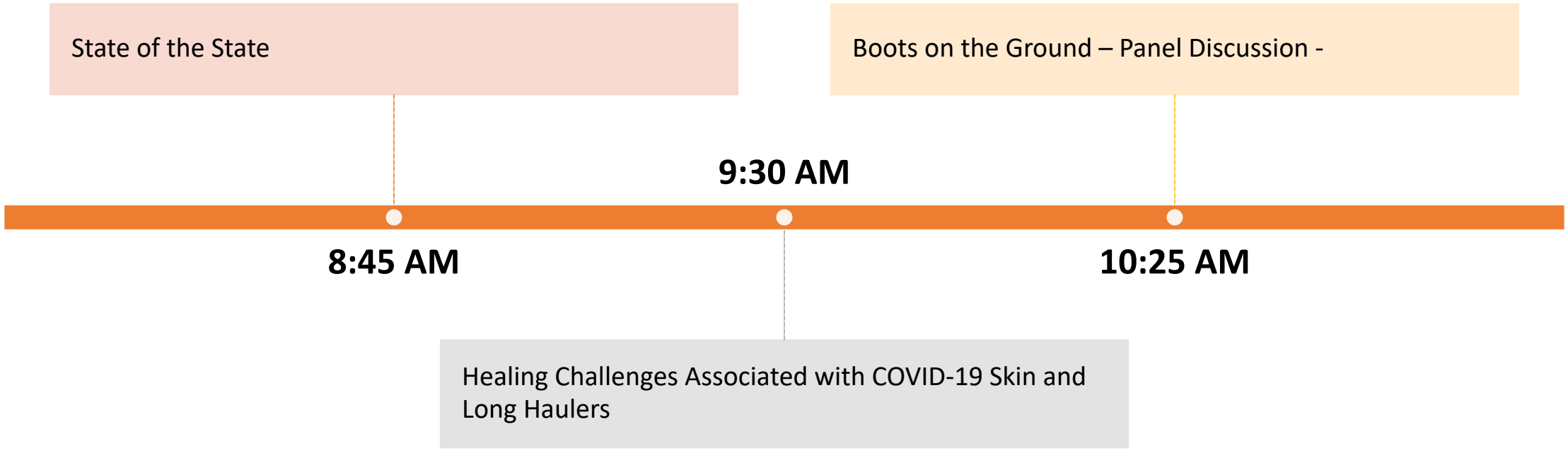
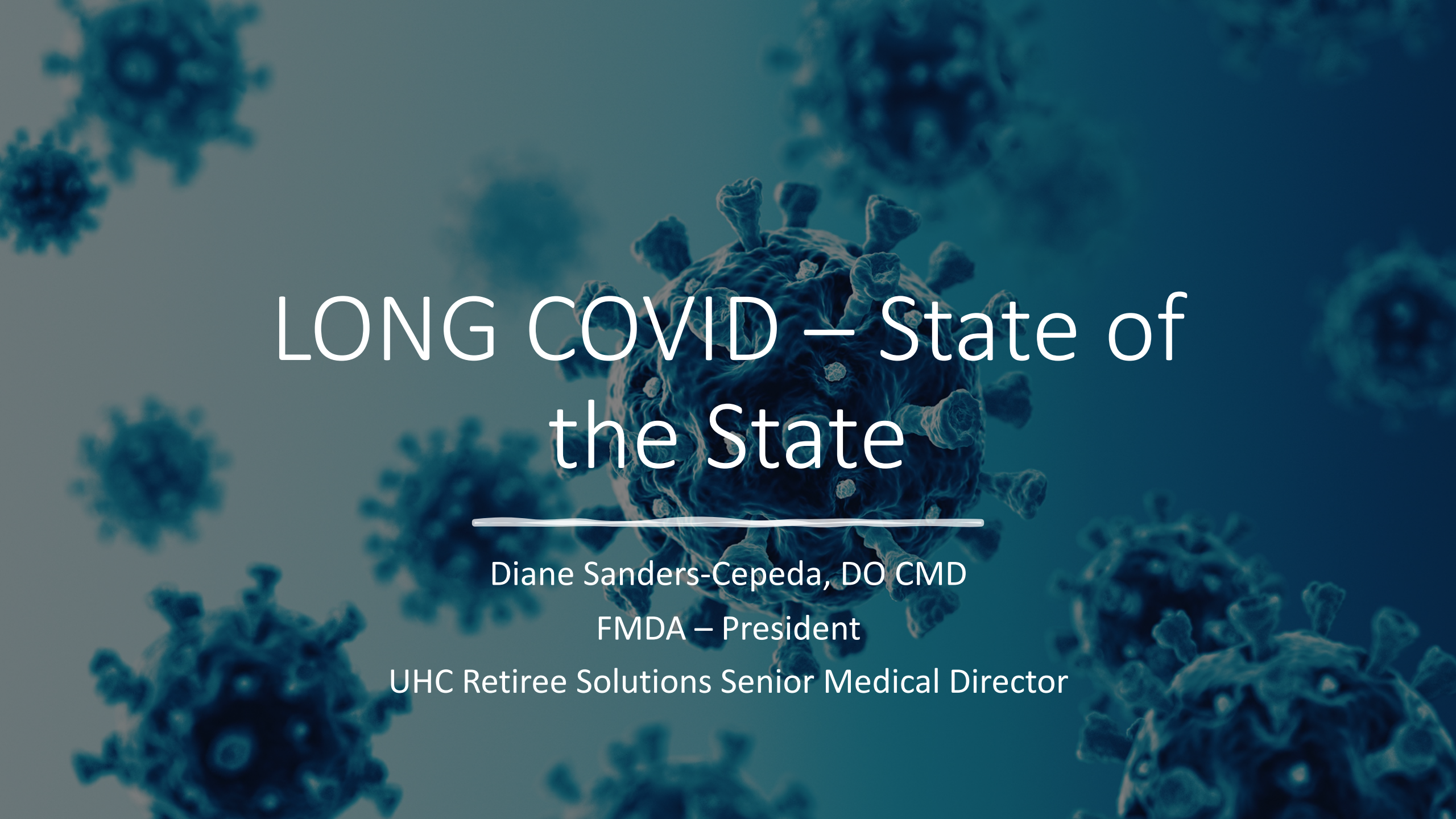
LONG COVID SUMMIT

Long COVID Summit Agenda





LONG COVID – State of the State

Diane Sanders-Cepeda, DO CMD

FMDA – President

UHC Retiree Solutions Senior Medical Director

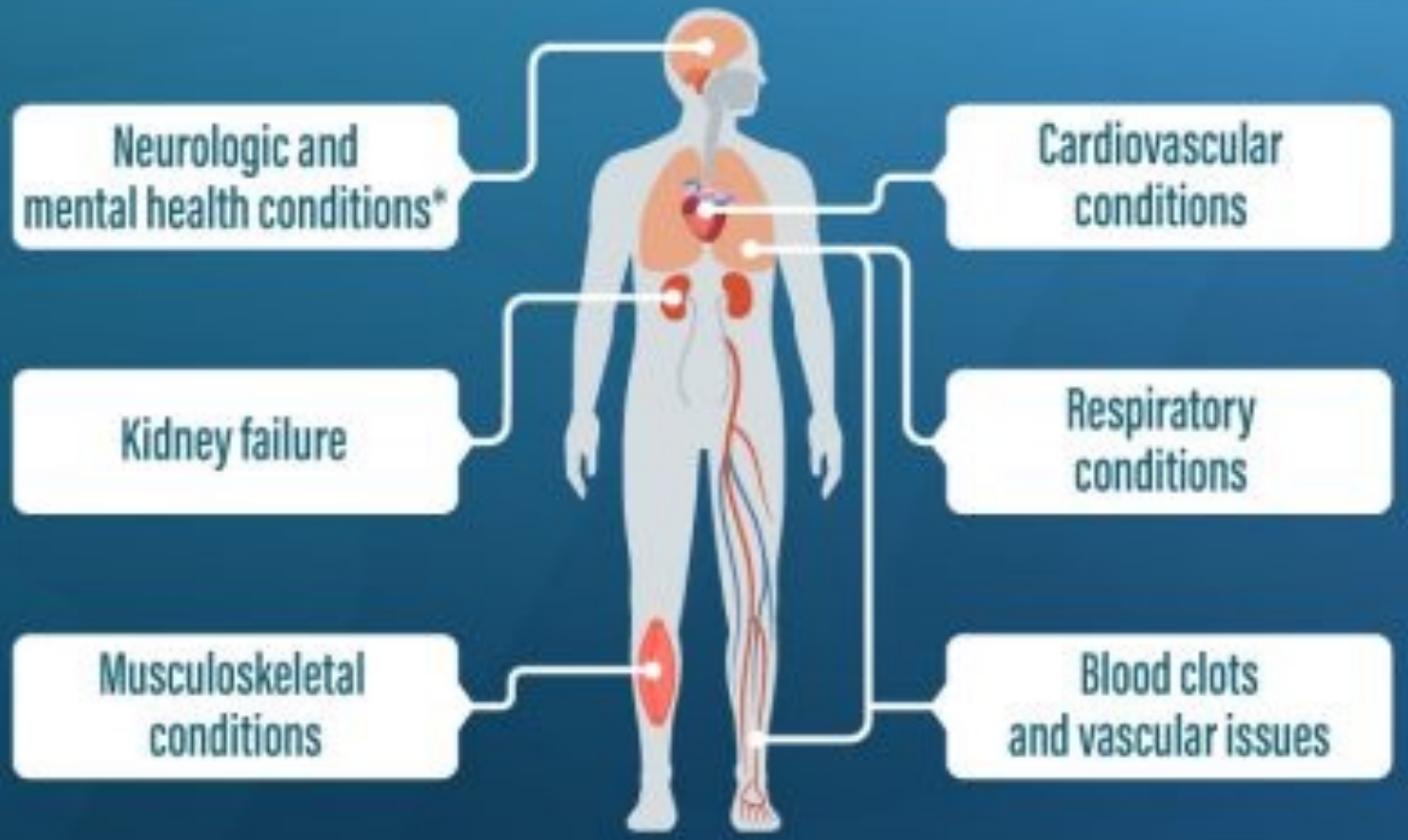
Speaker’s Disclosure

Dr. Sanders-Cepeda - UnitedHealthcare Full – time Employee

Approximately

1 in 5 adults

ages 18+ have a health condition that might be related to their previous COVID-19 illness, such as:



Talk to your health care provider if you have symptoms after COVID-19

CDC

* Adults aged 65 and older at increased risk

bit.ly/MMWR7121

MMWR

What is Long COVID?

