

A promotional graphic for a webinar. On the left, a female doctor in a white lab coat and blue scrubs is smiling and talking to a male patient. The background is a teal color with a white speech bubble containing the title "INDIGENOUS WELLNESS: A Conversation on Long COVID". Below the title, the date and time "May 25, 2023 | 2-3 p.m. EDT" are displayed. A dark teal speech bubble contains the website "ncuih.org/events". At the bottom center is the National Council of Urban Indian Health logo. At the very bottom, there is a small disclaimer in white text.

INDIGENOUS WELLNESS:
A Conversation on Long COVID

May 25, 2023 | 2-3 p.m. EDT

ncuih.org/events

This webinar was made possible by Award number H723IHS0007-01-01 from Department of Health and Human Services. This webinar is solely the responsibility of the National Council of Urban Indian Health and does not necessarily represent the official views of the Indian Health Service or the Department of Health and Human Services.

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NATIONAL COUNCIL of URBAN INDIAN HEALTH

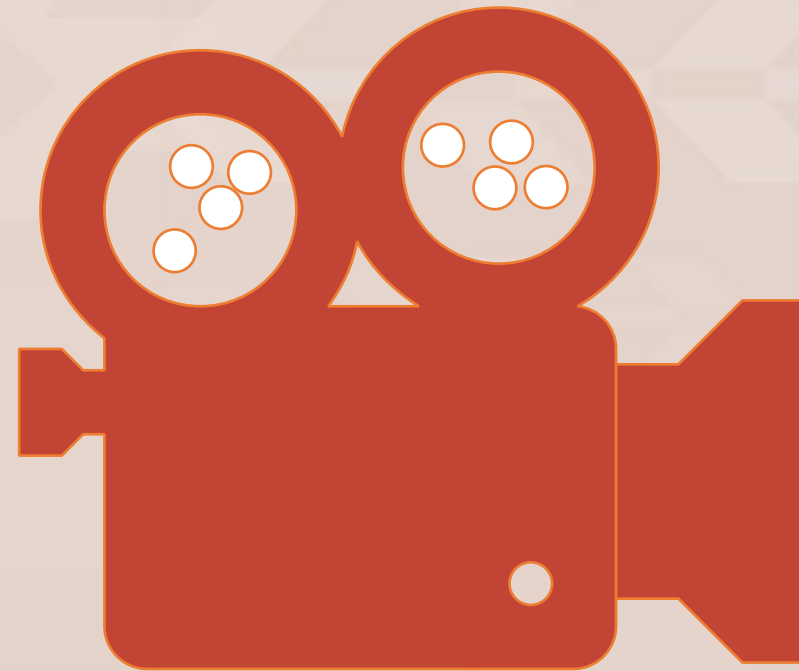
The National Council of Urban Indian Health (NCUIH) is the national non-profit organization devoted to the support and development of quality, accessible, and culturally-competent health and public health services for American Indians and Alaska Natives (AI/ANs) living in urban areas.

NCUIH is the only national representative of the 41 Title V Urban Indian Organizations (UIOs) under the Indian Health Service (IHS) in the Indian Health Care Improvement Act (IHCA). NCUIH strives to improve the health of the over 70% of the AI/AN population that lives in urban areas, supported by quality health care centers.



Audio and Visual Recording

Please note that this session will be recorded for educational and quality improvement purposes.



This activity is jointly provided by National Council of Urban Indian Health and Cardea Services

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This activity has been planned and implemented in accordance with the accreditation requirements and policies of the California Medical Association (CMA) through the joint providership of Cardea and National Council of Urban Indian Health. Cardea is accredited by the CMA to provide continuing medical education for physicians.

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Disclosures

There are no relevant financial relationships with ineligible companies for those involved with the ability to control the content of this activity.

Disclosures

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Successful completion of this continuing education activity includes the following:

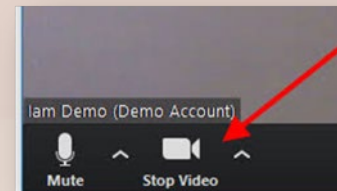
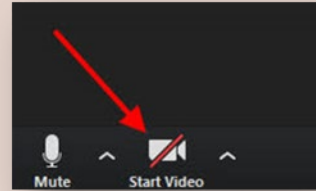
- Attending the entire CE activity;
- Completing the online evaluation;
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Your certificate will be sent via email. If you have any questions about this CE activity, contact Fiona Morrison-Fleming at ffleming@cardeaservices.org.

