



POWER OF PROVIDERS

Peer to Peer knowledge sharing
webinar series



Obtaining Continuing Education

- Continuing education is available for physicians (MD, DO, ND), physician assistants, nurses (RN, ARNP, LPN), and medical assistants.
- Successful completion of this continuing education activity includes the following:
 - Attending the entire live webinar or watching the webinar recording
 - Complete the evaluation after the live webinar or webinar recording
 - **On the evaluation, please check Yes if you're interested in contact hours and please specify which type of continuing education you wish to obtain**
- **Please note:** CE certificates are NOT generated after evaluation completion—CE certificates will be sent by DOH within a few weeks after evaluation completion
- Expiration date is 6/29/2024.

Continuing Medical Education

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Federation of State Medical Boards, Washington Medical Commission and the Washington State Department of Health. The Federation of State Medical Boards is accredited by the ACCME to provide continuing medical education for physicians.

The Federation of State Medical Boards designates this live activity for a maximum of 1.0 *AMA PRA Category 1 Credit*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Continuing Education

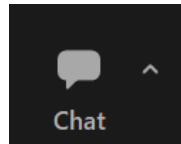
- This nursing continuing professional development activity was approved by Montana Nurses Association, an accredited approver with distinction by the American Nurses Credentialing Center's Commission on Accreditation. Upon successful completion of this activity, 1.0 contact hours will be awarded.
- This program has been granted prior approval by the American Association of Medical Assistants (AAMA) for 1.0 administrative continuing education unit.

Disclosures

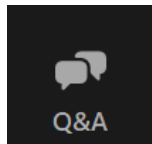
Dr Helen Chu receives research support from Gates Ventures, NIH, CDC, Gates Foundation, DARPA, Sanofi-Pasteur, Cepheid and serves on advisory boards for Abbvie, Merck, Pfizer, Ellume, and the Gates Foundation.

Dr Helen Chu has served as a co-investigator on studies funded by Pfizer, Novavax, and Glaxo Smith Kline.

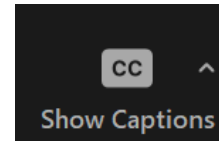
Zoom Housekeeping



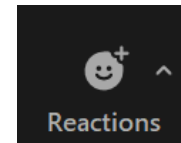
- Team shares information here
- Use for audience participation



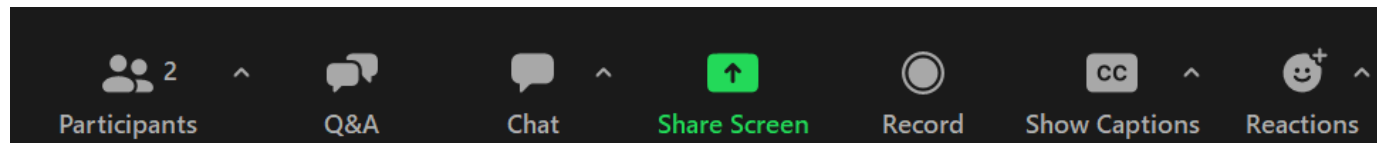
- Submit questions to presenter and team



- Click to enable automatic closed captions



- Click top-right arrow to hide participant reactions



About the Power of Providers Initiative

- Support and equip health care providers to serve as trusted sources of COVID-19 vaccine information for their patients and their communities
- Respond to member requests for resources
- Work together to increase vaccine rates across the state



Who can join POP?

Current Membership

- 4,500+ individuals
- 400 health care organizations
- 90 different health care roles
- Over 20 partnering health care associations

Any health care provider who engages with the people they serve about COVID-19 vaccinations is eligible—the ability to educate and refer is as important as administering the vaccine!



Visit our website to learn more at doh.wa.gov/joinpop. Fill out the [member signup form](#) to join the initiative.

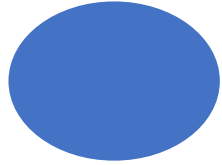
Current Resources



POP Shop

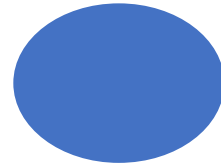
- Webpage to order free patient handouts, posters, discussion guides, other materials

doh.wa.gov/form/pop-shop



Biweekly e-newsletter

- New resources, timely and relevant updates for members
- Featuring POP member stories in Provider Spotlights

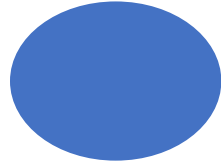


POP en Español

- Updates, links, fact sheets, other resources for providers serving Spanish-speaking populations

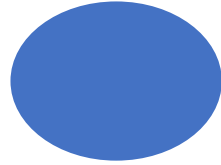
doh.wa.gov/popesp

Current Opportunities



Provider Advisory Group

- Multi-disciplinary group of POP members who inform and help guide our work



Peer-to-Peer webinars

- Learn about topics related to COVID vaccine from speakers who work in health care
- To learn about upcoming topics, register, and view recordings, visit doh.wa.gov/pop



Member engagement

- POP staff are available and engaged in conversations with providers across the state to learn about your experiences, challenges, and feedback for DOH

Peer-to-Peer Webinars

- Health care providers share expertise and knowledge with one another
- DOH provides meeting space only, not content

Effectively Engaging Communities series with **Dr Michelle Andrasik**:

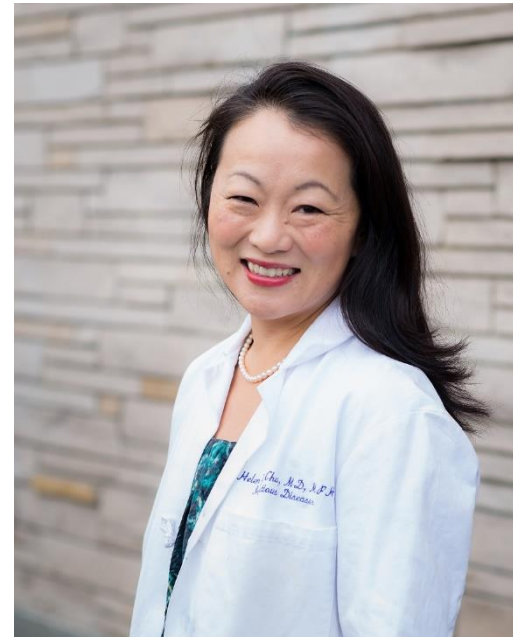
- April 19: Building Relationships and Establishing Trust
- May 10: Addressing Vaccine Hesitancy



Today's Presenter

Dr Helen Chu MD, MPH

- Professor of Medicine at the University of Washington.
- Earned her M.D. at Duke and her M.P.H at UW.
- Research focus is on preventive interventions against influenza, RSV and emerging respiratory viruses, including SARS-CoV-2. She was a Multiple Principal Investigator of the Seattle Flu Study, which first identified COVID-19 community transmission in the United
- Interested in defining clinical and immune correlates of protection against respiratory viruses and describing mechanisms of maternal-fetal immunity against respiratory viruses.