- Long COVID
- Long haulers COVID
- Post Acute Sequalae of COVID
- Post COVID Conditions

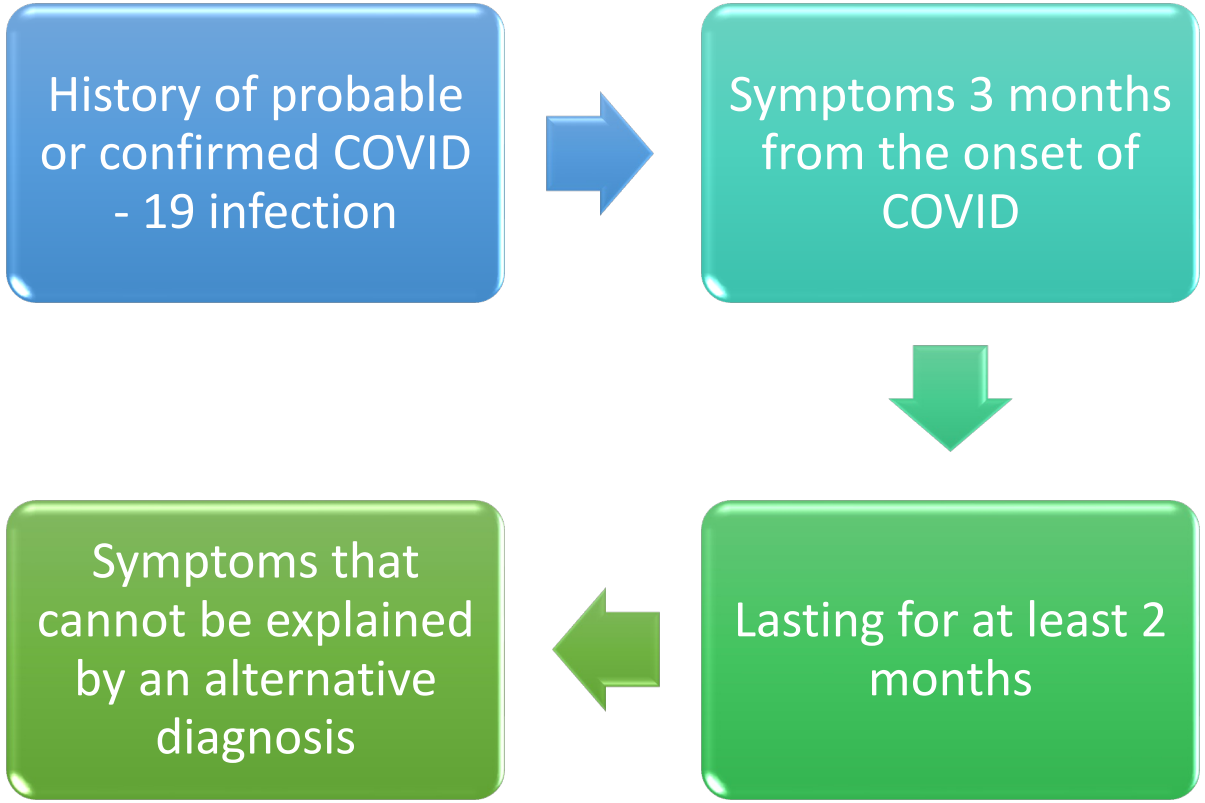
World Health Organization

Health Topics | Countries | Newsroom | Emergencies | Data

A clinical case definition of post COVID-19 condition by a Delphi consensus, 6 October 2021

6 October 2021 | COVID-19: Clinical care

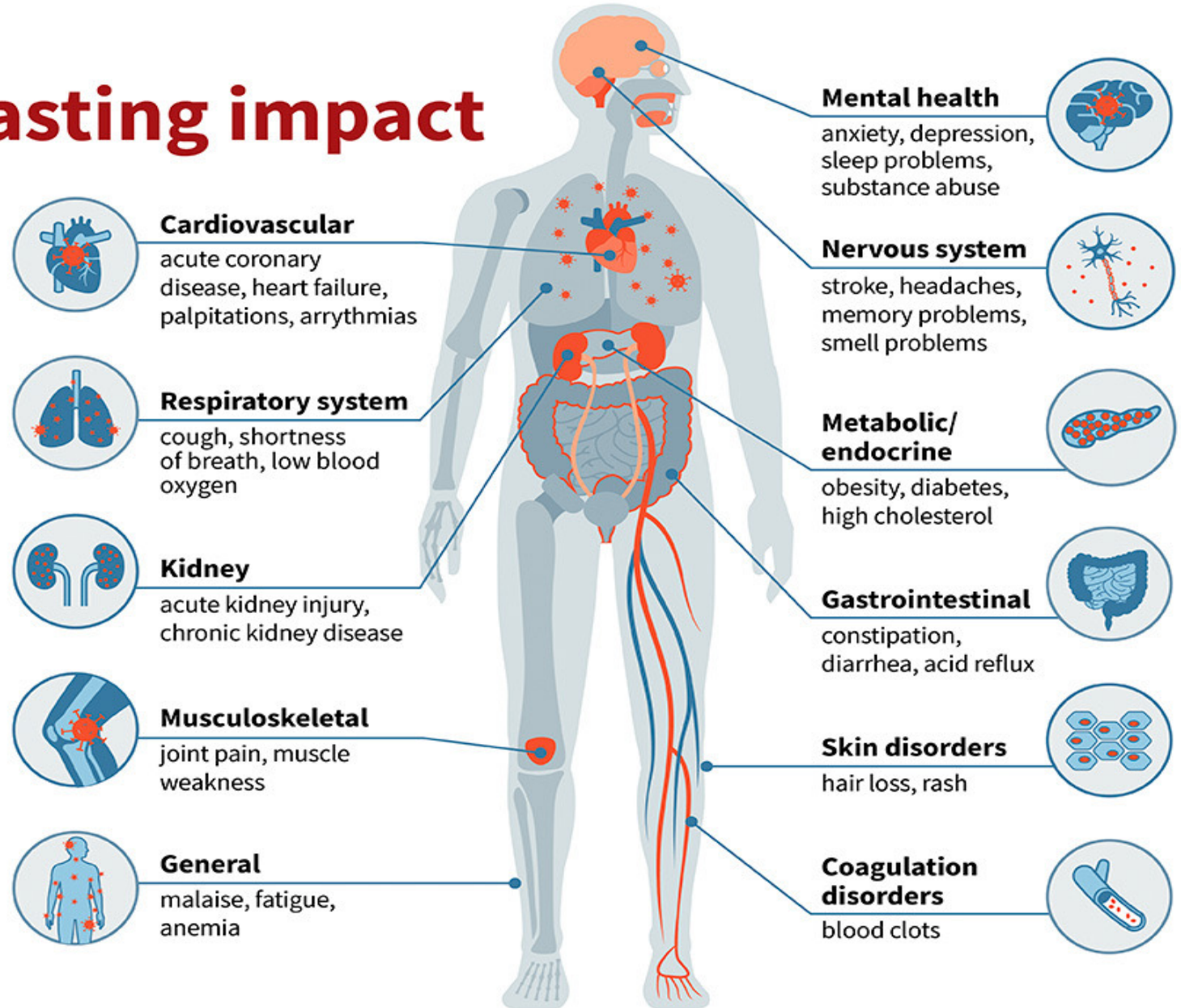
Post Acute Sequlae of COVID (PASC) WHO definition



COVID-19: Lasting impact

Even those survivors with mild initial cases can have wide-ranging health issues for six months or more.

