

Long Term Care, Frailty and SARS-COV-2 Infection: A Framework of Situation

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Received: March 03, 2021; **Published:** March 22, 2021

Frailty is an indicator of older adults' health and functional issues, and it makes them more prone to adverse health outcomes. During COVID-19, some studies address the individual's relationship to their families and caregivers, organizations, societies, and specific policy decisions in the vulnerability of older adults [1-3]. This weakness can be seen in the following examples: a) visitor limits have limited communication possibilities for families and caregivers; b) people residing in rural quarters and insufficient staffing services lead to residents' insecurity at the administrative level; c) on a local level, staff contact with residents, significantly in relation of transportation, may increase the risk of contracting the virus. COVID-19 is a virus that infects humans; d) on a more general level, support for services and monitoring obstacles exist, i.e. testing barriers can lead to a reduction in incidence and mortality due to COVID-19 being identified [4,5].

Prior research has shown that the clinical frailty scale (CFS) should be used to distinguish discrepancies in state of health and conditions, vaccine efficacy (as seen during influenza), and unusual disease manifestation in underdiagnosed situations (as shown in the long term care facilities infections) [6,7].

Use of such biomarkers in evaluating clinical symptoms in COVID-19 elderly people is discussed in several studies. A quest is ongoing to identify biomarkers and immune system measures in terms of understanding why older people' immune responses benefit (or hinder) their ability to combat disease. Biomarkers for inflammation, systemic inflammation, mitochondrial and induction of apoptosis function, calcium homeostasis, fibrosis, muscle activity, sarcopenia, bone/hormone metabolism, and nutritional status are among them [8,9]. Using influenza as an example, although it is well documented that traditional influenza vaccines do not provide sufficient protection for elderly people, it is less well documented that frailty is a significant indicator of vaccine efficacy against influenza-related hospital admission [10]. Nevertheless, there have been few research examining the relationship among frailty and immune biomarkers of vaccination programs, influenza disease [11,12], or other respiratory diseases like COVID-19 [13]. Infectious diseases such as SARS-CoV-1, pandemic influenza (H1N1), and COVID-19 have produced vital insights to disease intensity by measuring cytokine levels in the plasma or serum [14]. IL-6 levels are often used to select patients with IL-6 receptor blockers [15]. High concentrations of IL-6 are a biomarker for dangerous infections in influenza and COVID-19, and IL-6 levels have been used to select patients with IL-6 receptor blockers [15].

The importance in biomarkers stems from the fact that 1) biomarkers, in combination with physical examination, could be beneficial in recognizing people at high risk for serious COVID-19 infection, 2) biomarkers could be used to identifying patients into care groups and 3) biomarkers may disclose valuable details about the pathways of serious illness. Then it is also unclear why frailty impacts disease appearance and recovery, it's also unclear if healthy people and older vulnerable long term care facilities residents would have specific immune systems. As a result, it is important that elderly fragile individuals be used in the research so that results from healthy individuals are not extended to the elderly, frailer, and more at-risk population.

There are, moreover, few research investigating the relationship between frailty and biomarkers and the seriousness of disease in older adults. Biomarkers can be useful in recognizing these high-risk people, grouping patients into care groups and providing more information on the causes of dangerous infections.

Monitoring and additional studies on fragile residents could also provide information into how COVID-19 impacts high-risk and vulnerable people, allowing for improved COVID-19 public health interventions.

Disclosure Statement

The author declare that there are no conflicts of interest.

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Volume 4 Issue 4 April 2021

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