Research Updates on Post-Acute Sequelae of SARS-CoV-2

Helen Y. Chu, MD MPH
Professor of Medicine
University of Washington
March 29, 2024

UW Medicine
SCHOOL OF MEDICINE



SCHOOL OF PUBLIC HEALTH
UNIVERSITY *of* WASHINGTON

Disclosures

I receive research support from Gates Ventures, NIH, CDC, Gates Foundation, DARPA, Sanofi-Pasteur, Cepheid and serve on advisory boards for Abbvie, Merck, Pfizer, Ellume, and the Gates Foundation.

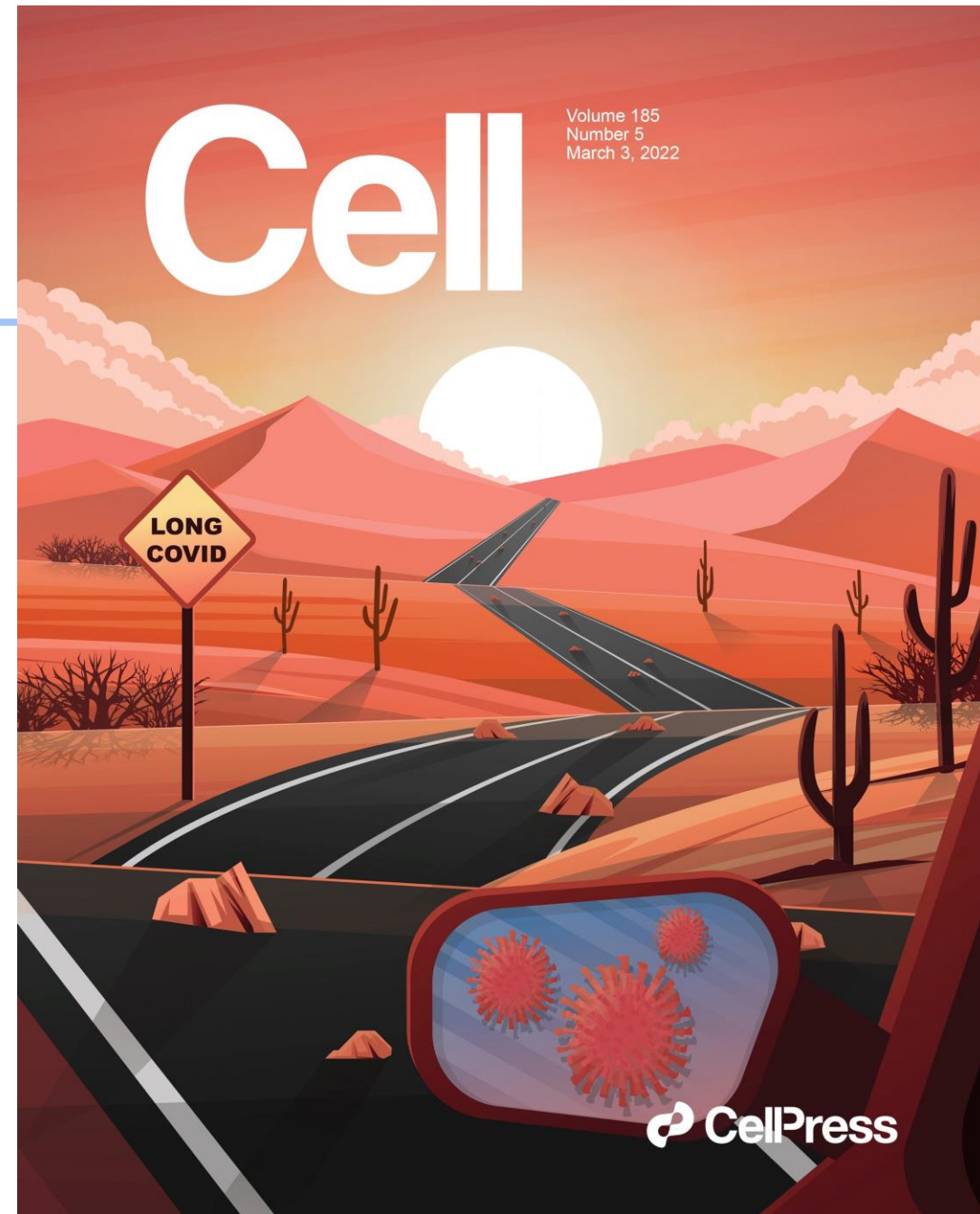
I have served as a co-investigator on studies funded by Pfizer, Novavax, and Glaxo Smith Kline.

