The background is a light blue gradient with several realistic water droplets of various sizes scattered across the surface. The droplets have highlights and shadows, giving them a three-dimensional appearance.

THE ECONOMIC BURDEN OF LONG COVID

KATIE BACH, BROOKINGS

DAVID CUTLER, HARVARD UNIVERSITY

OUTLINE

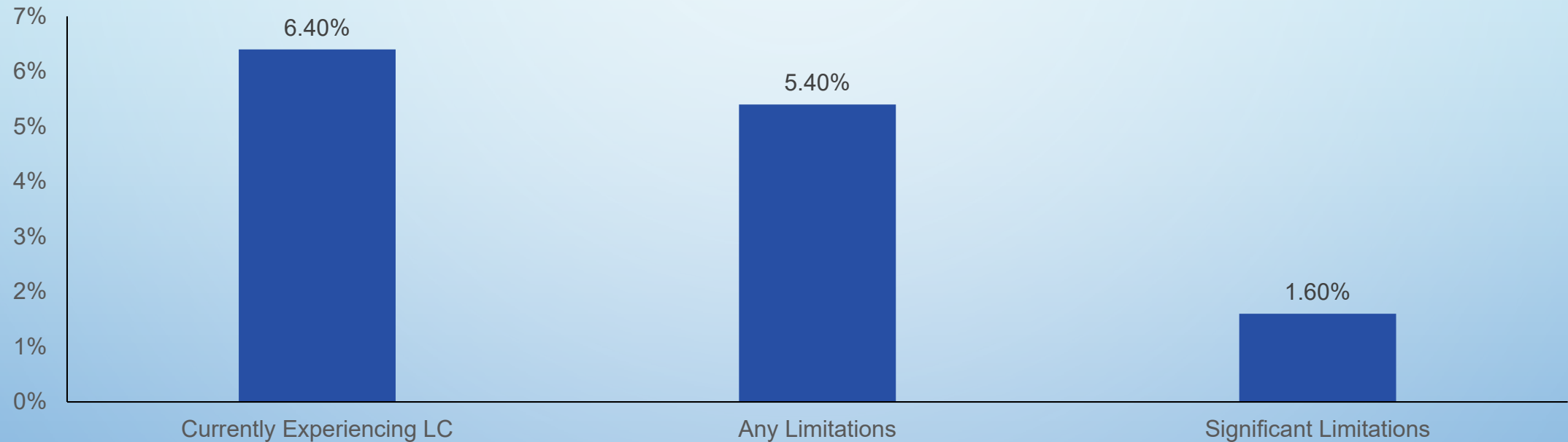
