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Post-Discharge Persistent Symptoms and Health-Related Quality of Life after Hospitalization for COVID-19

E Garrigues, Y Nguyen et al.

Of n=120 hospitalized patients, after mean 110 days following discharge:

- 55% with fatigue
- 42% with dyspnea
- 34% with memory loss

No significant differences in persistent symptoms between ward and ICU patients

COVID-19: Persistent Symptoms And Health-related Quality of Life¹

A Multi-Organ, Multi-System Clinical Presentation 120 patients (mean = 111 days after admission for COVID-19)

Persistent symptoms

- Fatigue 55%*
- Difficulty breathing 42%*
- Memory loss 34%
- Sleep disorder 32%*
- Attention disorder 27%
- Significant hair loss 20%
- Cough 17%*
- Loss of smell 13%
- Chest pain 11%*
- Loss of taste 11%



Professional and physical activities

- Not yet resumed to sports (engaged regularly pre-COVID) 28%*
- Slower walking 29%*
- Not yet returned to work (worked pre-COVID) 32%*

*Asterisk denotes symptoms of relevance to HLBS systems

¹Letter to the Editor, Journal of Infection, **Post-discharge persistent symptoms and health-related quality of life after hospitalization for COVID-19,** Eve Garrigues et al. https://doi.org/10.1016/j.jinf.2020.08.029



Centers for Disease Control and Prevention CDC 24/7: Saving Lives, Protecting People™

July 31, 2020

Morbidity and Mortality Weekly Report (MMWR)

Symptom Duration and Risk Factors for Delayed Return to Usual Health Among Outpatients with COVID-19 in a Multistate Health Care Systems Network — United States, March–June 2020

MW Tenforde, LR Feldstein et al. for the IVY Network Investigators and CDC COVID-19 Response Team

Among symptomatic outpatients with positive test for SARS-CoV-2, 35% not returned to baseline health 2-3 weeks after testing

- Older age and comorbidities associated with lack of return to baseline health
- 19% of young adults (19-34) with no comorbidities had not returned to baseline health

What is known about long term COVID-19 effects on the nervous system

- The perception of "Fatigue" is the most common:
 - 57% of <u>hospitalized</u> patients in Italian & 39% in British study (12 wks), 97% of the 35% with persistent symptoms in CDC outpt study (2-3 wks)
- Headache in 61% of the symptomatic persons in CDC study of outpatients (2-3 weeks post + test), 2% in British study 12 wks post admission
- Insomnia in 26% in British post hospital study
- Loss of smell and taste
- Pain syndromes- chest, abdomen, muscles in CDC and British studies.
- Difficulty with **concentration**, labeled in media "**brain fog**" is exceedingly common and usually associated with fatigue.

Not yet reported in published studies, but medical staff report cases of **Anxiety (PTSD) & Depression.**

In contrast 90% of outpatients with influenza recover within 2 weeks of + test.



CDC study of symptom-duration in outpatients

* 294 patients responded to 14–21-day interview, dd not report a previous positive SARS-CoV-2 test before the reference test, and answered questions about symptoms; 276 (94%) of these reported one or more symptoms at the time of SARS-CoV-2 RT-PCR testing; those who were interviewed at 7 days were excluded, with 274 included here. † Patients were randomly sampled from 14 academic health care systems in 13 states.

Long-Term Effects of Covid-19 Infection

ileum heart liver nasal lung eye SARS-CoV-2 Potential target cell ... P.M. endothelial AT2 TMPRSS2 fibroblast pericyte ACE2 goblet/ basal/ ciliated epithelial cholangiocytes secretory/ basal/ myocyte corneal epithelium multiciliated enterocytes prostate & testis Internalisation bladder brain kidney placenta pancreas SARS-CoV-2 activation . . CTSL ---pericvte fibroblast Endosome epithelial proximal tubule ductal epithelium epithelial fibroblast oligodendrocyte

COVID-19 Affects Multiple Organs

The Scientist, April 2020