Outline

Definitions, risk factors, and clinical manifestations

Current Research

New studies



Terminology

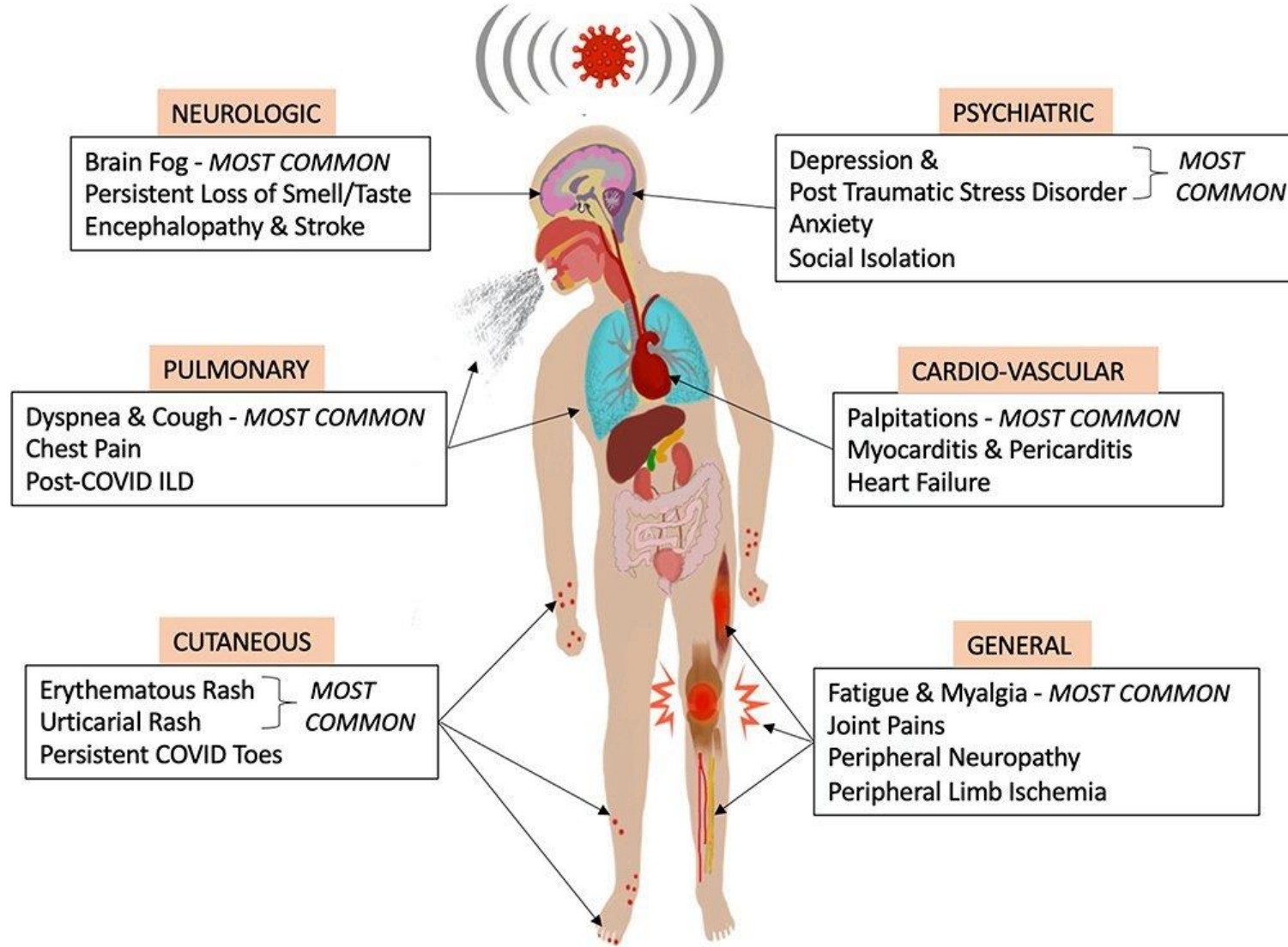
- Different terms
 - NIH: Post-Acute Sequelae of COVID-19 (PASC)
 - CDC: Post-COVID Conditions (PCC)
 - Long COVID
 - Long-haul COVID
- WHO definition: usually three months from the onset of the COVID-19 with symptoms that last for at least two months and cannot be explained by an alternative diagnosis
- CDC definition: symptoms developing during or after COVID-19 infection, but are present four or more weeks after infection with no alternative diagnosis
- ***ICD-10: U09.9 – Unspecified Post-COVID Condition***

Long COVID Overlaps with Post-Viral Syndromes

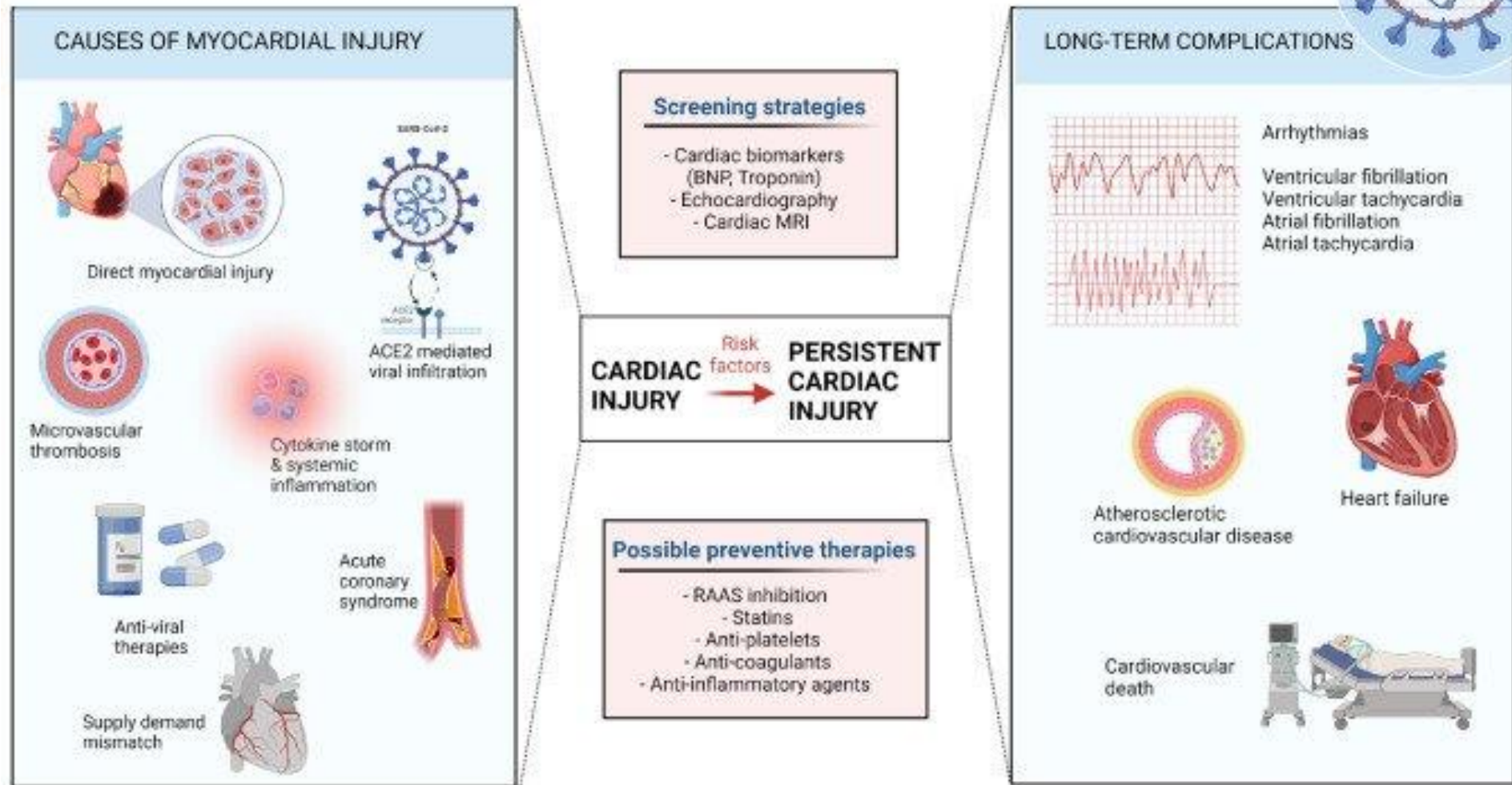
- Ebola, SARS, MERS survivors have similar patterns of persistent symptoms
 - Persistent shortness of breath, fatigue, reduced quality of life and mental health problems after SARS-CoV-1
 - Chronic fatigue in survivors of MERS in 48% at one year
 - Post-Ebola virus syndrome of fatigue, joint and muscle pain (70%), headache (48%), ocular problems (14%)
- Overlap with myalgic encephalomyelitis/chronic fatigue syndrome after viral illnesses like Chikungunya, Lyme or Epstein-Barr virus infection
 - Fatigue and myalgias
 - Problems with memory/concentration