1.Prevalence

2.Costs to individuals and families

3.Aggregate costs

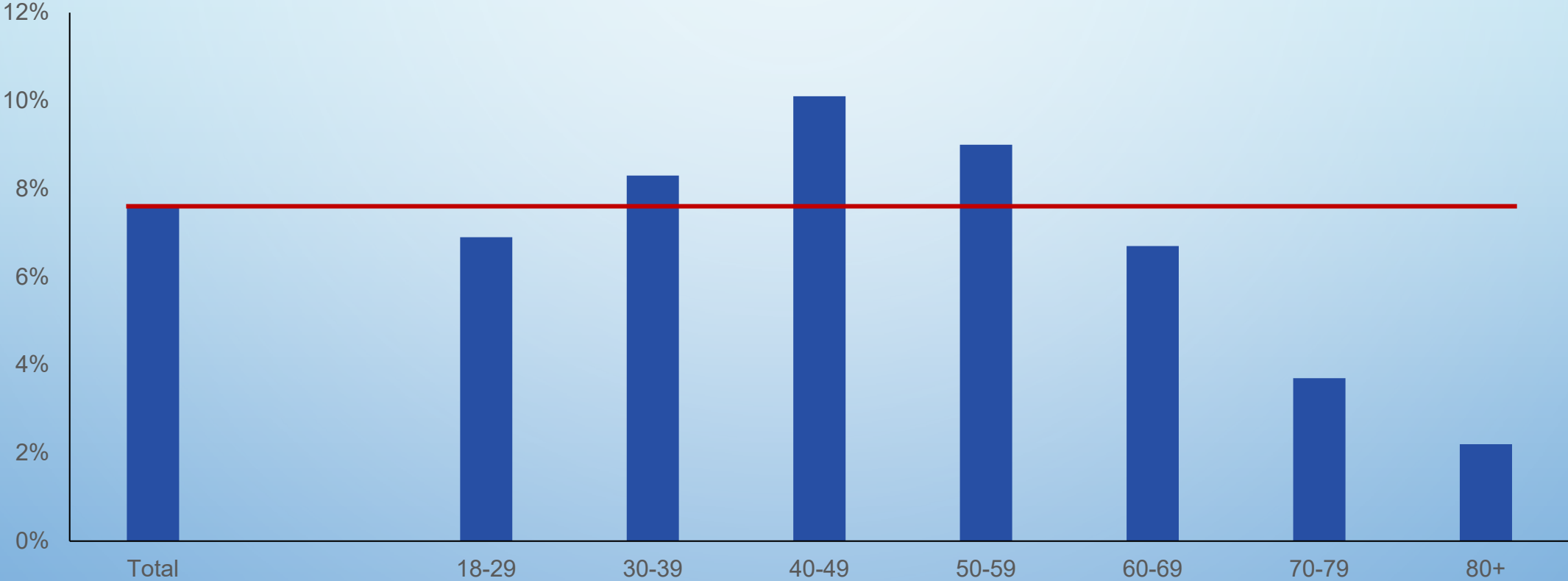
4.Policy choices that influence costs

OVERALL PREVALENCE AND ACTIVITY LIMITATION

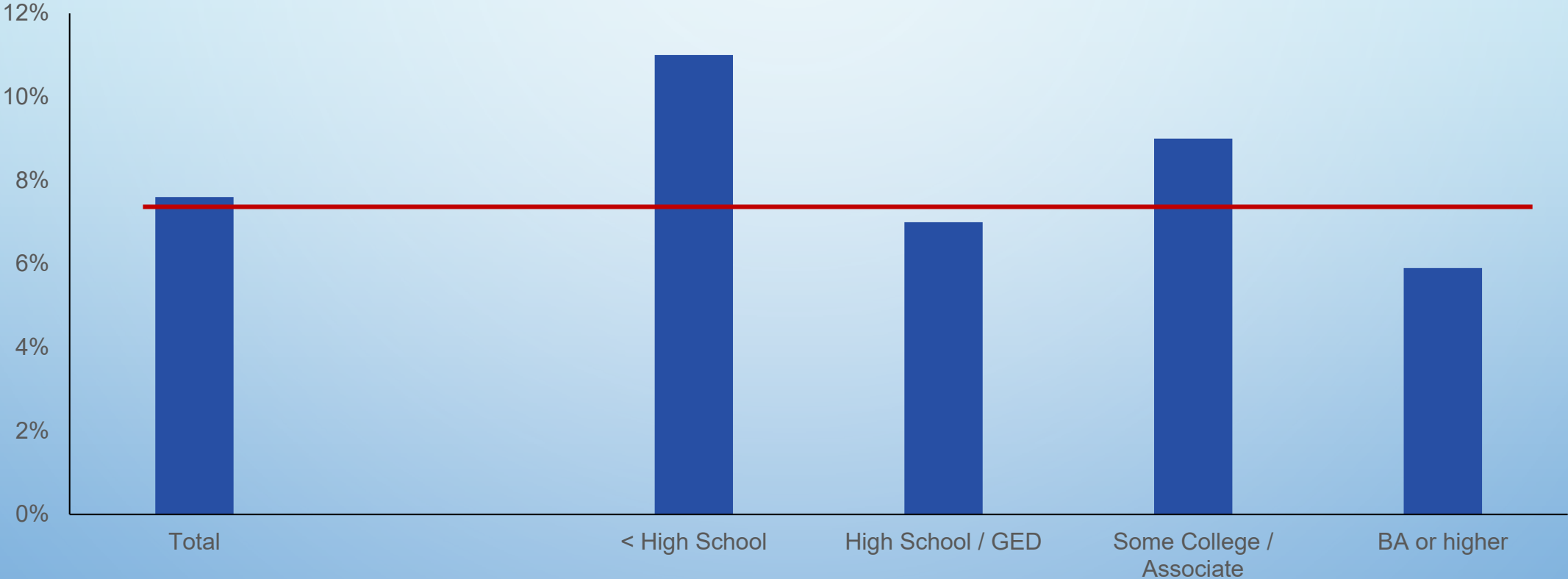


17.5M US adults experiencing Long Covid, 4.1M with “significant” activity limitations