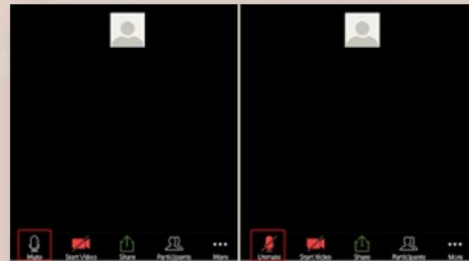


Housekeeping

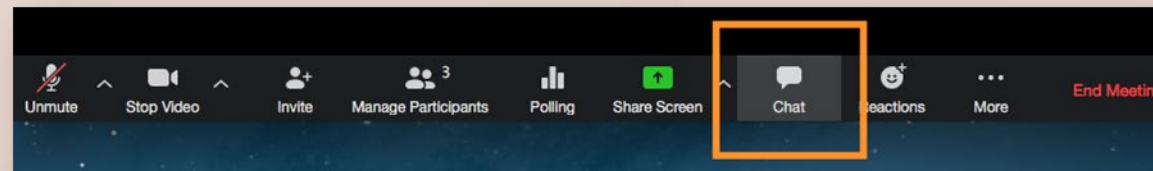
- Turn on Video



- Please Mute Your Microphone When Not Speaking



- Please Enter Your Name and Organization in the Chat Box

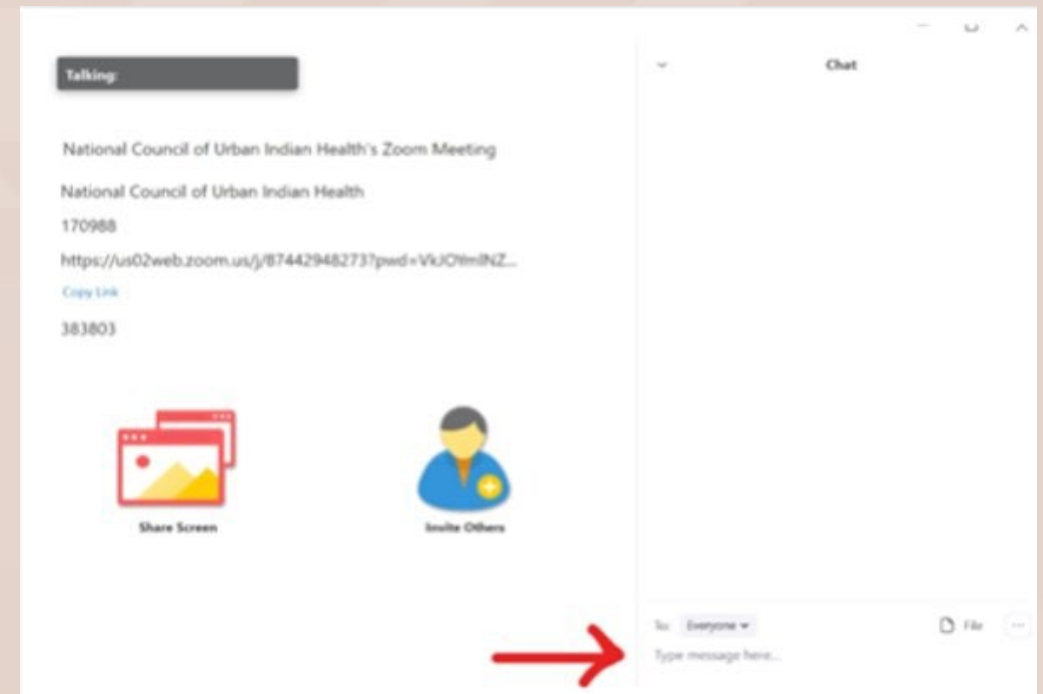
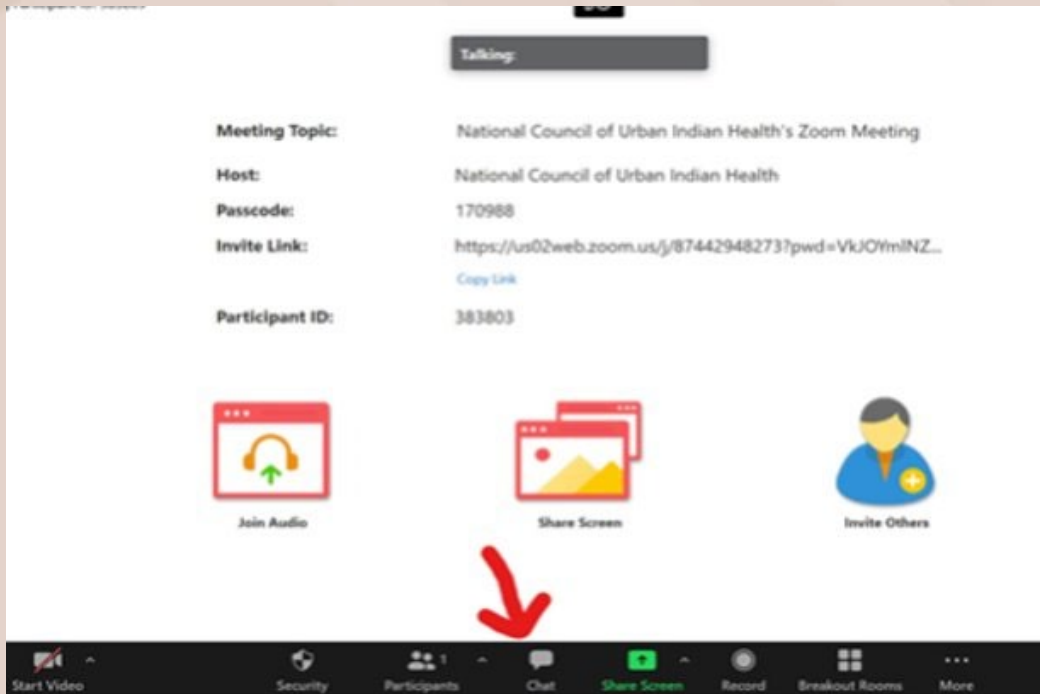




ASK A QUESTION OR COMMENT

First, select “Chat” at the bottom of your ZOOM screen

Then type your question or comment into the chat box that will appear on the right





POLL



**Dr. John Baratta,
Clinical Assistant Professor Department
of Physical Medicine and Rehabilitation,
University of North Carolina, Chapel Hill**





Post-COVID Conditions (Long COVID)

