

# Long COVID and Frailty Among Rural Elderly: A Rallying Cry for The Neglected Group

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Manuscript submitted: 05/07/2023; Accepted: 05/21/2023; published: 06/01/2023.

The coronavirus disease (COVID-19) pandemic is an apocalypse of the modern epoch. COVID-19 has resulted in unprecedented clinical, social, and economic repercussions in the short- and long term. However, there is a waning trend in the number of COVID-19 fatalities and hospitalization across the globe. Considering this trend and the advisory received from the International Health Regulations (2005) (IHR) Emergency Committee, the World Health Organization (WHO) Director-General has declared that COVID-19 is no longer a public health emergency of international concern (PHEIC) (WHO, 2023). At the same time, the Committee recommended the gradual dismantling of the pandemic control machinery and transition toward the strategic management of long-term risks associated with SARS-CoV-2.

Long COVID is the persistence of a heterogenous array of COVID-19 symptoms and delayed clinical repercussions beyond 4 weeks from the onset of SARS-CoV-2 infection (Wan et al., 2021). The term “Long COVID” although used commonly in the scientific literature, the heterogeneity in the term and the definition create ambiguity. Across the scientific literature, long COVID is referred by other terminologies such as ‘COVID long haul syndrome’ ‘long-haul covid’, ‘post-acute sequelae of COVID-19’. ‘post-acute

sequelae of SARS-CoV-2’, ‘post-acute COVID-19 syndrome’, ‘chronic Covid syndrome’ and ‘ongoing COVID-19’. Besides, the ambiguity of the long COVID definition in the context of the duration of COVID-19 symptoms and the clustering (or grouping) of symptoms poses significant challenges in the clinical understanding and effective management of long COVID (O’Mahoney et al., 2022).

Approximately half (45%) of the COVID long haulers across the globe have reported persistent symptoms at 3-4 months after their initial diagnosis. Although both hospitalized and non-hospitalized patients presented continued COVID symptoms, the hospitalized population reported a greater number of heterogenous symptoms (46 symptoms) than their non-hospitalized counterparts (who has 14 symptoms) (O’Mahoney et al., 2022). Regardless of the hospitalization status, fatigue was the most commonly reported symptom (58%) among the elderly with long COVID (Mansell et al., 2022).

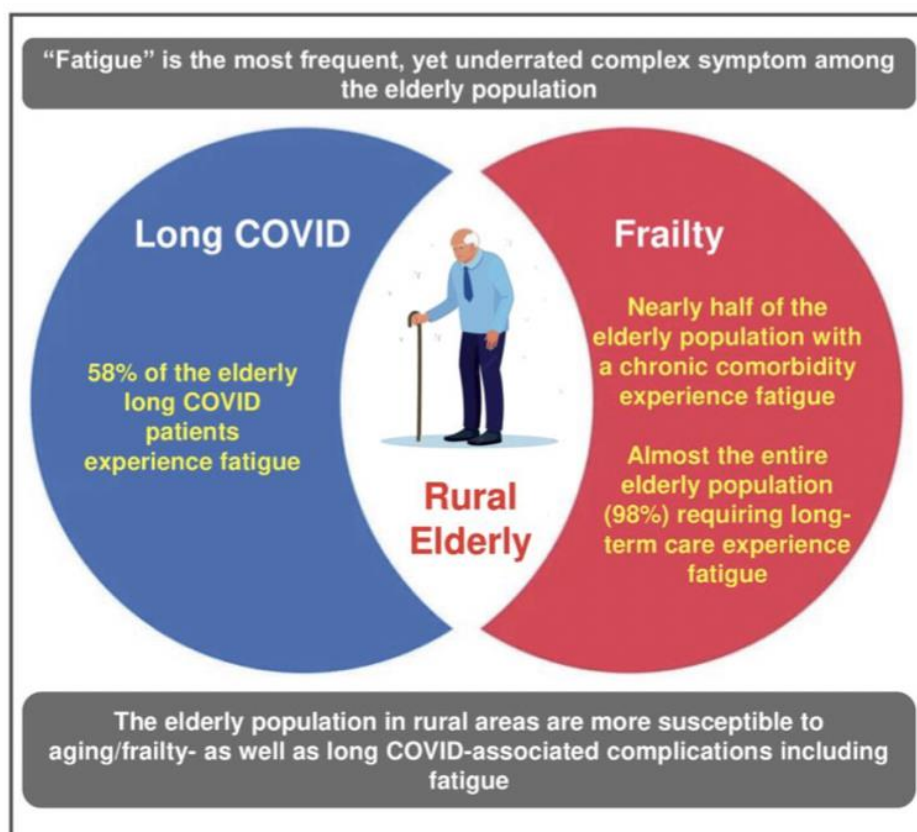
However, the term “fatigue” which is loosely defined as a lack of energy coupled with cognitive weariness, has no standard definition in the literature or clinical practice. Fatigue is still an under-recognized condition among healthcare specialists who consider fatigue to be a less

intricate entity, while patients view it as a constellation of multifaceted constructs (Egerton, 2013). Considering the high prevalence of fatigue in the geriatric population, ambiguous definitions, and distinct etiologies, unaddressed fatigue may lead to disability in the elderly.

Frailty, an age-related medical syndrome, is the most challenging manifestation of the geriatric population. Notably, fatigue is the pivotal indicator of frailty among the elderly, where the latter includes fatigue, weight loss, muscle weakness, diminished hand grip performance, reduced physical activity, and slow-paced walking (Avlund 2010).

care puts an additional burden on the already frail, elderly population who are dwelling in rural areas (Figure 1).

In rural areas, the impact of the pandemic shock is much higher due to reduced/lost income, poor healthcare capacity, economic derailment, etc. (Yazdanpanah et al., 2022). A seminal analysis report by Xu et al. (2021) showed that pooled frailty prevalence in rural elderly was 23% in developed countries and 17% in developing countries. This could be due to an increased number of aged populations in the developed countries than their counterparts in the developing countries. At least one-in-five elderly people in



**Figure 1. Fatigue: The Key Intersecting Component of Long COVID and Frailty Among Rural Elderly**

Nearly half (47%) of clinically stable older patients experienced fatigue (and consequently frailty) during the COVID-19 outbreak (Zou et al., 2020). Another study conducted on the diabetic elderly population showed that the prevalence of fatigue was 48.8%, with nearly half of them reporting moderate or severe fatigue (Kim and Son, 2019). The prevalence of self-reported fatigue among the elderly population seeking primary care is 25%, while nearly all (98%) of the older population seeking long-term care experienced fatigue (Egerton, 2013). Through this communication, we accentuate that the lack of long COVID

rural areas are affected by frailty.

Taken together, it is high time to devise and enforce appropriate healthcare policies to abridge the urban-rural gap and offer equitable healthcare education and medical services to the rural areas, which account for a larger proportion of the older population. Periodical campaigns for long COVID assessment and frailty screening (among non-COVID)—aimed to provide a balanced diet, exercise, and therapeutic and ancillary care—must be conducted to mitigate long COVID/frailty and associated complications. Further, standardizing the terminologies, definitions, and

treatment options pertinent to frailty and long COVID helps bolster the health and well-being of the rural elderly in this long COVID epoch.

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