PREVALENCE OF LONG COVID BY AGE



PREVALENCE OF LONG COVID BY EDUCATION



COSTS TO INDIVIDUALS AND FAMILIES

- Income may decline...
 - UK's ONS: working-age LC patients 45% and 34% more likely to be out of work 30-39 or 40-51 weeks post-Covid vs pre-infection
 - Small longitudinal US analysis: 26% of LC patients had employment or work hours affected
 - US HHS points to decreased financial stability, increased risk of homelessness
- Just as health costs rise
 - ME/CFS proxy: ~\$9,000 / yr in additional spending
 - Barriers: lack of insurance (incl with job loss), insurance not covering tests / treatment
- Where caregivers are impacted, families incur additional (non-LC) care costs

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/selfreportedlongcovidandlabourmarketoutcomesuk2022/selfreportedlongcovidandlabourmarketoutcomesuk2022>

<https://www.minneapolisfed.org/research/institute-working-papers/long-haulers-and-labor-market-outcomes>

<https://www.hhs.gov/sites/default/files/healthplus-long-covid-report.pdf>

<https://jamanetwork.com/journals/jama-health-forum/fullarticle/2792505>

NET EFFECT ON EMPLOYMENT

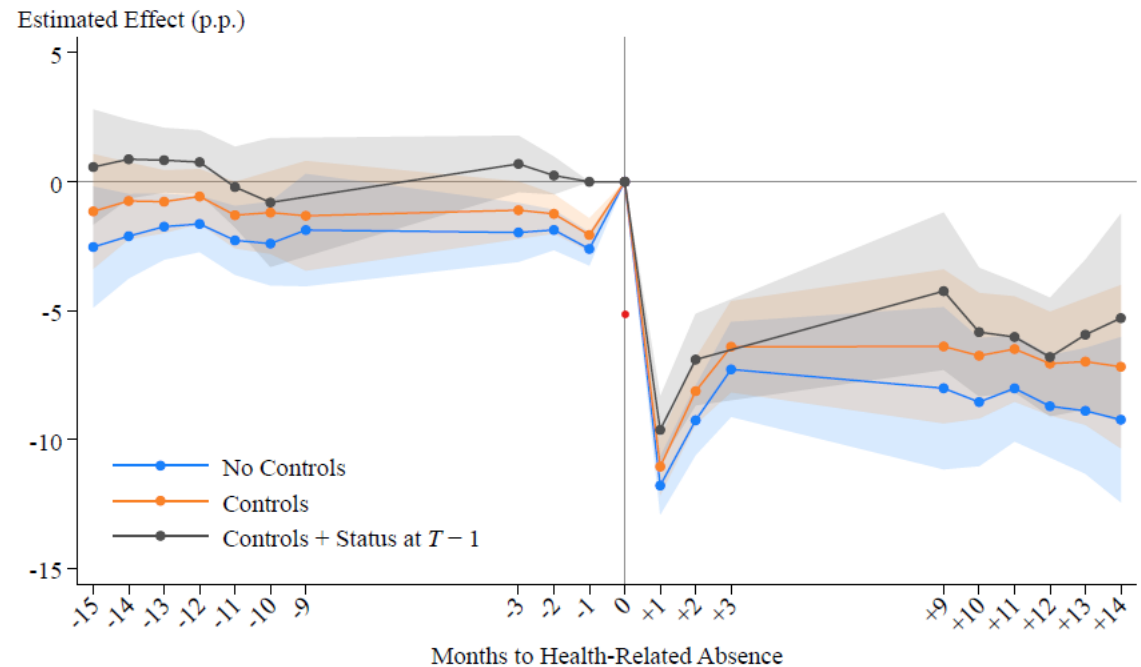
- 500,000-750,000 people out of labor force (conditional on being COVID-related work absence)
- Additional reduction in hours among those still employed

- Current Population Survey

Gopi Shah Goda and Evan Soltas, "The Impacts of COVID-19 Illnesses on Workers," NBER Working Paper No. 30435.