WashU researchers link many diseases with COVID-19, signaling long-term complications for patients and a massive health burden for years to come.



https://www.emergency-live.com/health-and-safety/long-covid-washington-university-study-highlights-consequences-for-covid-19-survivors/

Call to Action

JAMA Network Open™

Research Letter | Infectious Diseases

Sequelae in Adults at 6 Months After COVID-19 Infection

Jennifer K. Logue, BS; Nicholas M. Franko, BS; Denise J. McCulloch, MD, MPH; Dylan McDonald, BA; Ariana Magedson, BS; Caitlin R. Wolf, BS; Helen Y. Chu, MD, MPH

Characteristic	No. (%)				
	Total recovered individuals (n = 177)	Inpatients (n = 16)	Outpatients (n = 150)	Asymptomatic individuals (n = 11)	Healthy controls (n = 21)
Post-COVID-19 follow-up characteristics					
Time after illness onset, median (SD), d[b]	169 (39.5)	179 (44.9)	169 (37.1)	139 (47.1)	87 (31.3)
Persistent symptoms[c]					
0	119 (67.2)	10 (62.5)	98 (65.3)	11 (100.0)	20 (95.2)
1-2	29 (16.4)	2 (12.5)	28 (18.7)	0	0
≥3	24 (13.6)	3 (18.8)	21 (14.0)	0	1 (4.8)
Missing	7 (4.0)	1 (6.3)	3 (2.0)	0	0
Worsened quality of life[d]	53 (29.9)	7 (43.8)	44 (29.3)	2 (18.2)	2 (9.5)

aapm&r

American Academy of
Physical Medicine and Rehabilitation

MARCH 18, 2021 NEWS RELEASE

President Biden And Congress Urged to Prepare and Implement National Crisis Management Plan to Address Needs of Millions Suffering from Long COVID

aapm&r

FIND A PM&R PHYSICIAN | ABOUT PM&R | COVID-19 RESOURCE CENTER

American Academy of Physical Medicine and Rehabilitation

Data as of 11/2/2022

View Dashboard Assumptions, Methodology, and Sources

SUMMARY | BY STATE

FILTERS
(reset to default)
Select Est. PASC %
30%
Select a State
All
Select a County
All

MODEL ASSUMPTIONS AND SOURCES
(see all)

1. Model assumes 30% of COVID-19 surviving cases in the U.S. result in PASC.

2. COVID-19 surviving cases are confirmed cases less deaths.

3. U.S. case data is pulled nightly from JHU CSSE COVID-19 Data. U.S. Census data uses 2019 1-year estimates.

Powered by ASSOCIATION ANALYTICS

COVID-19 SURVIVING CASES (TOTAL)
96,379,790

PASC CASES (ESTIMATED)
28,913,937

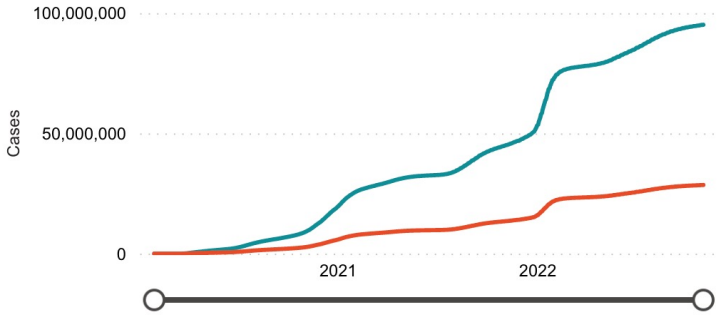
ESTIMATED PASC CASES PER STATE

State	PASC Cases (Estimated)
California	3,378,818
Texas	2,355,206
Florida	2,132,301
New York	1,851,117
Illinois	1,132,309
Pennsylvania	977,133
North Carolina	963,146
Ohio	943,460
Michigan	839,151
Georgia	832,066
New Jersey	827,460
Arizona	676,901
Tennessee	667,839
Virginia	626,466
Indiana	573,847
Wisconsin	564,005

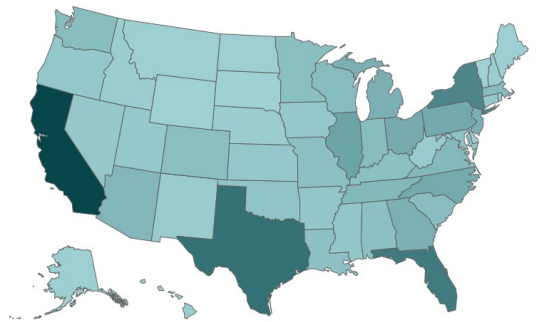
CUMULATIVE AND DAILY CASES

Select Display: Cumulative / Daily

COVID-19 Surviving Cases ● PASC Cases (Estimated)



PASC CASES (ESTIMATED)



aapm&r

FIND A PM&R PHYSICIAN | ABOUT PM&R | COVID-19 RESOURCE CENTER

American Academy of Physical Medicine and Rehabilitation

Data as of 11/2/2022

View Dashboard Assumptions, Methodology, and Sources

SUMMARY | BY STATE

FILTERS
(reset to default)
Select Est. PASC %

30%

Select a State

Florida

Search

- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii

MO NS

1. Mo ID-19 su esult in PA

2. COVID-19 surviving cases are confirmed cases less deaths.

3. U.S. case data is pulled nightly from JHU CSSE COVID-19 Data. U.S. Census data uses 2019 1-year estimates.

Powered by ASSOCIATION ANALYTICS

COVID-19 SURVIVING CASES (TOTAL)

7,107,669

PASC CASES (ESTIMATED)

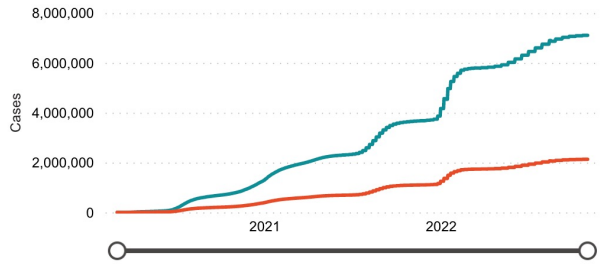
2,132,301

ESTIMATED PASC CASES PER STATE

State	PASC Cases (Estimated)
Florida	2,132,301

CUMULATIVE AND DAILY CASES

Select Display: Cumulative / Daily



PASC CASES (ESTIMATED)