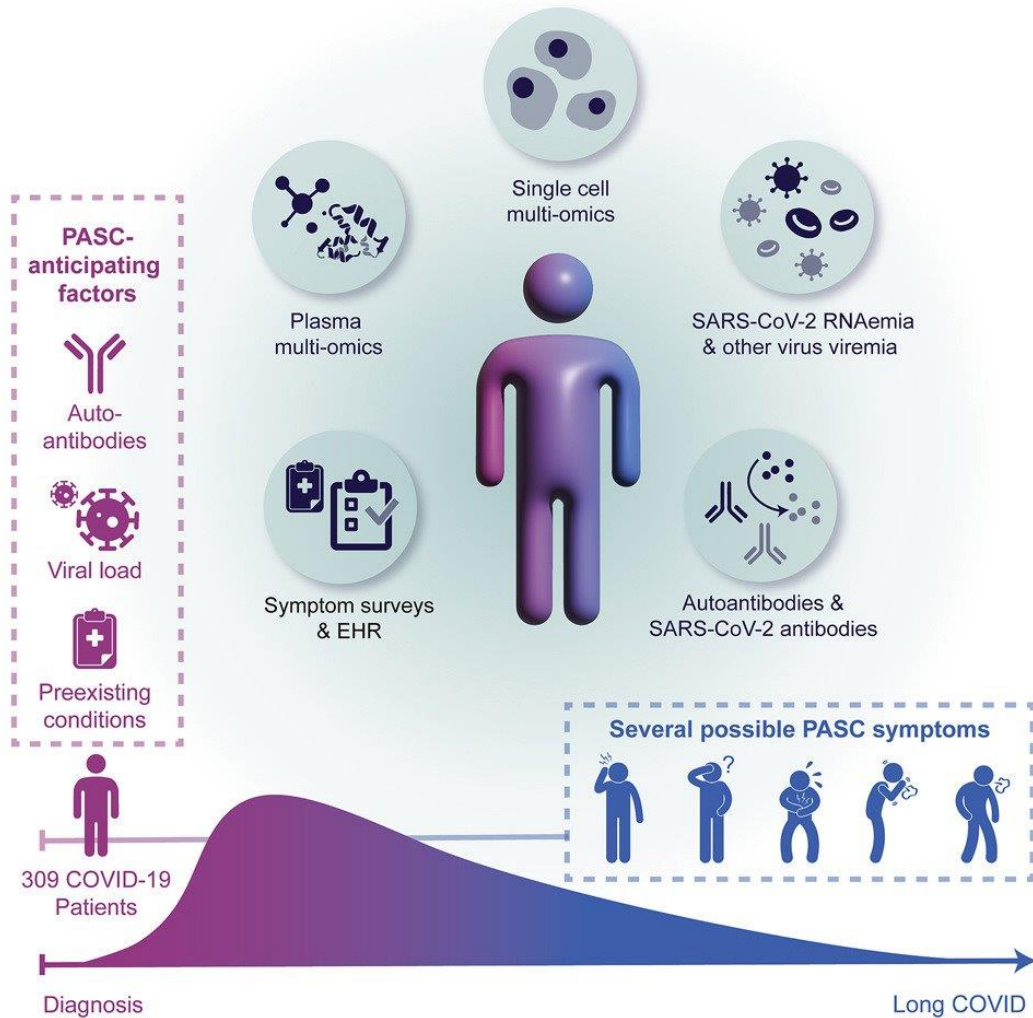
Long-COVID-19 : Common Manifestations



Cardiovascular implications of Long COVID syndrome



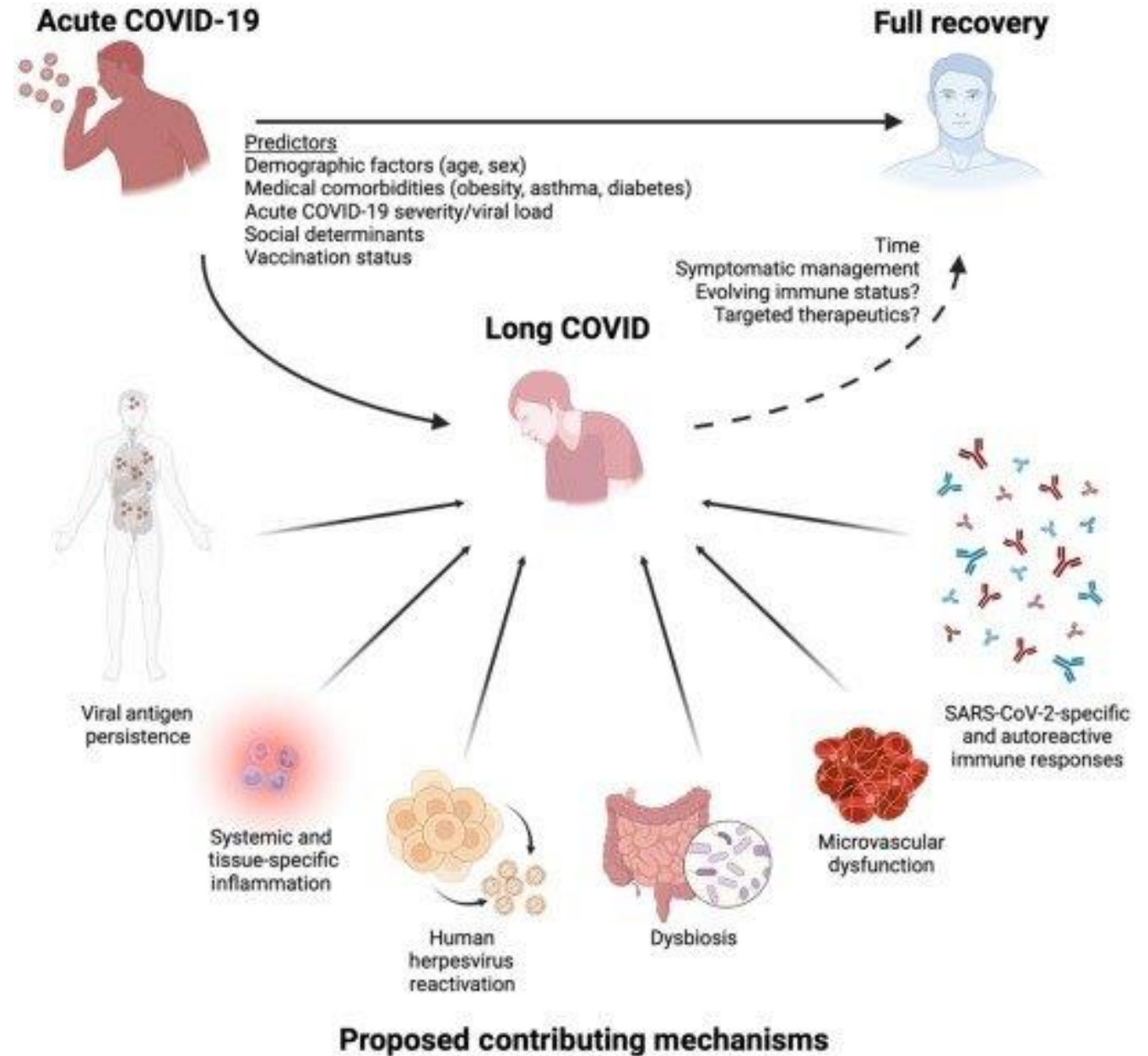
Early Factors Correlated with Long COVID



4 PASC-anticipating risk factors at time of initial COVID-19 diagnosis:

- Epstein-Barr virus viremia
- SARS-CoV-2 RNAemia
- Type 2 diabetes
- Autoantibodies

Mechanisms of PASC:



Mechanisms of PASC

- Viral persistence
 - Reservoir of replicating virus with associated ongoing inflammation
- Cardiopulmonary disease: Virus-specific pathophysiologic changes, microvascular thromboembolism, direct myocardial injury
 - e.g. Autoimmune disease: Immunologic aberrations & inflammatory damage in response to the acute infection
- Neurologic sequelae