Figure 2: Labor Force Participation Impacts of Health-Related Absences

Panel A: Event Study



LABOR MARKET IMPACT

The Impacts of Covid-19 Illnesses on Workers*

Gopi Shah Goda Evan J. Soltas

September 2, 2022

Abstract

We show that Covid-19 illnesses persistently reduce labor supply. Using an event study, we estimate that workers with week-long Covid-19 work absences are 7 percentage points less likely to be in the labor force one year later compared to otherwise-similar workers who do not miss a week of work. This finding suggests that Covid-19 illnesses have reduced the U.S. labor force by 4.1 million workers, or 2.5% of the labor force. This finding implies an average forgone earnings of \$1,000 per worker, which reflects lost labor supply.

Keywords: Covid-19, labor supply, long Covid
JEL Codes: I12, J17, J24



REPORT
New data shows long Covid is keeping as many as 4 million people out of work

Katie Bach · Wednesday, August 24, 2022

*Goda: Stanford Institute for Economic Policy Studies (esoltas@mit.edu). We thank David Jim Poterba, Brendan Price, Ceci Ernest Tedeschi, and seminar participants for their knowledge support from the National Bureau of Economic Research and from the National Institute on Aging. The content is solely the responsibility of the authors and does not necessarily represent the views of the National Institutes of Health.



Since the depths of the COVID-19 pandemic through today, news about labor shortages and missing workers has [dominated headlines](#). The question everyone still seems to be asking is: Why?

In January 2022, Brookings Metro published a [report](#) that assessed the impact of [long Covid](#) on the labor market. Data on the condition's prevalence was limited, so the report



Katie Bach
Nonresident Senior Fellow - Brookings Metro
[kathrynbach](#)

JAMA Health Forum



JAMA Forum

The Costs of Long COVID

David M. Cutler, PhD

More than 6 million people have died from COVID-19 worldwide, including nearly 1 million in the US.¹ But mortality is not the only adverse consequence of COVID-19. Many survivors suffer long-term impairment, officially termed *postacute sequelae of SARS-CoV-2 Infection* and commonly called *long COVID*.

Long COVID—typically defined as symptoms lasting more than 30 days after acute COVID infection—has received some public attention, but it is not nearly as intense as it is for acute COVID-19 infection. Support groups are devoted to the condition, and Congress has allocated more than \$1 billion to the National Institutes of Health to study it. But the relatively meager attention that has been paid to long COVID is unfortunate because its health and economic consequences are likely to be every bit as substantial as those due to acute illness.

People who have more severe COVID-19 are more likely to experience long COVID, but severe acute disease is not a prerequisite. Long COVID has been found in people with only mild initial illness. The most common symptom of long COVID is fatigue.² More severe cases involve damage to a variety of organ systems (the lungs, heart, nervous system, kidneys, and liver have all been implicated), along with mental health impairment. Researchers have hypothesized that physiological pathways may involve direct consequences of the viral infection along with inflammatory or autoimmune responses.

Because many prevalence estimates are based on convenience samples of members of

who had severe acute disease, the population prevalence of long COVID based on population data suggest that 22% to 38% of people with the symptom 12 weeks after initial symptom onset, and 12% to 17%

of the population number of people with long COVID. The US Centers for Disease Control and Prevention estimates that as of May 5, 2022, the US has had roughly 81 million COVID-19 deaths. Even the lower-end estimate of 12% of people with 3 months of long COVID suggests that 9.6 million people in the US may have developed long COVID-19 deaths. It is not known how long people with long COVID survive in the first year of long COVID for affected individuals may

be a consequence of long COVID. People with the condition work and live differently. One survey found that 44% of people with long COVID worked fewer hours.³ In the economy as a whole, more than 1 million people are out of the labor force at any given time because of long COVID.⁴ This represents a direct earnings loss. If 1 million people are out of the labor force

Author affiliations and article information are listed at the end of this article.