APRIL 05, 2022

Memorandum on Addressing the Long-Term Effects of COVID-19

National Research Action Plan on Long COVID

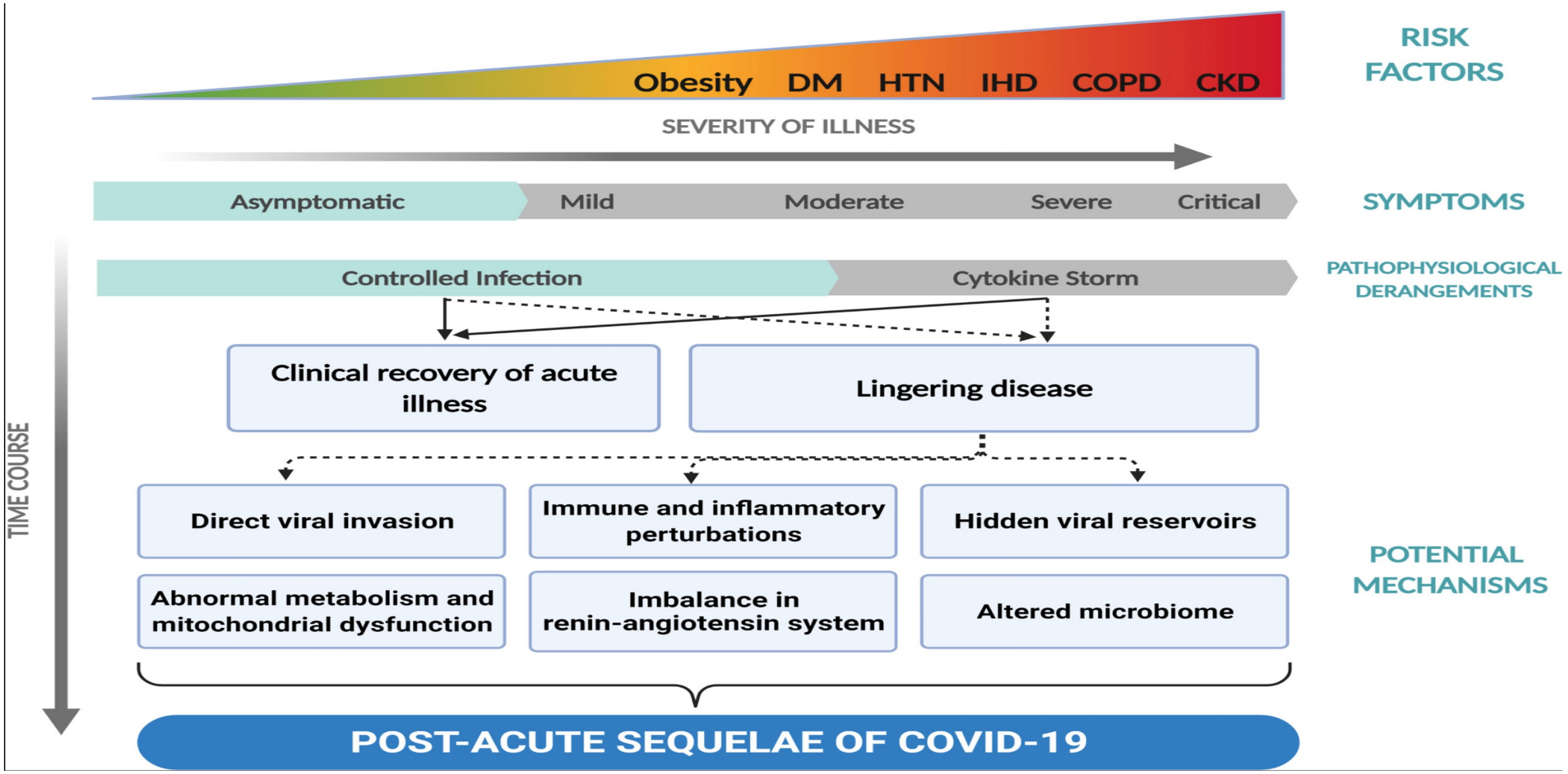
Department of Health & Human Services

August 2022

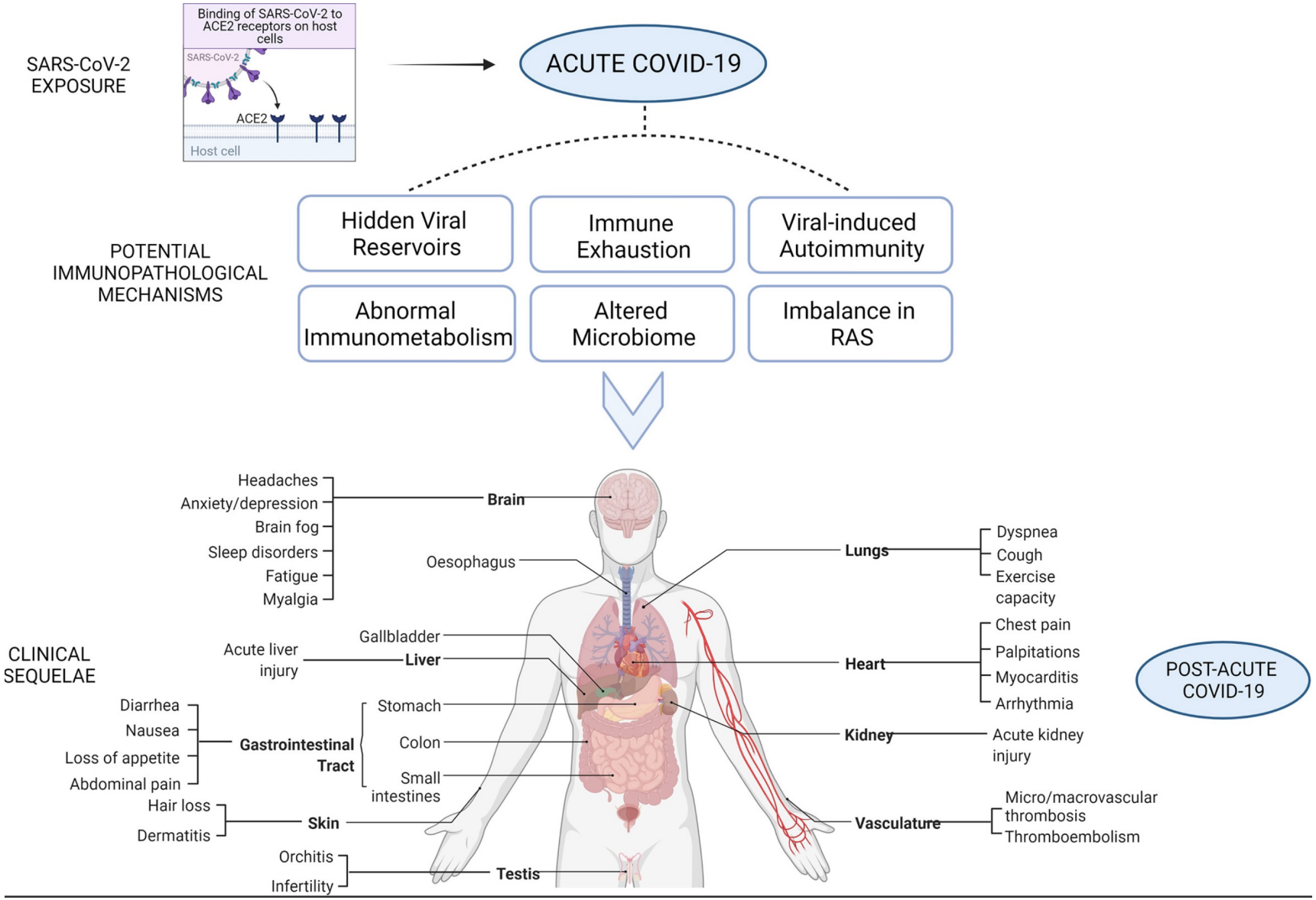
Priorities align across Seven Research Areas

1. Characterizing the Full Clinical Spectrum of Long COVID and Diagnostic Strategies
2. Pathophysiology
3. Surveillance and Epidemiology
4. Long COVID and Overall Well-Being
5. Therapeutics and other Health interventions
6. Human Services, Supports, and Interventions
7. Health Services and Health Economics Research

Research Moving Forward…



Front. Immunol., 30 June 2021 | https://doi.org/10.3389/fimmu.2021.686029



Front. Immunol., 30 June 2021 | https://doi.org/10.3389/fimmu.2021.686029

RECOVER
Researching COVID to Enhance Recovery

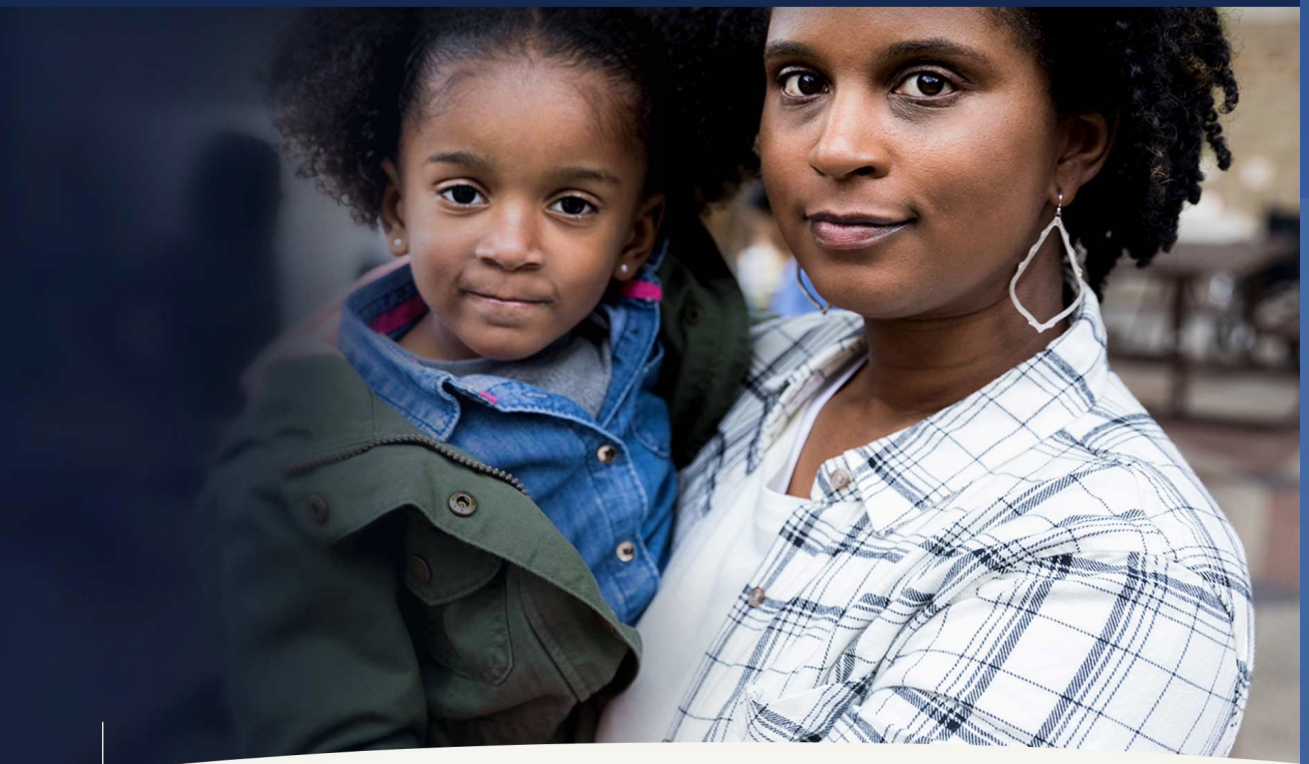
HOME | WHAT IS LONG COVID? | RESEARCH | NEWS & EVENTS | ABOUT THE INITIATIVE

RECOVER: Researching COVID to Enhance Recovery

The National Institutes of Health (NIH) created the RECOVER Initiative to learn about the long-term effects of COVID.