John M. Baratta, MD, MBA

Assistant Professor, Physical Medicine & Rehabilitation

Founder & Co-Director, UNC COVID Recovery Clinic

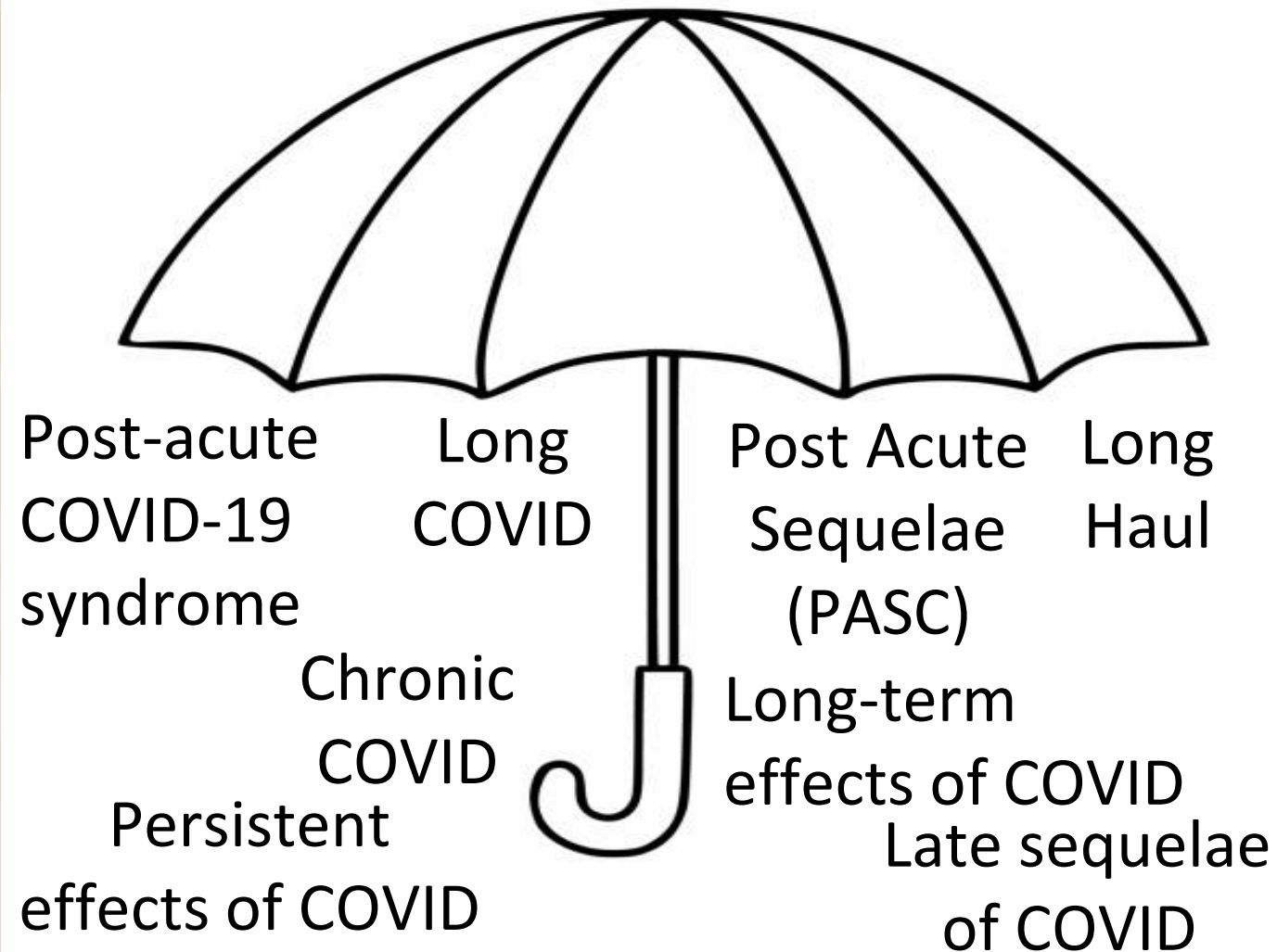


Agenda

- **Review fundamentals of Post-COVID Conditions (Long COVID)**
- **Brief discussion of evaluation and management of common symptoms**



Post-COVID Conditions





Post Covid Conditions (PCC): *Setting the Background*

Post-COVID Condition is a medical syndrome in which there is a "lack of return to a usual state of health following acute COVID-19 illness." (CDC - Centers for Disease Control)