Back of envelope example...

- 4.1M limited a lot
- 62% LFPR
- 25% reduction in hours

Would =

- 0.6M FT equiv.



- Likely range ~ (500,000-2M)

AGGREGATE COSTS OF LONG COVID

Area	Concept
Health loss	Welfare loss from reduced health
Earnings loss	Fewer people at work; people working earn less
Health spending	More money spent on treating people

Note: Things like DI receipt, workers compensation, etc. are transfers, not net reductions in welfare.

CUTLER ESTIMATE

- Total cost = \$3.8 trillion, \$11,000 per person, 17% of GDP.
- Note: Part of the shortage of low wage workers in the economy may be because some of these workers are out with long COVID.
 - There are other reasons as well, including immigration and saved COVID stimulus \$s.

Table 1: The Economic Cost of Long COVID

Impact	Value (\$ billion)
Reduced quality of life	\$2,195
Reduced earnings	\$997
Increased medical spending	\$528
Total cost	\$3,719
Cost per capita	\$11,189
Percent of 2019 GDP	17%

IMPLICATIONS – PUBLIC POLICY

- We desperately need to know more.
 - NIH was allocated \$1B for long COVID research, but it has been very slow going
- The strain on SSDI could be large.
 - But, so far there has been no increase in SSDI enrollment or applications
 - Quite anomalous

IMPLICATIONS – EMPLOYERS

- Will need to make accommodations for workers with long COVID
 - Telework
 - Flexibility on working hours / deadlines
 - More frequent breaks
 - Stand → sit
 - “Brain fog”-related prompts (e.g., fast casual recipes, checklists...)
- ...But not all jobs are easily amenable to accommodations

IMPLICATIONS – CLINICIANS

- Few clinicians have experience with ME/CFS (most closely related to LC)
- Anecdotally (from clinicians), there are treatments that help some LC patients (MCAS, POTS, and more) – but no good studies
- Need LC-literate PCPs & specialists that take insurance

DIAGNOSING AND TREATING MYALGIC ENCEPHALOMYELITIS/ CHRONIC FATIGUE SYNDROME (ME/CFS)

– U.S. ME/CFS CLINICIAN COALITION –

Version 2

July 2020

About the U.S. ME/CFS Clinician Coalition

The U.S. ME/CFS Clinician Coalition is a group of US clinical disease experts who have collectively spent hundreds of years treating many thousands of ME/CFS patients. They have authored primers on clinical management, have served on CDC medical education initiatives, and are actively involved in ME/CFS research.

Members of this group include:

Dr. Lucinda Bateman - <i>Internal Medicine, UT</i>	Dr. Alison Bested - <i>Hematological Pathology, FL</i>
Dr. Hector Bonilla, <i>Internal Med, Infectious Disease, CA</i>	Dr. Bela Chheda - <i>Internal Med, Infectious Disease, CA</i>
Dr. Tania Dempsey - <i>Internal Medicine, NY</i>	Dr. Theresa Dowell - <i>Family Nurse Practitioner, AZ</i>
Dr. Donna Felsenstein - <i>Infectious Disease, MA</i>	Dr. Susan Levine - <i>Infectious Disease, NY</i>
Dr. Anthony Komaroff - <i>Internal Medicine, MA</i>	Dr. David Kaufman - <i>Internal Medicine, CA</i>
Dr. Nancy Klimas - <i>Immunology, FL</i>	Dr. Charles Lapp - <i>Internal Medicine, Pediatrics, NC</i>
Dr. Benjamin Natelson - <i>Neurology, NY</i>	Dr. Dan Peterson - <i>Internal Medicine, NV</i>
Dr. Richard Podell - <i>Internal Medicine, NJ</i>	Dr. Irma Rey – <i>Internal & Environmental Medicine, FL</i>
Dr. Ilene Ruhoy, <i>Neurology, NY</i>	Dr. Ronald Tompkins - <i>Surgery, MA</i>
Dr. Maria Vera-Nunez - <i>Internal & Integrative Med, SC</i>	Dr. Brayden Yellman - <i>Rheumatology, UT</i>

For clinicians who want more information, please contact us through our website (mecfscliniciancoalition.org)