 - Microvascular ischemia & injury, immobility, metabolic alterations during critical illness
 - Mimics post-chemotherapy brain with elevated CSF cytokines, myelin loss

The Viral Reservoir Hypothesis

- Autopsies on 44 patients with COVID-19
 - SARS-CoV-2 viral replication in multiple reservoirs, including pulmonary and extrapulmonary tissues early in infection.
 - Persistent SARS-CoV-2 RNA in multiple sites, including the brain, up to 230 days following symptom onset
- Other studies have detected viral shedding in GI tract past period of viral clearance in lungs
- Issues and questions:
 - Challenging to culture virus – is it live replicating virus or viral fragments
 - Immune reaction to persistent virus?

Outline

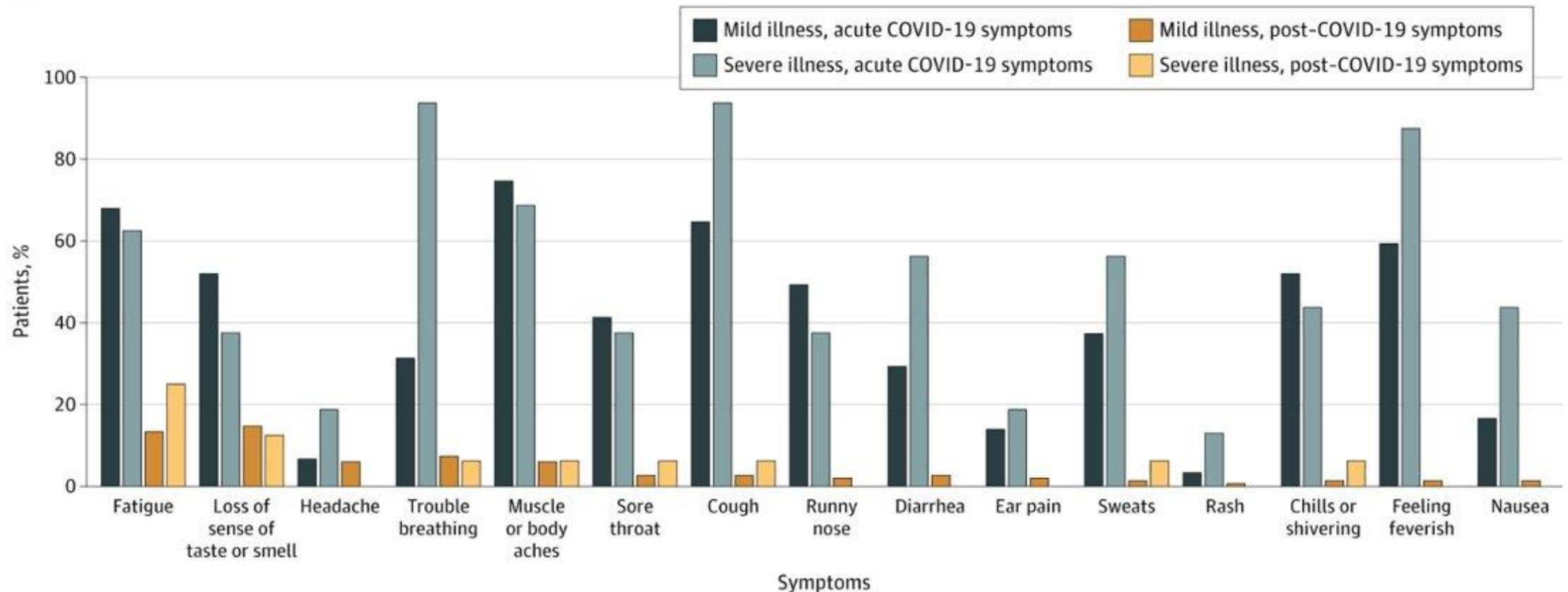
Definitions, risk factors, and clinical manifestations