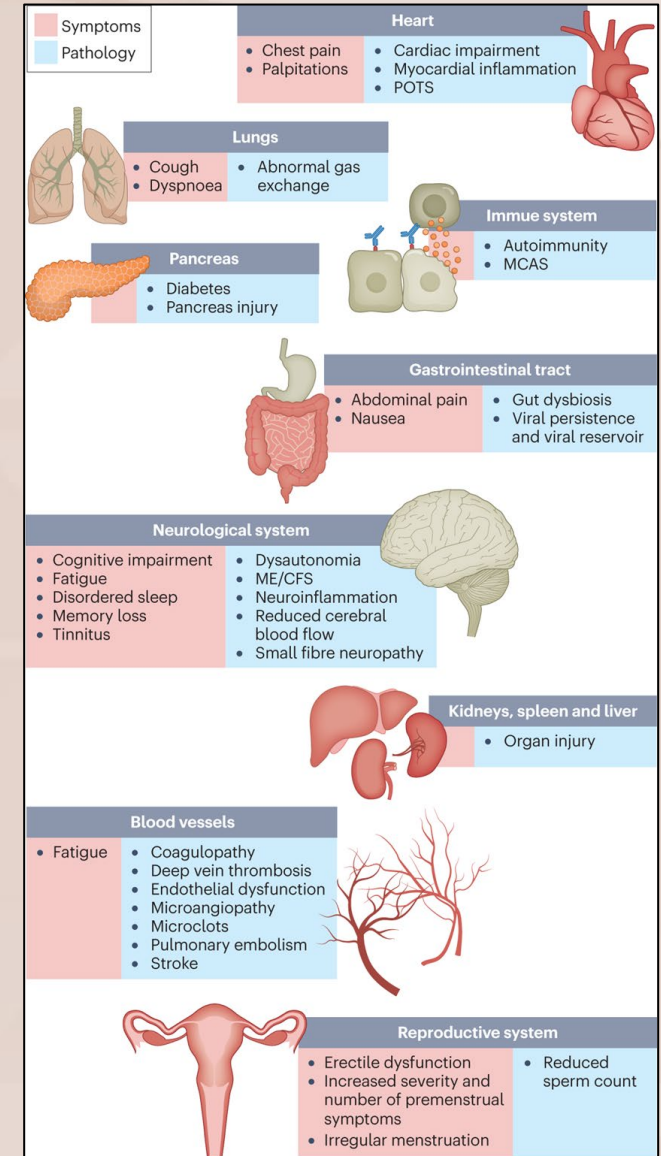
Requires two criteria:

- Prior COVID-19 illness (confirmed or presumed)
- Lingering symptoms or health effects (usually considered 1-3 months)

Also commonly termed:

- Long COVID, Post-Acute Sequelae of COVID-19 (PASC)

Davis, H. E., McCorkell, L., Vogel, J. M., & Topol, E. J. (2023). Long COVID: major findings, mechanisms and recommendations. *Nature reviews. Microbiology*, 21(3), 133–146. <https://doi.org/10.1038/s41579-022-00846-2>



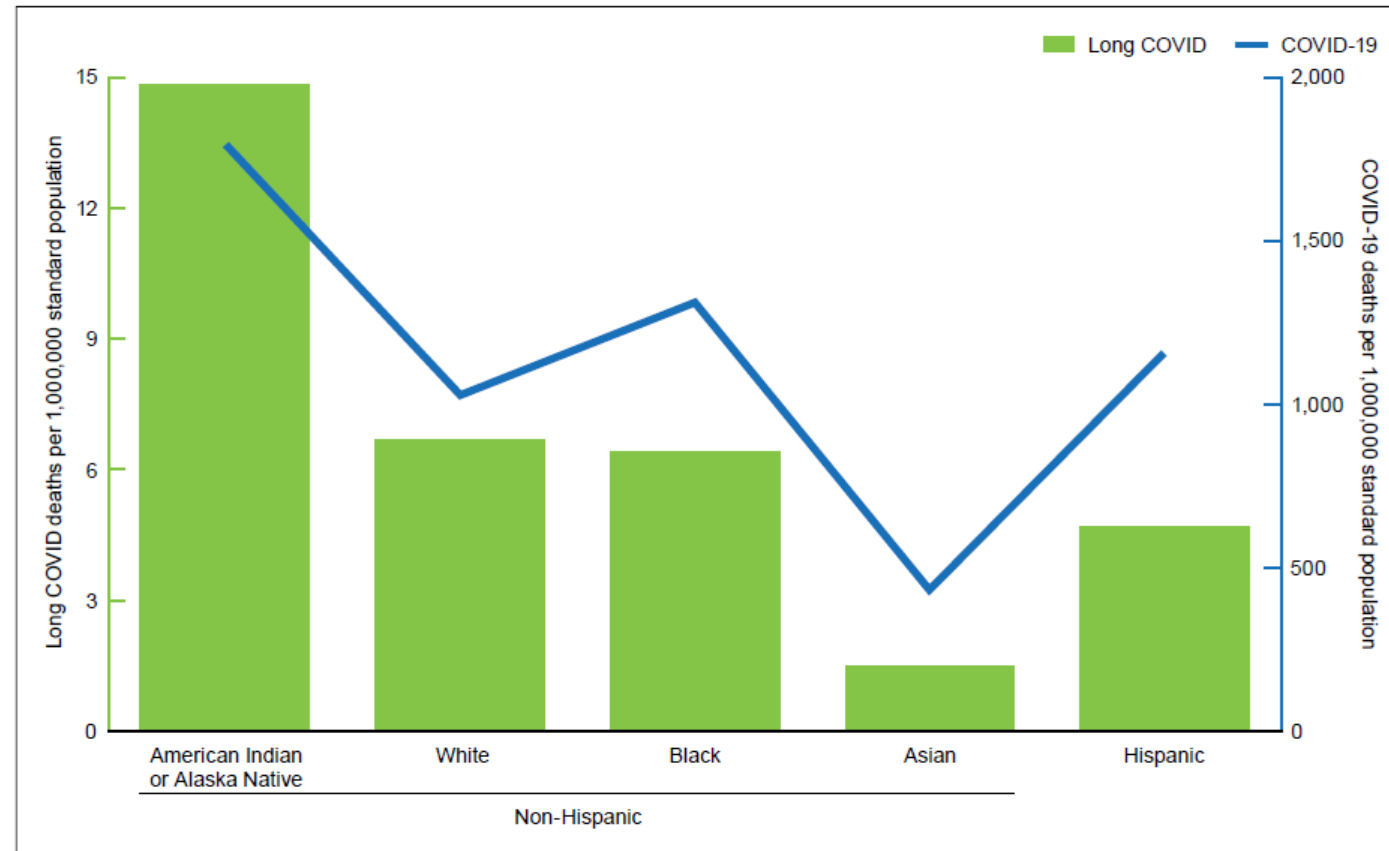


Terminology

- Instead of using the broad and vague term "Long COVID", consider using a more specific one, such as:
 - Post-COVID Fatigue
 - Post-COVID Memory impairment
 - Post-COVID Dyspnea
 - Post-COVID Headache disorder
 - Post-COVID Dysautonomia
- In addition to symptom/diagnosis codes, please use ICD-10: "Post COVID Condition" U09.9 (as of October 2021)