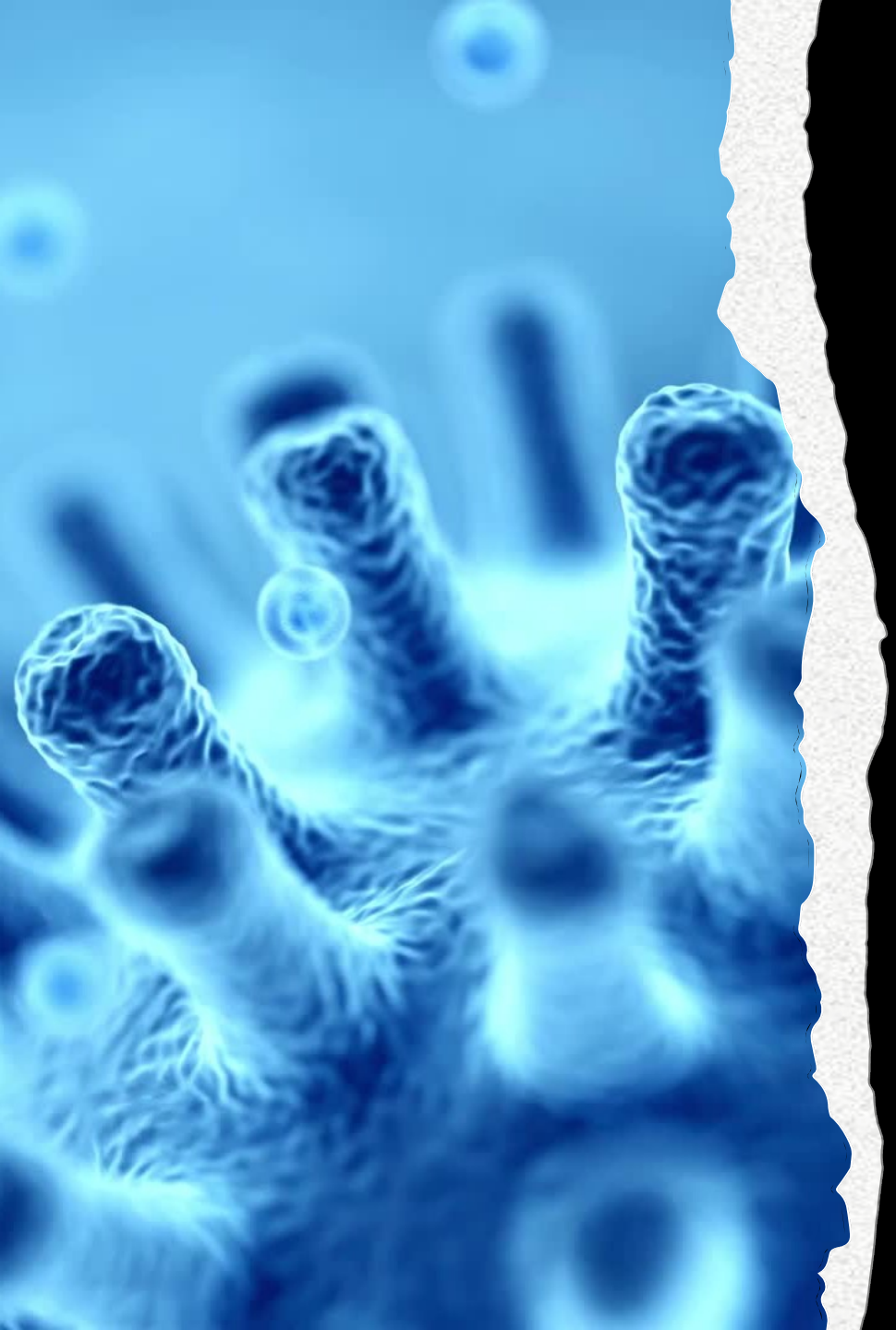
Everyone can join the search for answers to Long COVID. Whether or not you have had COVID, you may be able to participate in RECOVER research.

FIND A STUDY SITE NEAR YOU



RECOVER research aims to understand how people recover from a COVID infection, and why some people do not fully recover and develop **Long COVID** or **PASC** (post-acute sequelae of SARS-CoV-2). Long COVID is when people have symptoms weeks or months after they first had COVID.

RECOVER program takes first steps in advancing toward clinical trials to better understand Long COVID



Research Highlights

- Hidden Viral Resoviors - Reactivation of SARS CoV-2 particles
- Impaired Immune reaction triggering inflammatory response
- Immune system response leading to Autoantibody production

The Washington Post
Democracy Dies in Darkness

HEALTH

‘We are in trouble’: Study raises alarm about impacts of long covid

By Frances Stead Sellers

Updated October 13, 2022 at 4:20 p.m. EDT | Published October 12, 2022 at 5:00 a.m. EDT

nature communications

Article

https://doi.org/10.1038/s41467-022-33415-5

Outcomes among confirmed cases and a matched comparison group in the Long-COVID in Scotland study

Received: 25 July 2022

Accepted: 15 September 2022

Published online: 12 October 2022

Claire E. Hastie[1], David J. Lowe[1,2], Andrew McAuley[3,4], Andrew J. Winter[5], Nicholas L. Mills[6,7], Corri Black[8,9], Janet T. Scott[10], Catherine A. O'Donnell[1], David N. Blane[1], Susan Browne[1], Tracy R. Ibbotson[1] & Jill P. Pell[1]

Original Investigation | Infectious Diseases

October 27, 2022

Prevalence and Correlates of Long COVID Symptoms Among US Adults

Roy H. Perlis, MD, MSc[1,2]; Mauricio Santillana, PhD[3]; Katherine Ognyanova, PhD[4]; et al

» Author Affiliations | Article Information

JAMA Netw Open. 2022;5(10):e2238804. doi:10.1001/jamanetworkopen.2022.38804

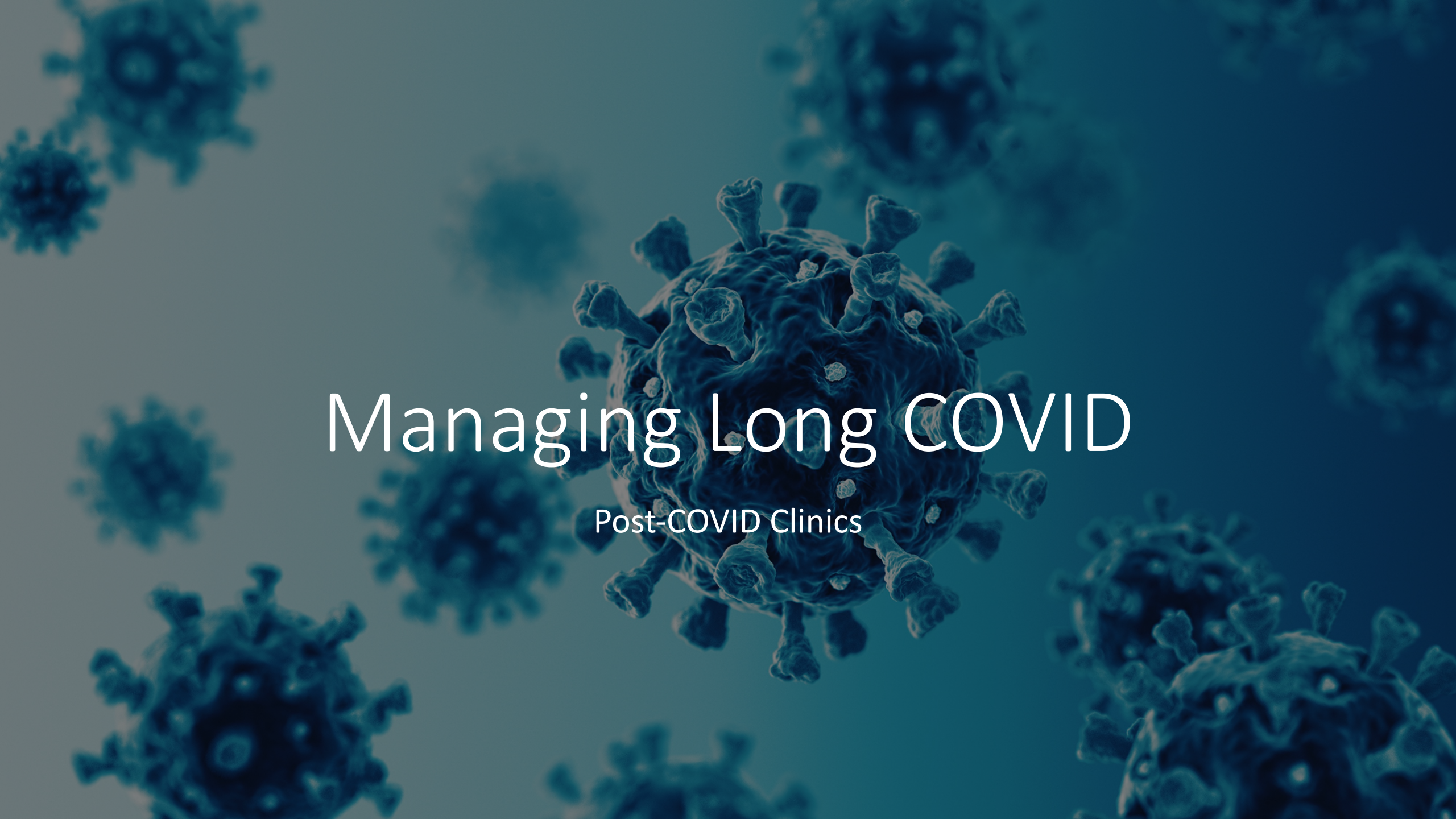
Key Findings – JAMA LONG COVID Prevalence Study 10-2022

Sociodemographic features

- Age > 40 and female gender– higher prevelance
- Urban environment and Higher level of education – lower prevalence