Current Research

New studies

One-third of patients with mild disease had persistent symptoms at 6-month follow-up

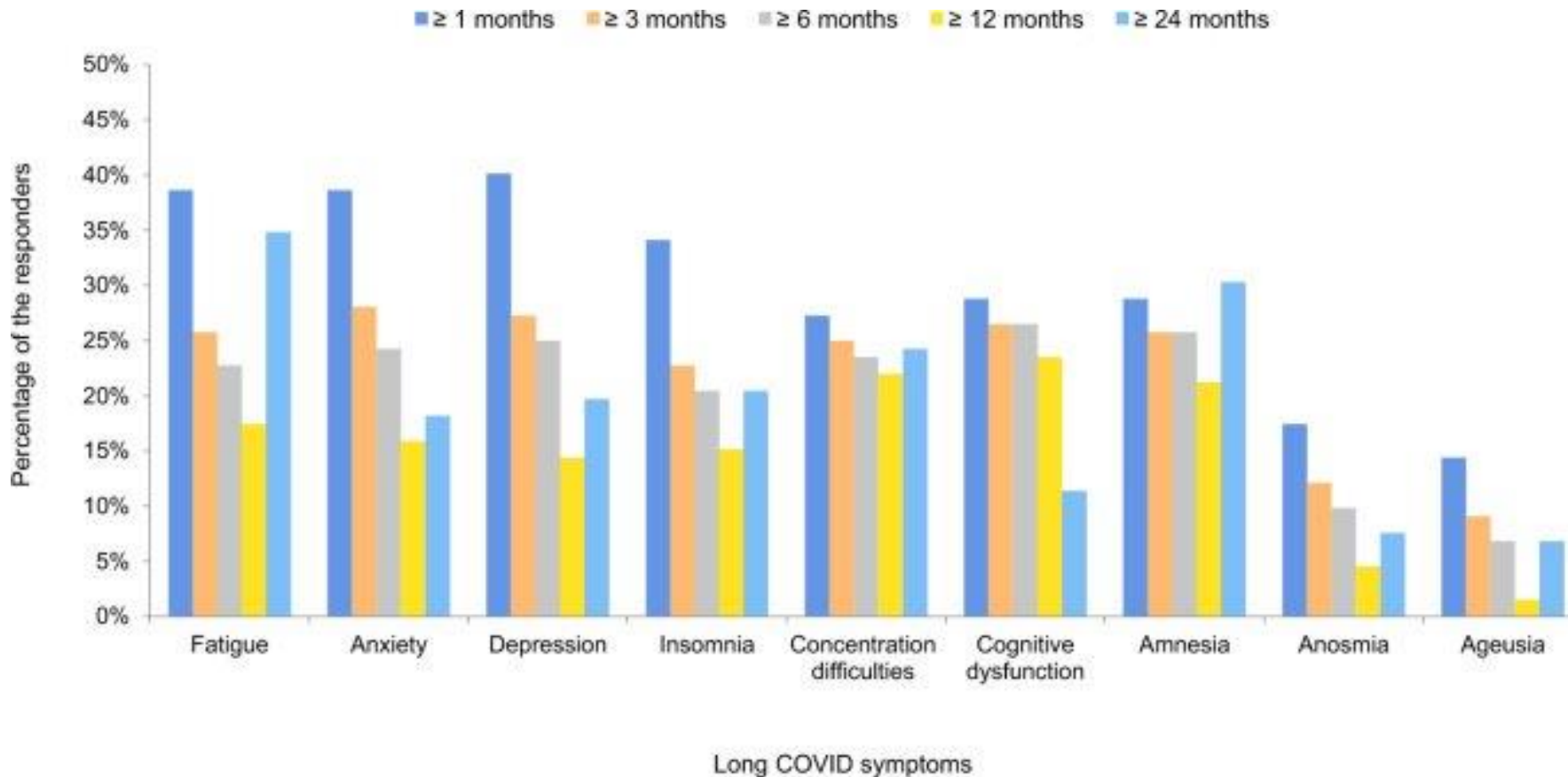
B Percentage of participants who reported COVID-19 symptoms during acute illness and at follow-up



Long COVID Persists 24 Months after Infection

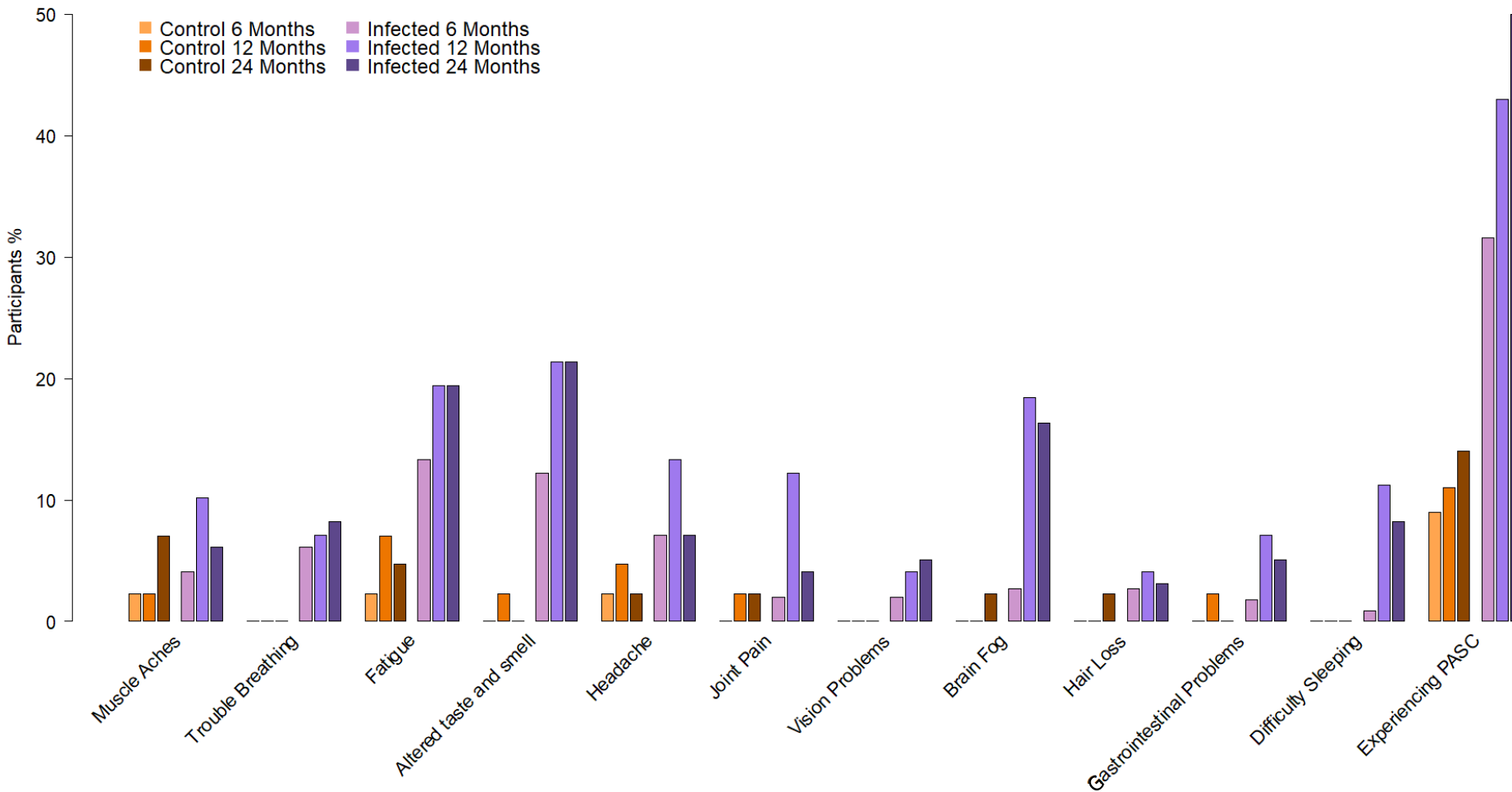
- VA study found that the risk of experiencing health issues can persist for at least 2 years after SARS-CoV-2 infection
 - Hospitalized individuals were more likely to experience health problems
 - Non-hospitalized were still at higher risk for 1/3 of the 77 medical issues analyzed
 - For every 1,000 people infected, a cumulative 150 years of healthy life is lost due to struggles with symptoms