Long Covid Deaths by Race

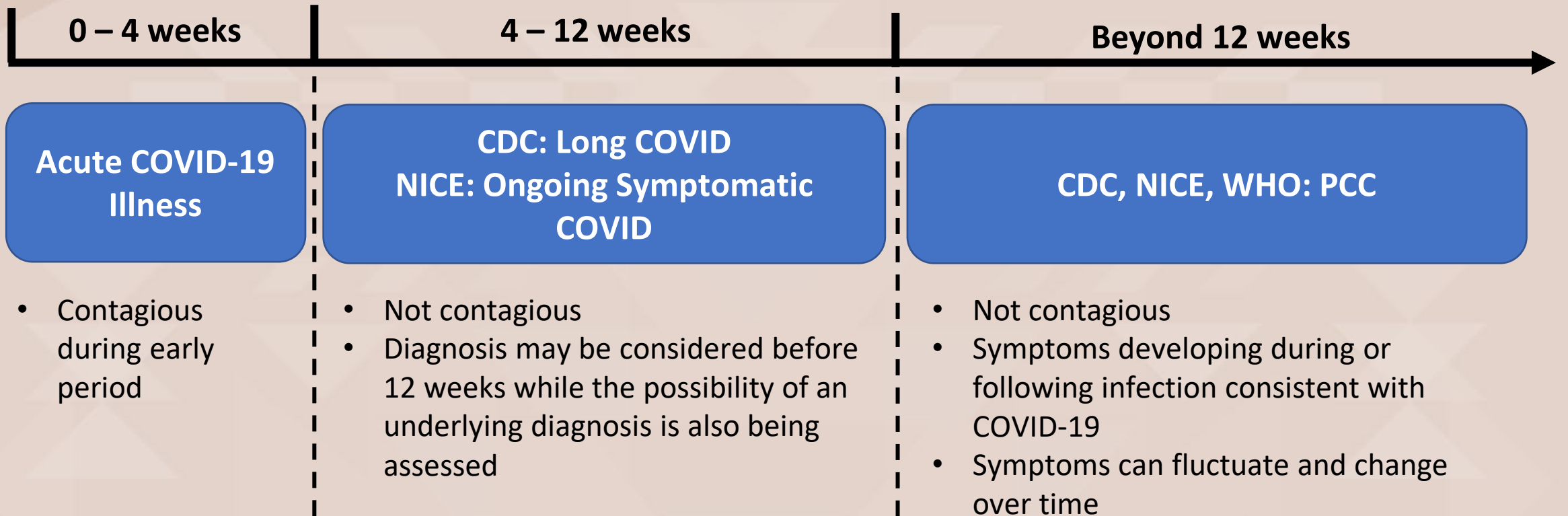
Figure 3. Provisional age-adjusted death rates for COVID-19 and COVID-19 deaths with long COVID, by race and Hispanic origin: United States, July 1, 2021–June 30, 2022



NOTES: National Vital Statistics System provisional data for 2021 and 2022 are incomplete. These data include deaths that occurred in the United States and may include residents of U.S. territories and foreign countries. Deaths with confirmed or presumed COVID-19 as an underlying or contributing cause of death were identified using *International Classification of Diseases, 10th Revision* code U07.1 and death certificate keywords mentioning long COVID. Deaths for non-Hispanic Native Hawaiian or Other Pacific Islander people, non-Hispanic multiracial people, and people of unknown race have fewer than 20 deaths and are not presented in this figure.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Time of Post-Covid Conditions (PCC)

- US Centers for Disease Control (CDC) – 4 weeks or more
- UK National Institute for Health and Care Excellence (NICE) & World Health Organization (WHO) – 12 weeks or more