Most Common Lingering Symptoms

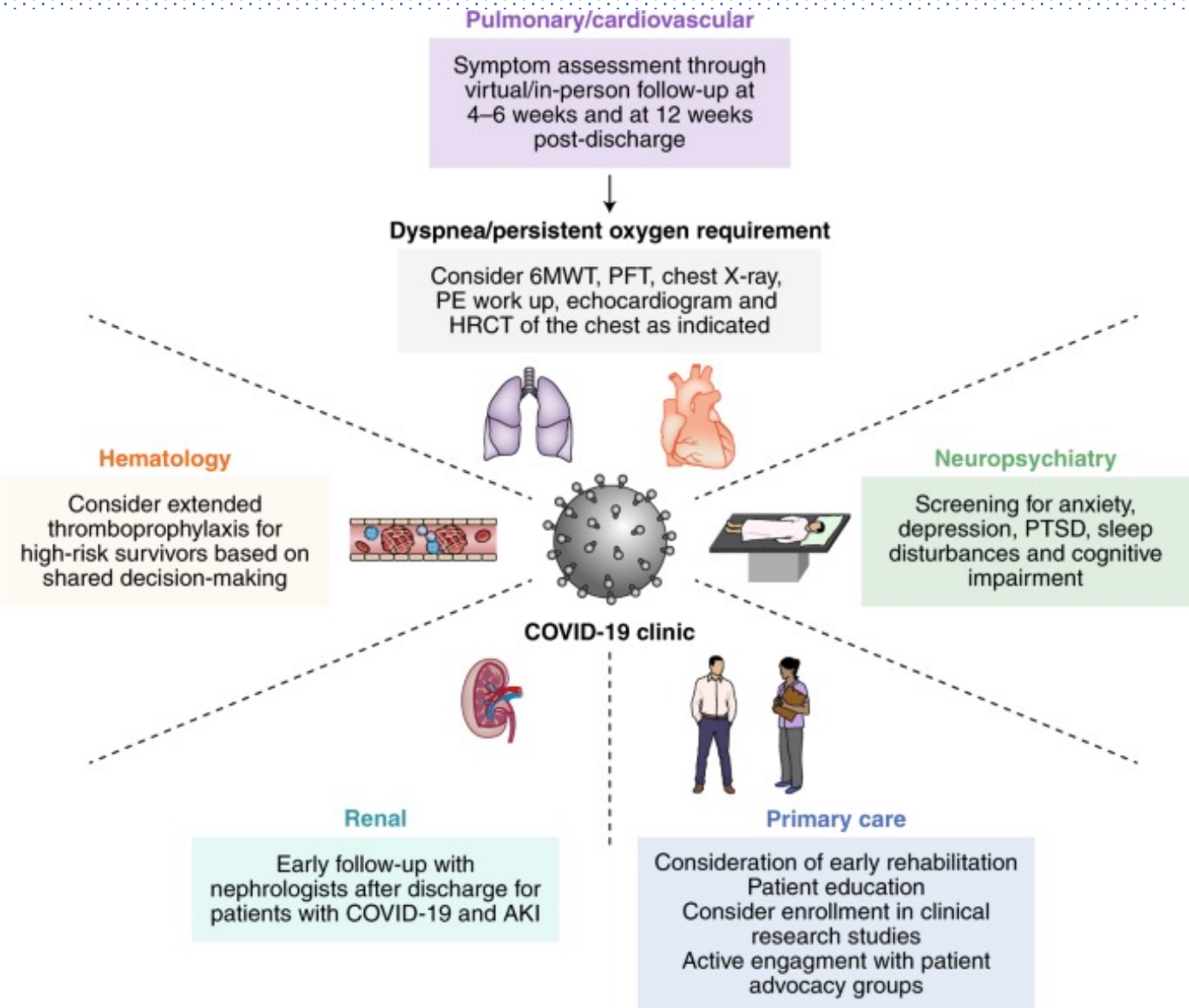
- Fatigue
- Loss of Smell
- Brain Fog
- Shortness of Breath



Managing Long COVID

Post-COVID Clinics

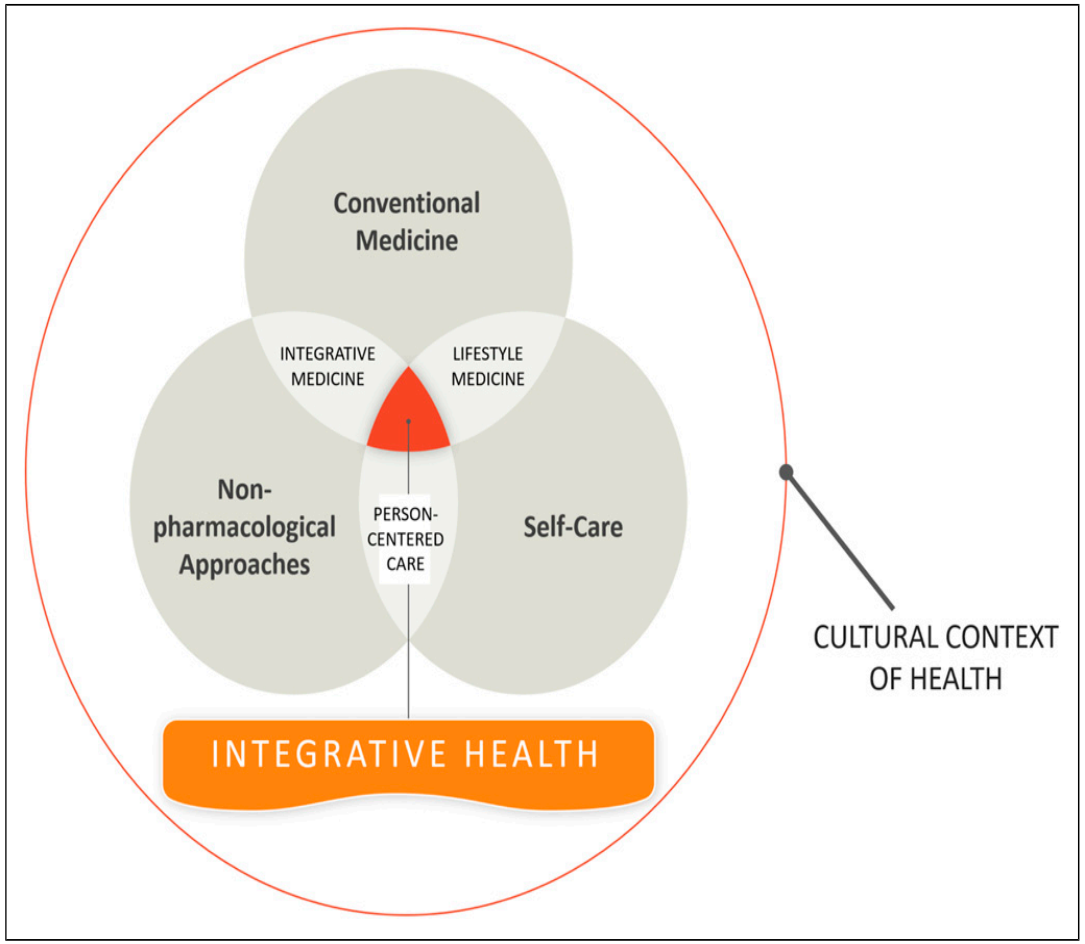
Post COVID Clinic Model



Nalbandian et. Al. NATURE MEDICINE | VOL 27 | APRIL 2021

Addressing the Long COVID Crisis: Integrative Health and Long COVID

Alan Roth, DO[1], Pan San Chan, MD[1], and Wayne Jonas, MD[2]



Global Advances in Health and Medicine Volume 10: 1–6

DOI: 10.1177/21649561211056597

Thinking about treatment

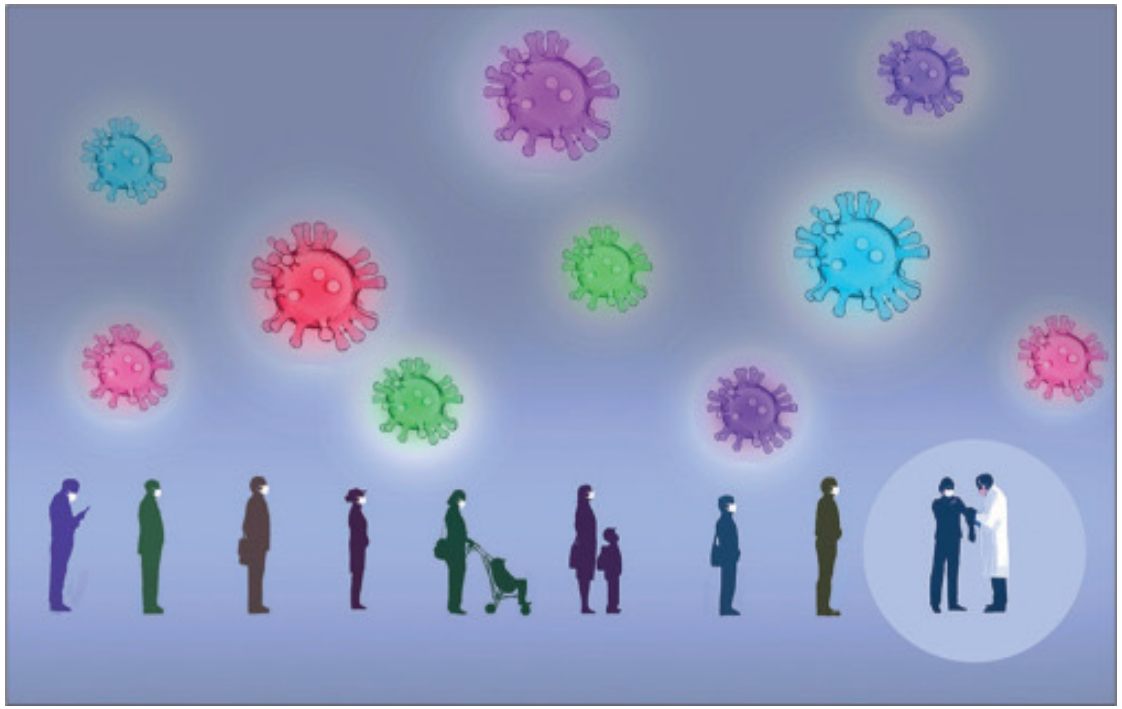
THE LANCET
Respiratory Medicine

NEWS | ONLINE FIRST

Do vaccines protect from long COVID?