Long COVID Persists 24 Months after Infection



- 71.2% of participants experienced symptoms of long COVID
- Most common symptoms were fatigue (34.8%), amnesia (30.3%), concentration difficulties (24.2%), insomnia (20.5%), and depression (19.7%)

Long COVID Persists 24 Months after Infection



- 50% (56/112) of participants experienced symptoms of long COVID at 24 months
- Most common symptoms were Altered smell and taste, fatigue, and brain fog
- 36% reported conditions were improving or resolved

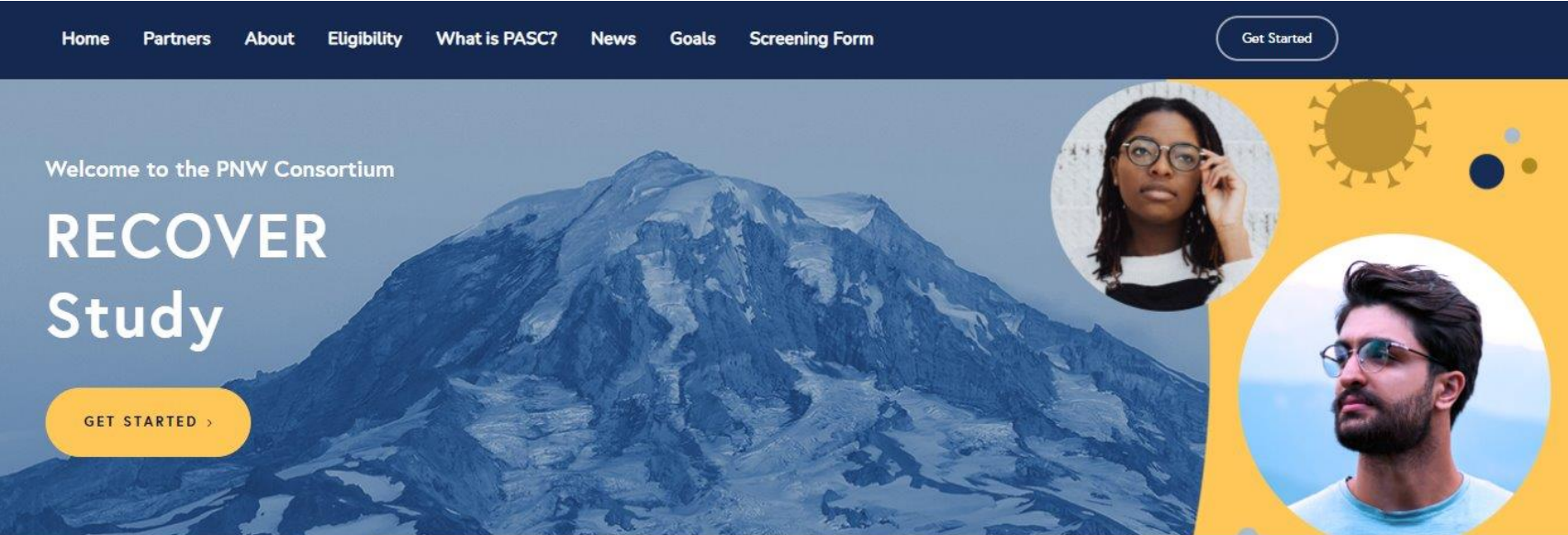
Understanding PASC: RECOVER Observational Study

Home Partners About Eligibility What is PASC? News Goals Screening Form [Get Started](#)

Welcome to the PNW Consortium

RECOVER Study

[GET STARTED >](#)



Help us better understand the long-term effects of COVID.

If you or someone in your family has had COVID, or are feeling the long term effects of COVID, you might be able to help us understand more about it and treat it. Even if you have not had COVID, you might be able to help.

[GET STARTED >](#)



RECOVER
Researching COVID to Enhance Recovery



Understanding PASC: RECOVER Observational Study

RECOVER Study Components

RECOVER Cores



Elements



Clinical Platform with Multi-therapeutic domains ~40,000 participants 60 million+ records; ~4 million+ COVID cases Mechanistic studies of pathogenesis 50+ tissue types

Data Resources



RECOVER: Development of a Definition of Postacute Sequelae of SARS-CoV-2 Infection

- Research published in JAMA Network Open in May 2023
- Research questions:
 - What are the defining symptoms of Long COVID?
 - Were certain participants more likely to get Long COVID?