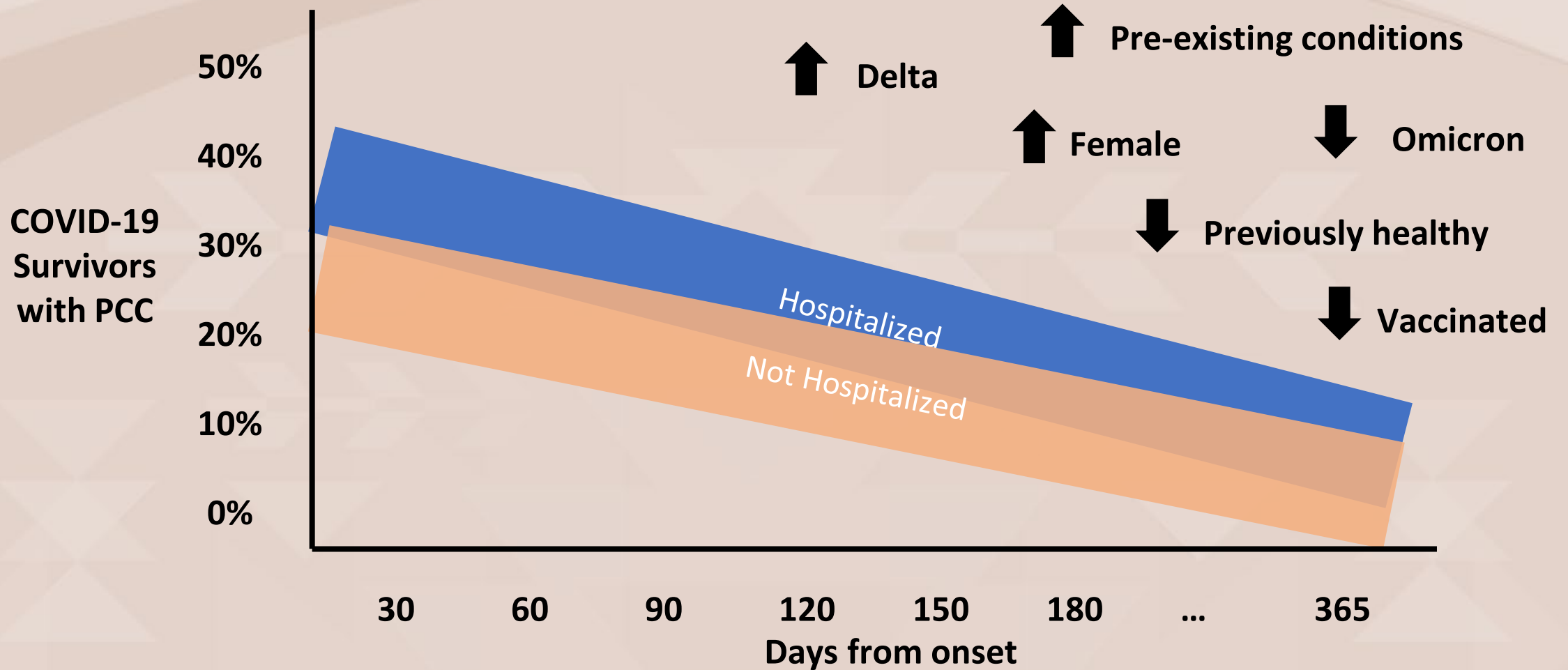


CDC Household Pulse Survey

Beginning in June 2022, the National Center for Health Statistics added PCC / Long COVID questions to a monthly national household survey.

	Percentage reported on Household Pulse	Of 258 M adults in USA, this represents approximately
Ever experienced long COVID, as a percentage of all adults	14.0 – 14.8%	36 - 38 million
Currently experiencing long COVID, as a percentage of all adults	6.8 – 7.6%	17 – 19 million
Any activity limitations from long COVID, as percentage of adults who currently have long COVID:	78 – 81%	13 – 15 million
Significant activity limitations from long COVID, as a percentage of all adults who currently have long COVID	23 – 26%	4 – 5 million

How Common Are Post-Covid Conditions (PCCs)?

