 - Work restrictions




MAYO CLINIC APPROACH

- Subacute

- COVID Activity Rehabilitation Program (CARP)
 - Evaluation for tissue damage
 - Paced rehabilitation
 - Symptom management
 - **Focus on return to work**

- Chronic

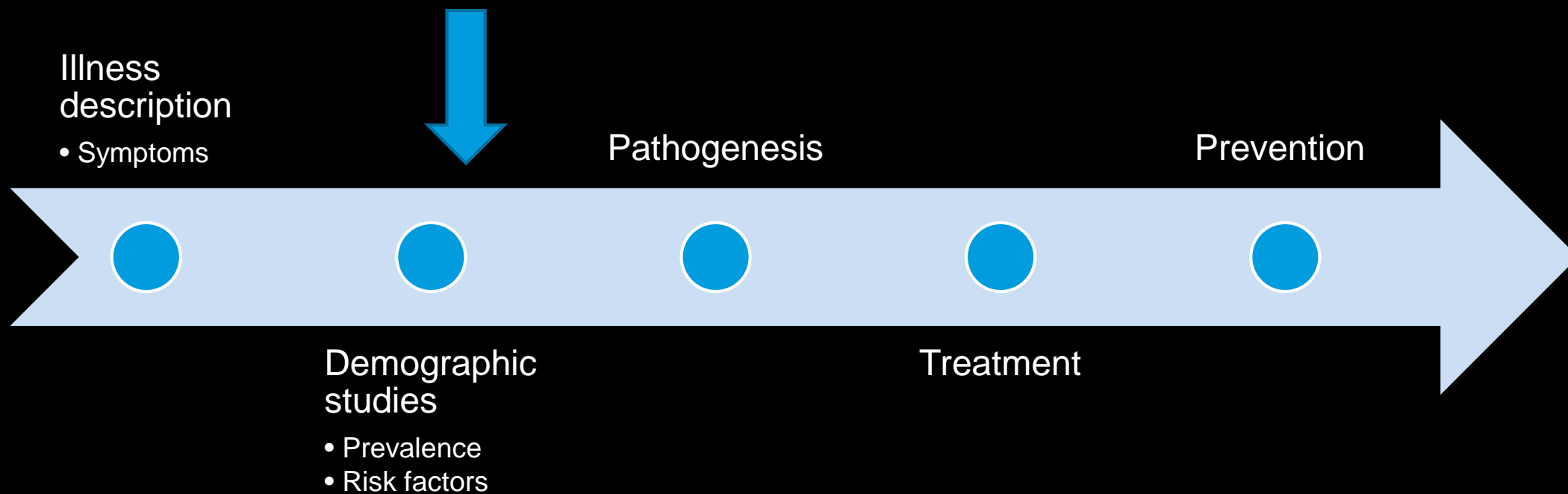
- Post COVID Care Clinic (PCOCC)
 - Evaluation for tissue damage
 - Paced rehabilitation
 - Symptom management
 - Cognitive behavioral therapy
 - **Focus on symptom management**



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POST COVID SYNDROME - RESEARCH DIRECTIONS

UNDERSTANDING POCOS



QUESTIONS & ANSWERS

