



Perspective on Defining Long COVID from the ME/CFS Experience

Jeanne Bertolli, PhD, MPH

Deputy Chief

Chronic Viral Diseases Branch, DHCPP

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Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)

- A complex, chronic, debilitating illness with systemic effects
- Pathology unknown, thought to involve dysregulation of multiple systems in response to a particular trigger.
- Not exclusively considered post-infectious; associated with several infectious agents
- Characterized by chronic fatigue, sleep disturbance, poor concentration, dizziness; symptoms often exacerbated by exertion.
- Temporal relationship between viral epidemics and chronic post-infectious symptoms consistent with criteria for ME/CFS.
- Important similarities with Long COVID, but data supporting SARS-CoV-2 as an infectious trigger for ME/CFS are limited

Central Challenges for Defining Long COVID

- No diagnostic test
- Frequently unavailable documentation of infection; when available, hard to prove infection triggered Long COVID
- Unclear
 - time from infection to onset of Long COVID symptoms
 - duration of symptoms needed to be considered “long”
- Heterogeneous presentation
- Symptoms are subjective
- Definition needed for different uses

ME/CFS Research Case Definitions

- Multiple definitions have been used
 - 1994 International Research (CFS)
 - 2003 Canadian Consensus (ME/CFS)
 - 2011 ME International Consensus
- Based on expert opinion from clinical experience (not data)
- Limited involvement of those with lived experience; did not reflect heterogeneity of the illness

[Understanding History of Case Definitions and Criteria | Healthcare Providers | Myalgic Encephalomyelitis/Chronic Fatigue Syndrome \(ME/CFS\) | CDC](#)

Limitations of ME/CFS Research Case Definitions

- Did not operationalize elements of definitions
 - Standardized evaluation of symptoms not required
 - Ambiguous clauses (example "not explained by other conditions")
- Overconfidence that case definition will identify “true” cases
 - Refining or adding criteria unlikely to result in population with common etiology and response to treatment
- Did not meet needs of different applications
 - Clinical and research needs not clearly differentiated

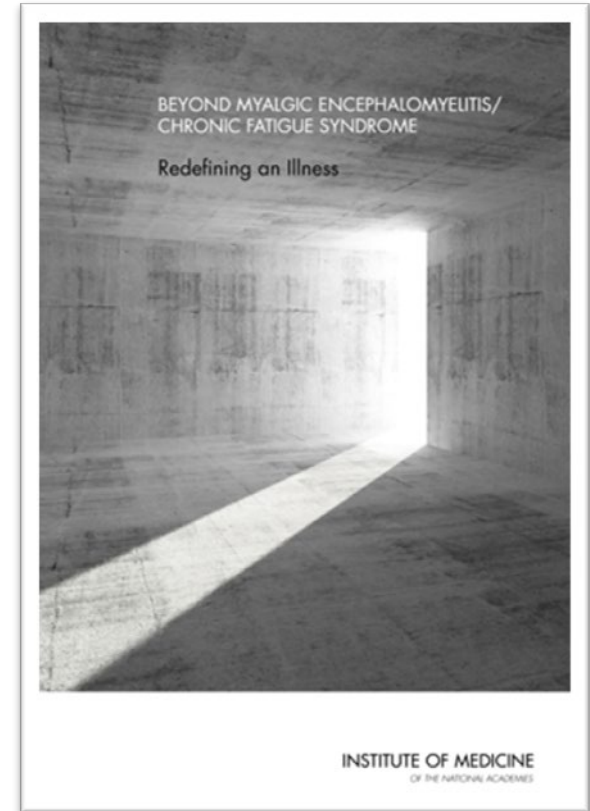
Impact of Limitations

- Study populations not representative, differed from study to study
- Study findings rarely replicated
- Skepticism about validity of diagnosis
- Limited progress in understanding cause(s) of ME/CFS

2015 IOM Diagnostic Criteria for ME/CFS

- Convened diverse panel of experts
- Reviewed literature and interviewed stakeholders
- Incorporated data from CDC's Multisite Study of ME/CFS
 - Enrollment based on clinical experts
 - Standardized measures of each illness domain
- Simplified criteria for clinical use
- Highlighted gaps in measurements

<http://iom.nationalacademies.org/reports/2015/me-cfs.aspx>



2015 IOM Diagnostic Criteria

ME/CFS diagnosis requires **all three symptoms to occur**



Substantial impairment that lasts more than **six months** and is accompanied by **profound fatigue**



Post-exertional malaise (PEM)



Unrefreshing sleep

In addition, **at least one** of the following symptoms must be present:



Impaired memory or ability to concentrate



Orthostatic intolerance

Patients have symptoms at least half of the time and with moderate, substantial, or severe intensity

How Challenges Addressed for ME/CFS

- Syndromic illness often associated with infection, documentation of infection, timing of onset not required
- Frequency, intensity, duration of specified principal symptoms
- Post-exertional malaise required, distinguishes ME/CFS from idiopathic chronic fatigue, other conditions like depression
- Cognitive impairment or orthostatic intolerance must be present
- Other conditions associated with the principal symptoms not specified as exclusionary criteria; instead required post-exertional malaise
- Conditions occurring along with ME/CFS recognized

Summary

- Some sequelae of COVID-19 are similar to ME/CFS
- Process used for defining ME/CFS could help set a process for defining Long COVID
- Extent to which the same distinguishing and other features identified for ME/CFS are applicable to Long COVID is an important question

Questions?

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