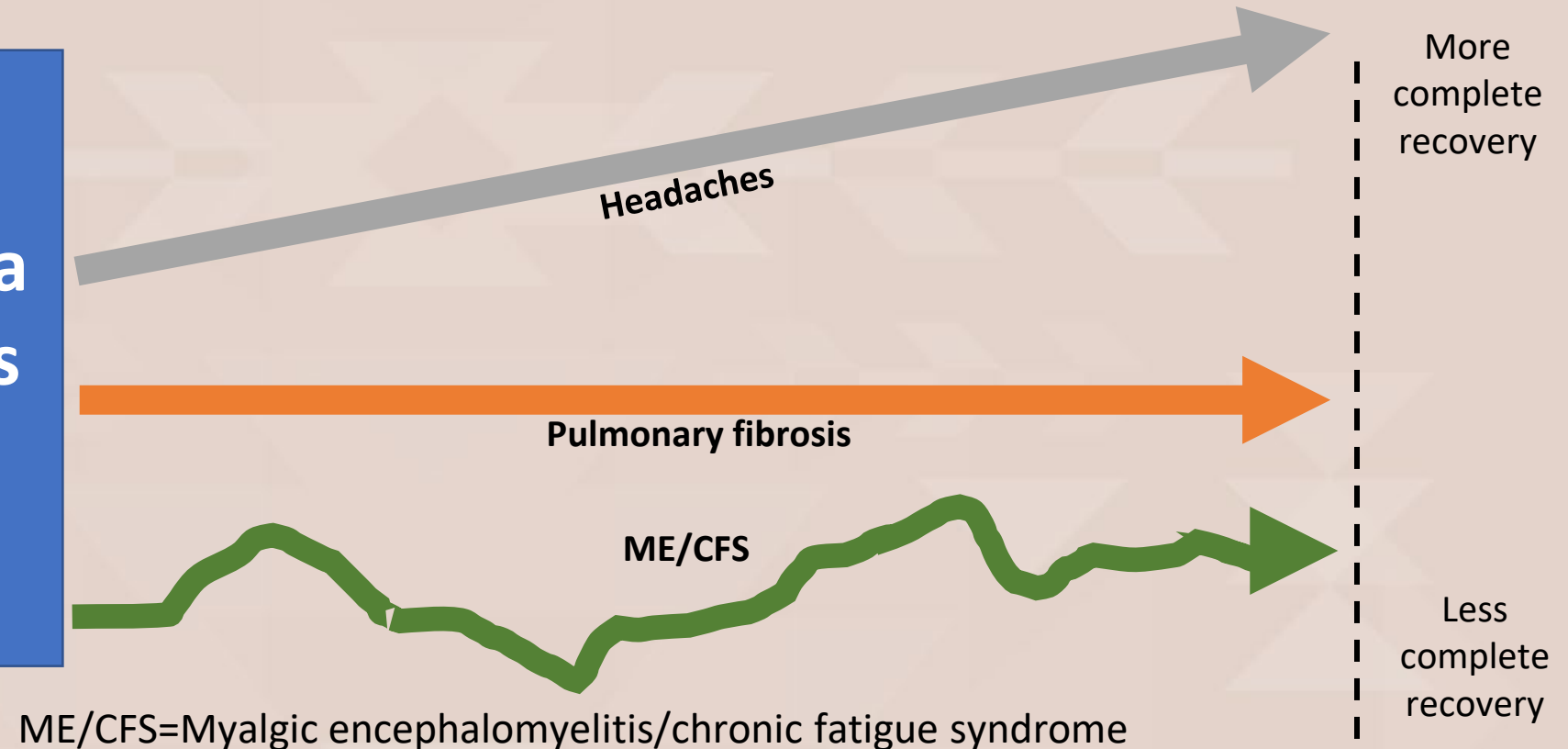




Recovery Trajectory

Post-COVID recovery is highly variable and dependent on the symptom constellation, severity, and underlying pathophysiology (if known).

Long COVID is a heterogeneous syndrome





Evaluation and Management of Common Symptoms



History: Look for the Different Phenotypes

Fatigue

Dysautonomia
(POTS)

Respiratory
Symptoms

Pain Syndromes

Neurologic and
Cognitive Symptoms



Fatigue Evaluation

- Look for mimickers/exclude treatable causes
 - Anemia, B12 deficiency, iron deficiency, Vit D deficiency, thyroid disorders, myositis, adrenal insufficiency
- “Special labs” – biomarkers, viral serology
 - Limited utility

Labs:

- CBC
- Glucose
- TSH
- B12
- Vitamin D
- Ferritin
- ANA
- CK
- CRP/ESR
- AM cortisol



Fatigue Treatment

- Treating overexertion
 - Education about pacing
 - Referral for a movement program, with experienced therapists (PT, OT)
 - Work accommodations:
- Treating depression
- Treating sleep disorders
- Might benefit: activating antidepressants, stimulants (esp with cognitive dysfunction)



Pulmonary Symptom Evaluation

Dyspnea and cough are common:

- Evaluation

- PFTs, with and without bronchodilation, with DLCO (most common abnormality for people with Long Covid)
- Imaging—more extensive if PFTs, O₂ sats are abnormal
- Sleep study
- Consider diagnosis of Pulmonary Embolism: increased after Covid 19



Pulmonary Symptom Treatment

- Cough
 - Usual treatment for post viral cough
 - Low threshold for a steroid inhaler
 - Often Improves
- Dyspnea
 - Breathing exercises
 - PT/Respiratory Rehab
 - Pulmonology referral as indicated



Dysautonomia Evaluation

- Evaluation: Orthostatic vital signs, symptom diary, smart watches, Cardiac evaluation
- Rule out adrenal insufficiency, other causes for unexplained tachycardia
- Tilt table testing



Dysautonomia Treatment (Non-pharmacologic)

- Hydration
 - 2-3 liters per day of water
- Salt: 2-3 tsp of salt, 8-10 gram
- Compression stockings
 - At least medium compression
 - Thigh high if possible
- Avoid Exacerbating Factors
 - Dehydration
 - Alcohol
 - Meds
- Recumbent Exercise





Dysautonomia Treatment (Pharmacologic)

Beta blocker

- Propranolol 20-40 mg/day
- Metoprolol, atenolol
- Can also use Calcium channel blocker

Fludrocortisone

- Doses 0.05-0.2 mg daily
- Follow up electrolytes

Ivabradine-cardiospecific

- Cost may be an issue

Pyridostigmine

- Becoming more popular
- Start 30 mg bid and increase as tolerated
- Often limited by Side effects

Clonidine



Pain - Neuropathic

- **Workup:**
 - Consider B12, TSH, EMG
 - Consider RPR, CBC
- **Consider Small Fiber Neuropathy (SFN) as etiology**
 - Case reports suggesting SFN is common
 - May also be etiology of Autonomic dysfunction
- **Treatment:**
 - Gabapentin, pregabalin, TCA (amitriptyline), SNRI (venlafaxine, mirtazapine)



Pain – Myalgias, Arthralgias

- **Workup:**
 - Consider CK, ESR, CRP, ANA, Anti-CCP,
 - Note that most workers are negative
- Consider rheumatology consultation
- **Symptomatic Treatment:**
 - Curcumin (turmeric) supplementation for anti-inflammatory benefits
 - NSAIDs, steroid burst, topical meds (diclofenac)



Pain – Myalgias, Arthralgias

- Very common and wide ranging
- Cognitive Dysfunction–most bothersome
 - Attention
 - Executive Function
- Headaches
- Dizziness
- Tremors



Cognitive Dysfunction

- Similar to approach to fatigue – minimize triggers, allow for rest breaks, reduced work intensity
- Speech therapy for cognitive rehabilitation
- Neuropsychology testing may be helpful
- Stimulants (methylphenidate, dextroamphetamine, modafinil) have been helpful. Additionally, guanfacine has shows early promising results.



