

Impact COVID-19 Infection and Persistent Lingering Symptoms on Patient Reported Indicators of Nutritional Risk and Malnutrition

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Objectives: This study investigated the impact of COVID-19 infection and its persistent lingering symptoms on known risk factors for malnutrition.

Methods: Patients with confirmed history of COVID infection and persistent symptoms were referred to the Post-COVID Recovery Clinic. Standardized telehealth screening included: Patient Generated Subjective Global Assessment (PG-SGA), Shortness of Breath (SOBQ), Patient Health Questionnaire (PHQ9), CDC 18 common symptom COVID, Generalized Anxiety Disorder (GAD7), and (Instrumental) Activities of Daily Living (I)ADL.

Results: Eighty-six patients were evaluated in the first 2.5 months. Average age was 52 years (23–90), 67% were female, and 58% Caucasian. COVID+ test to clinic visit was 49 days (14–140). Forty eight percent did not require hospitalization, 62% were obese, and 73% had ≥ 1 comorbidity. At infection onset, 80% complained of GI symptoms

(75% loss of taste, 61% loss of smell, 59% diarrhea, 57% nausea). At the telehealth visit, 51% reported lingering GI symptoms (45% taste, 41% smell, 41% diarrhea, 36% nausea). Other common symptoms were: dyspnea on exertion, chronic fatigue, cough, and weakness. Survivors required referrals for the following specialty services: 84% pulmonary, 77% physical/occupational therapy, 73% behavioral health, and 51% registered dietitian consult. Average PG-SGA score was 5.7 ± 5.02 with sub-scores: weight 1.37 ± 1.65 , food 0.58 ± 0.64 , symptoms 2.19 ± 3.30 , activities/function 1.59 ± 0.93 . Preliminary analysis of 2-day 24h dietary recalls of a subset of clinic patients ($n = 33$) found $>50\%$ of COVID survivors failed to meet basic dietary recommendations. Daily caloric intake was low, protein intake was below 0.8 g/kg, and the daily distribution of protein skewed towards a single meal.

Conclusions: We found that the clinical symptoms experienced by COVID survivors, particularly fatigue, dyspnea, and eating difficulties (nausea, vomiting, changes in smell and taste, trouble breathing) created difficulties in maintaining an adequate nutritional intake. This is concerning because malnutrition, specifically inadequate protein, leads to weaker immune function, slower recovery from illness, and loss of lean body mass.

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