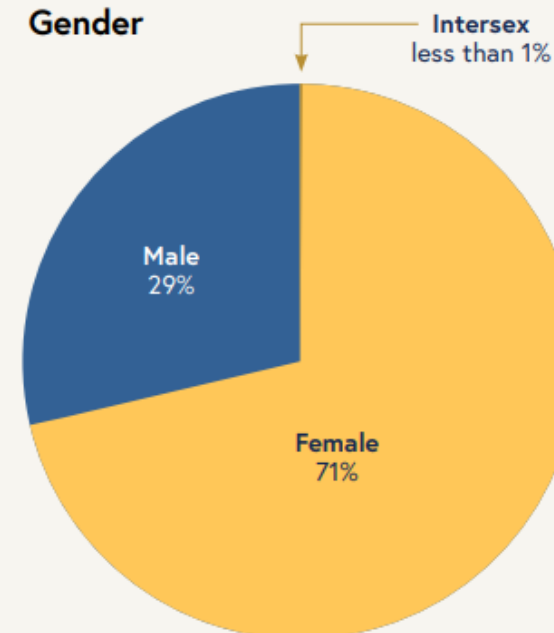
About 1,000
participants who never had
COVID (uninfected)



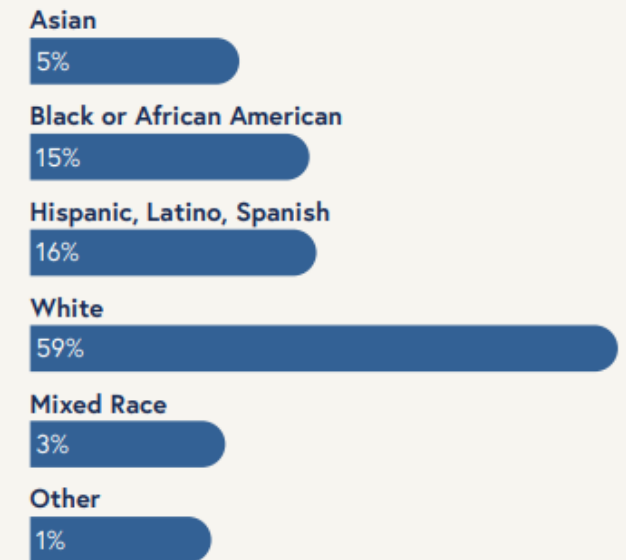
About 9,000
participants who had COVID
before they joined the study

The participants' average age was 47.

Gender



Race and Ethnicity



RECOVER: Development of a Definition of Postacute Sequelae of SARS-CoV-2 Infection

- 37 symptoms were more commonly reported by those who had COVID at 6+ months after infection
- 12 symptoms could best identify participants with Long COVID
- Participants who had Long COVID were more likely to:
 - Have had COVID for the first time before December 2021 (before the Omicron variant)
 - had it more than once
 - not gotten a COVID vaccine



Feeling tired and unwell that gets worse after physical or mental activity (post-exertional malaise)



Loss of sexual desire or ability



Feeling weak and tired (fatigue)



Loss of, or change in, taste or smell



Brain fog



Feeling thirsty



Dizziness



Long-term (chronic) cough



Symptoms that affect the stomach and digestion (gastrointestinal symptoms)



Chest pain



Fluttering or pounding heartbeats (palpitations)



Unusual movements (abnormal movements)

Outline

Definitions, risk factors, and clinical manifestations

Current Research

New studies

RECOVER-NEURO Clinical Trial

RECOVER-NEURO is focused on cognitive dysfunction symptoms associated with Long COVID, which may include trouble thinking clearly or remembering things (brain fog) and problems focusing on tasks. We want to better understand how the virus that causes COVID-19 affects the brain and find possible treatments to improve brain function for people with Long COVID.



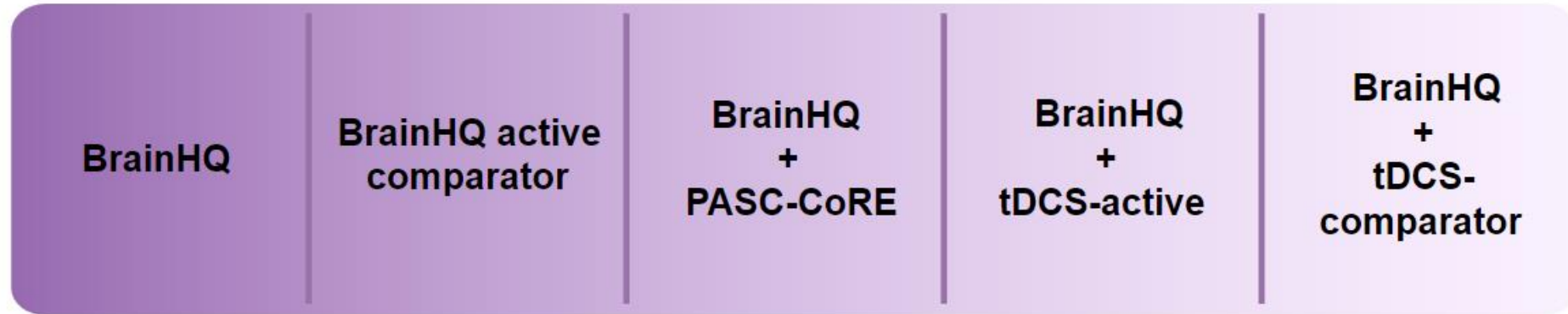
RECOVER

Researching COVID to Enhance Recovery

RECOVER NEURO



Participants will be assigned by chance to one of these groups:



Participants will be in RECOVER-NEURO for about 6 months, including a 10-week study intervention period. During this time, they will be asked to:



Visit the clinic 3 times



Complete brain training sessions at home for 10 weeks



Answer surveys about how they are feeling



Complete lab tests and brain function tests

RECOVER-VITAL Clinical Trial

RECOVER-VITAL (viral persistence and reactivation, and immune dysregulation) is focused on viral persistence, which is when the virus that causes COVID-19 stays in the body and causes damage to organs or the immune system (the body's system that fights off illnesses) to not function properly. Researchers think that viral persistence may lead to Long COVID symptoms.



RECOVER

Researching COVID to Enhance Recovery

RECOVER VITAL



Participants will be assigned by chance to one of these groups:



Participants will be in RECOVER-VITAL for about 6 months.

During this time, they will be asked to:



Visit the clinic 4 to 5
times



Answer surveys
about how they are
feeling



Take a study drug for
up to 25 days,
provided at no cost



Complete lab tests,
physical ability
tests, and/or brain
function tests



Thank you for joining us and
being part of the Power of Providers!

powerofproviders@doh.wa.gov

<https://doh.wa.gov/pop/>

(360) 236-2662



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