Priya Venkatesan

Published: January 20, 2022 • DOI: https://doi.org/10.1016/S2213-2600(22)00020-0



Reduced Incidence of Long-COVID Symptoms Related to Administration of COVID-19 Vaccines Both Before COVID-19 Diagnosis and Up to 12 Weeks After

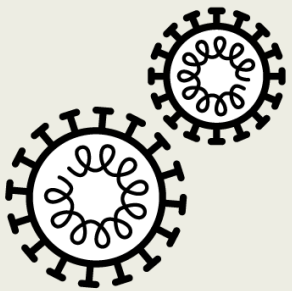
Michael A. Simon, Ryan D. Luginbuhl, Richard Parker

JAMA Network | Open

RCT: Effect of High-Dose Zinc and Ascorbic Acid Supplementation on Symptom Length Among Ambulatory Patients With SARS-CoV-2 Infection

POPULATION

82 Men, 132 Women



Adult patients with SARS-CoV-2 infection confirmed with a PCR-based assay as outpatients

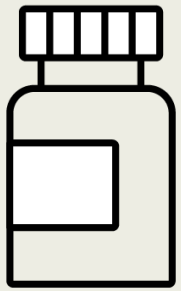
Mean (SD) age, 45.2 (14.6) y

SETTINGS / LOCATIONS

Hospitals in a single health system with sites in Ohio and Florida

INTERVENTION

214 Patients randomized and analyzed



50 Standard of care
Standard outpatient prescription for viral illness

48 Ascorbic acid
8000 mg Ascorbic acid

58 Zinc gluconate
50 mg Zinc

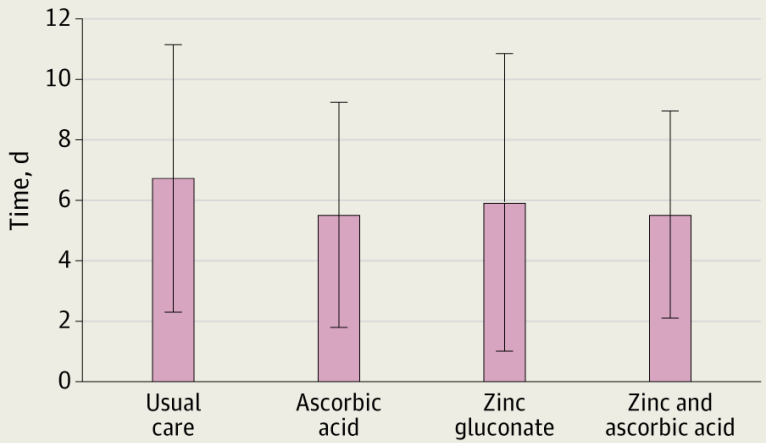
58 Zinc and ascorbic acid
50 mg Zinc and 8000 mg of ascorbic acid

PRIMARY OUTCOME

The primary end point was the number of days required to reach a 50% reduction of symptoms, such as severity of fever, cough, shortness of breath, and fatigue

FINDINGS

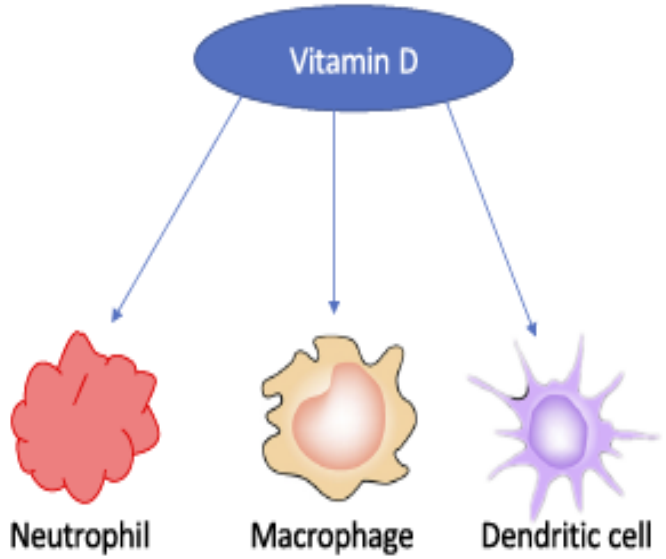
The study was stopped for a low conditional power for benefit with no significant difference among the 4 groups for the primary end point, a 50% reduction in symptoms



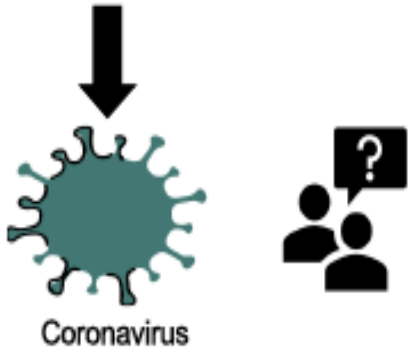
Time to 50% symptom reduction
Usual care: Mean (SD), 6.7 (4.4) d
Ascorbic acid: Mean (SD), 5.5 (3.7) d
Zinc gluconate: Mean (SD), 5.9 (4.9) d
Zinc and ascorbic acid: Mean (SD), 5.5 (3.4) d

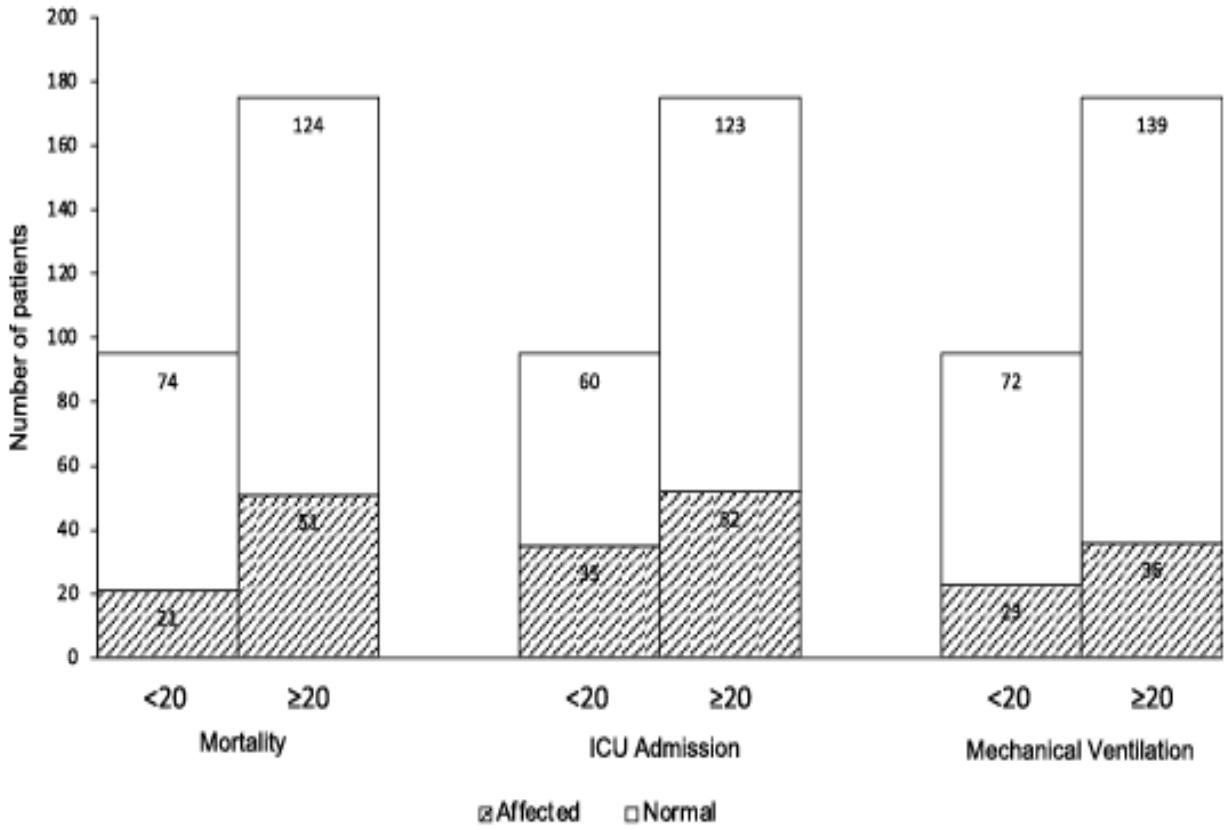
Thomas S, Patel D, Bittel B, et al. Effect of high-dose zinc and ascorbic acid supplementation vs usual care on symptom length and reduction among ambulatory patients with SARS-CoV-2 infection: the COVID A to Z randomized clinical trial. *JAMA Netw Open*. 2021;4(2):e210369. doi:10.1001/jamanetworkopen.2021.0369

Exploring the link between Vitamin D and clinical outcomes in COVID-19



Vitamin D binds to these cells and immunomodulates gene expression enhancing innate immunity and modulating adaptive immunity





Severe disease outcomes in relation to Vitamin D Levels

Question- Does Vitamin D help decrease the severity of clinical outcomes in COVID-19?

Conclusion- No significant association found between Vitamin D levels and clinical outcomes in COVID-19.