History and Physical Active Listening Screen for Mood Disorders

For all: Reassurance/Validation
Cautious Optimism
Support Groups
Follow up

**Pulm: Evaluate
Evidence of lung
damage/fibrosis?**

Yes, refer
to pulm

No, but has
shortness of
breath

*Other common
symptoms: dermatologic,
headaches, myalgias,
neuropathy, arthralgias,
sleep disturbances

Movement program/PT,
Breathing exercises,
If cough, consider empiric
asthma treatment

**Cardiac Issues
Look for POTS**

If yes:
Hydration, compression
stocking
Consider: Pharmacologic
Therapy

Fatigue

Check labs and
evaluate/treat
mood and sleep
disorders

Advise movement,
looking for "energy
window":
Warn about PEM
Consider Stimulant

"Brain Fog"

Check labs and
evaluate/treat
mood and sleep
disorders

Consider referring
for neuropsych
testing, speech
therapy



Post-COVID Condition Guidance

CDC

CDC. (2020b, February 11). *Healthcare Workers*. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/post-covid-conditions.html>

American Association of Physical Medicine & Rehabilitation

PASC Guidance. (n.d.). Aapmr.org. <https://www.aapmr.org/members-publications/covid-19/pasc-guidance>

UpToDate

<https://www.uptodate.com/contents/covid-19-evaluation-and-management-of-adults-with-persistent-symptoms-following-acute-illness-long-covid>

Education and Self-Management

Patients should be encouraged to actively participate in their own recovery.

When possible, resources provided on symptom management and recovery techniques can be useful.

Educational resources to consider:

- med.unc.edu/covid-recovery-clinic
- phsa.ca/health-info/post-covid-19-care-recoverycdc.gov/coronavirus/2019-ncov/long-term-effects/index.html

Long COVID Brain Fog

Brain fog is a common issue for people recovering from COVID-19. It includes mental fatigue that causes difficulty with thinking skills.

What does brain fog look and feel like?

- Making increased mistakes
- Losing your train of thought
- Being easily distracted
- Increased confusion
- Difficulty remembering new information
- Difficulty concentrating
- Slow processing
- Difficulty remembering
- Difficulty focusing
- Having trouble with memory

How do I manage it?

- Balance your schedule, including resting, break times, and sleep.
- For a long task, break it into short, manageable pieces.
- Set an alarm to remind you to take a break during an activity.

Write things down.

- Write notes on a notepad.
- Set reminders on your phone.
- Write notes on a calendar.
- Use color coding to organize your notes.
- Make lists of tasks to do.

Fatigue

Everyday situations that require physical, cognitive (thinking), social and emotional energy may be exhausting. Fatigue is the most common symptom of Long COVID and this can cause your quality of life to suffer. Each person experiences fatigue differently.

What is “Long COVID”?

Long COVID is a wide range of health problems that people may experience for months or years after developing COVID-19. It can occur in people from all age groups, ethnicities, and cultures. Even people who had few symptoms with their initial infection are at risk for Long COVID. Persistent issues can include:


• Fatigue	• Loss of taste or smell
• Weakness	• Sleep disorders
• Shortness of breath	• Fevers
• Cough	• Nausea, vomiting, and diarrhea
• Memory and attention problems	• Anxiety
• Headaches	• Depression
• Dizziness	• Rash
• Heart palpitations or chest tightness	• Joint, muscle, and nerve pains

It is estimated that 10-20% of people who had COVID-19 will experience Long COVID. These persistent symptoms can make it hard to do your usual activities, including work, school, childcare, or hobbies.


Be kind to yourself and try to remain optimistic
While it can be scary to have these persistent health problems, there is reason to be hopeful. Most people with Long COVID have gradual improvements.

You should expect to have some days that are better than others. Your progress will likely not be consistent or predictable. Try not to compare today's results to that of yesterday, or to how you were prior to your illness, or to other people.

Want more information?
1. **Centers for Disease Control information page:**
www.cdc.gov/coronavirus/2019-ncov/long-term-effects/index.html
2. **RECOVER COVID Initiative**, a research program led by the National Institutes of Health (NIH): recovercovid.org



unchealth.org



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PCC are Magnifying Health Disparities

Vulnerable populations more likely to:

- Hold frontline (essential) jobs, increasing exposure to virus
- Live in multigenerational homes or crowded locations
- Have pre-existing conditions known to increase illness severity
- Require hospitalization

Vulnerable populations less likely to:

- Be vaccinated
- Access testing during acute illness, which is often required Long COVID specialty clinics
- Receive acute COVID treatments
- Access specialist healthcare including Long COVID clinics



Thank you!



Long COVID Discussion

How have you integrated traditional healing practices into your clinic or organization to address the needs of those impacted by COVID-19?

Share successes and/or challenges met?



Long COVID Discussion

What are the challenges that you are seeing in your clinics or with your patient population in diagnosing and/or treating those impacted by Post COVID Conditions?



Long COVID Discussion

What are the lingering mental health effects that you are seeing within your communities or with patients impacted by COVID-19 and/or Post COVID conditions?



Long COVID Discussion

What are services, resources or supports that you see are needed within in your communities to address the needs of those individuals impacted by Post COVID Conditions?



Questions and Answers



Evaluation





Upcoming NCUIH Events

- May 31 @ 2pm: Open Forum: Beyond Burnout: Weaving Self Care into Everyday Practice
- June 8 @ 2 pm: Branching Out: Wellness Programming for Patient-Centered HIV Care from an Urban Indian Perspective



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