Prateek et. Al. American Journal of Physiology. 2021

Healthcare & Pharmaceuticals

2 minute read · October 27, 2022 6:41 PM EDT · Last Updated 6 days ago

U.S. government to test Pfizer's Paxlovid for long COVID

By Julie Steenhuysen

Coding Post COVID Syndrome

Post COVID – 19 Condition ICD-10 U09.9

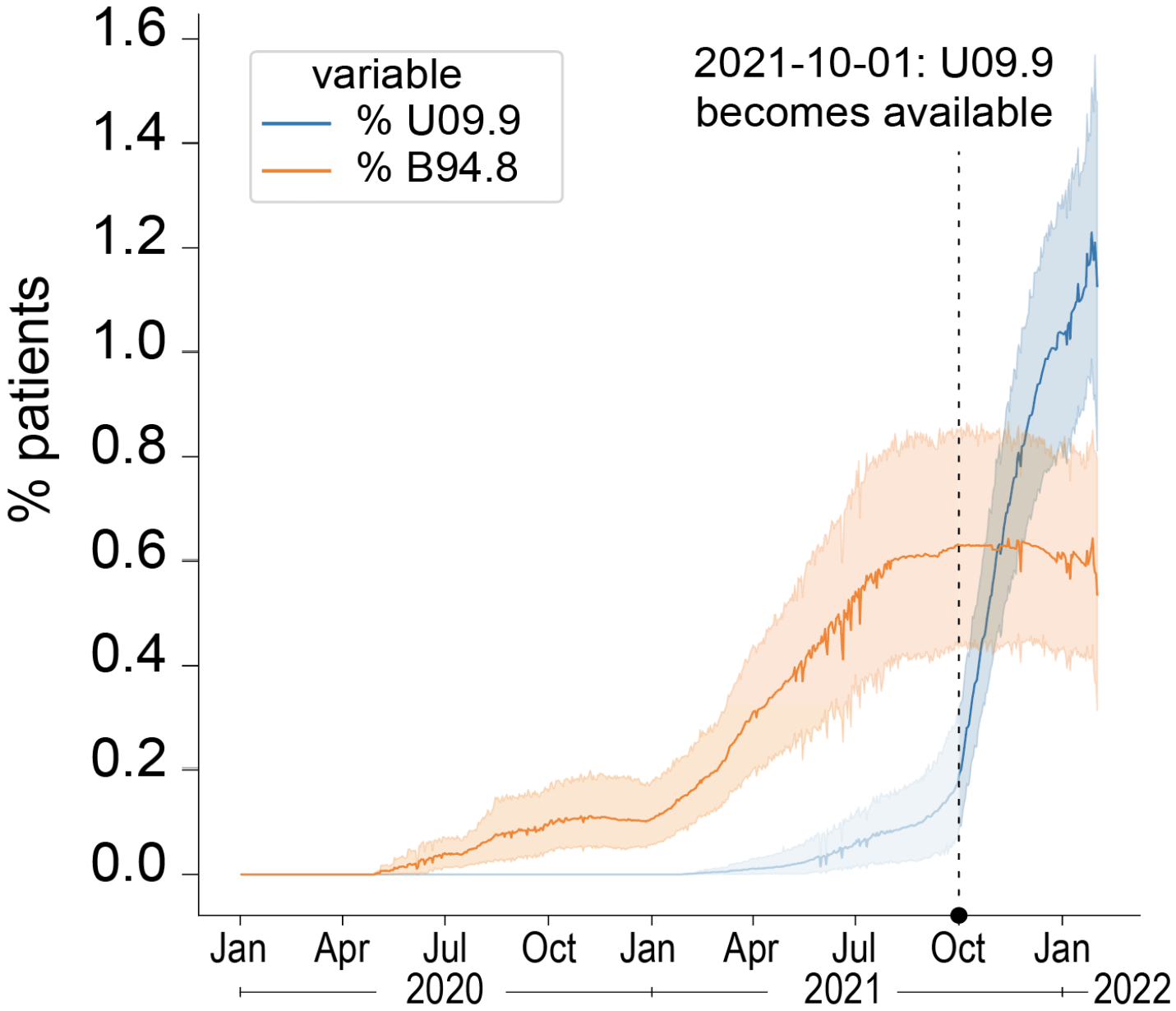
WHO added new code to ICD-10

Proposal to add to ICD-10 CM made at the March 2021 Meeting

Implementation date – October 1, 2021

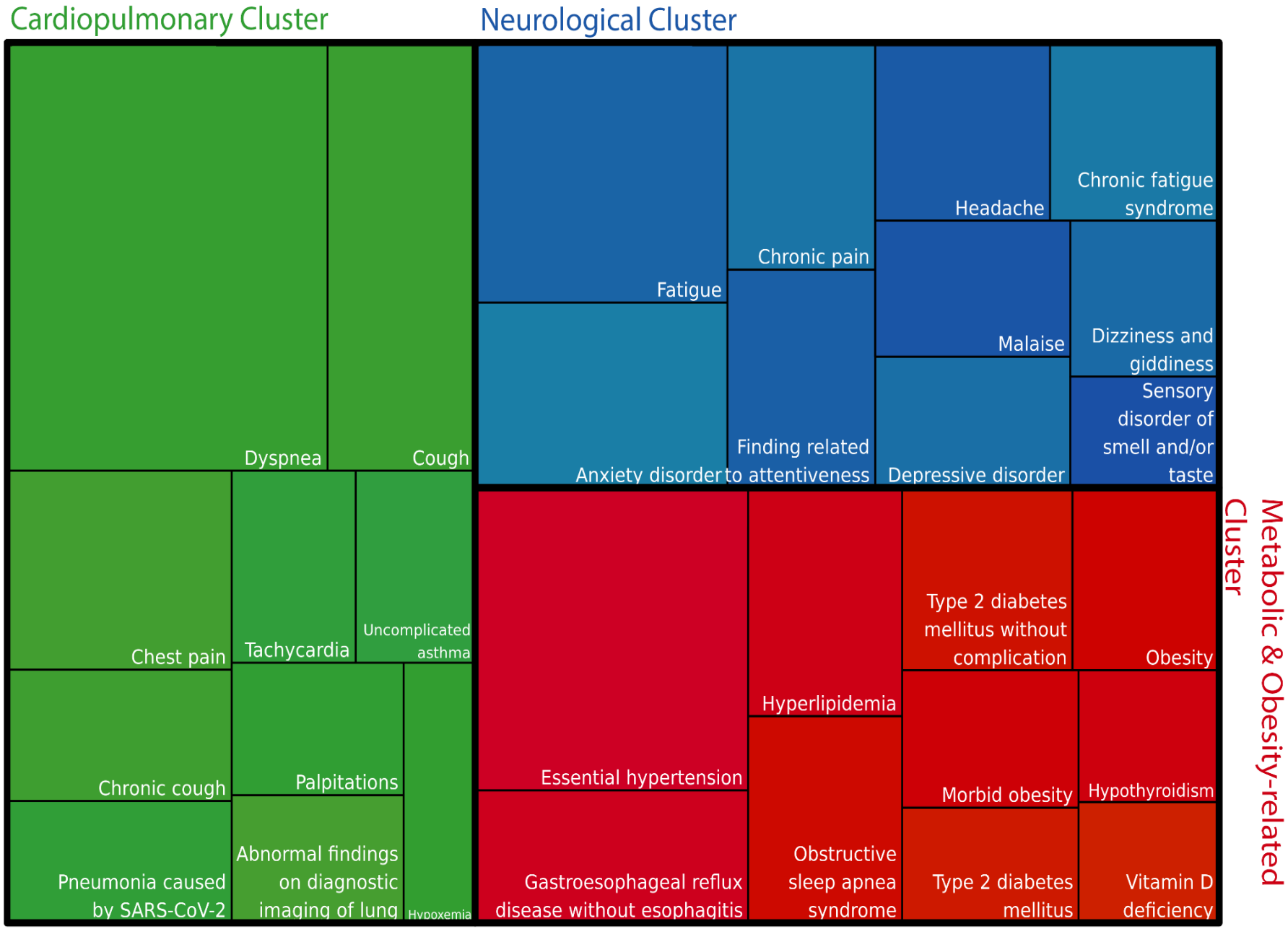
Transitioning to U09.9

- B94.8 - Sequelae of other specified infectious and parasitic diseases
- U09.9 – Post COVID Conditions



https://doi.org/10.1101/2022.04.18.22273968; this version posted April 19, 2022

U09.9 code & Co-occurring diagnoses



https://doi.org/10.1101/2022.04.18.22273968; this version posted April 19, 2022

POST COVID Syndrome Symptoms

- **Fatigue**
- **Difficulty thinking or concentrating**
  - *sometimes referred to as “brain fog”*
- **Difficulty breathing**
  - *with and without abnormal imaging and pulmonary function testing*
- **Cough**
- **Painful joints** or **muscles**
- **Chest pain**
- **Depression** or **anxiety**
- **Headache**
- **Fever**
- **Palpitations**
- **Loss of smell** or **taste**
- **Dizziness on standing**
- *Rashes*
- *Hair Loss*
- *Lesions on Toes “ COVID TOES”*

Code presenting symptom first, then code Post COVID condition

Example: Coding Post COVID Condition

Add **U09 Post COVID-19 condition**

Add **U09.9 Post COVID-19 condition, unspecified**

Add **Note:** This code enables establishment of a link with COVID-19.
Add This code is not to be used in cases that are still presenting with active COVID-19. However, an exception is made in cases of re-infection with COVID-19, occurring with a condition related to prior COVID-19.
Add Post-acute sequela of COVID-19

Add **Code first** the specific condition related to COVID-19 if known, such as:
Add chronic respiratory failure (J96.1-)
Add loss of smell (R43.8)
Add loss of taste (R43.8)
Add multisystem inflammatory syndrome (M35.81)
Add pulmonary embolism (I26.-)
Add pulmonary fibrosis (J84.10)

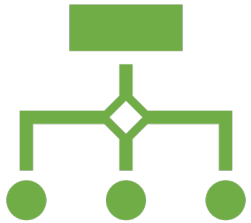
https://yes-himconsulting.com/2022-icd-10-cm-updates-now-available-post-covid-19-and-social-determinants-of-health-codes-included/

Example: Coding Post COVID Condition

CODE The Presenting Condition first

Patient with Fatigue 2 months after COVID infection

You will code R53.8 first



Then add Post COVID Condition code

Then, You will code U09.9


Where Do We Go From Here?

Open Discussion