

# Study finds 64 percent higher risk of dementia among elderly hospitalized COVID-19 patients

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A new study has found that COVID-19 is associated with new-onset cognitive impairment that persists beyond the infection, as well as a higher risk of dementia among elderly hospitalized patients. The study was a review and meta-analysis of 18 previously published studies. There were significant differences in methodology and measures reported among the studies, but the researchers nevertheless were able to pool results to generate several new findings.

The researchers found that people 65 years old and older with COVID-19 acquired new diagnoses of dementia at 1.64 times the rate of uninfected controls for the 12 months following infection. These results were based on data from over 800,000 patients, half of whom were controls who did not have COVID-19. The risk of dementia was highest for females, African Americans, and people over the age of 85.

The researchers pooled the results of seven studies that used the Montreal Cognitive Assessment (MoCA) to measure cognitive function. In these studies, 98 percent of patients were hospitalized for COVID-19 and over 99 percent had no dementia diagnosis prior to their COVID-19 diagnosis.

The researchers found a mean MoCA score of 23.34 (95 percent confidence interval 22.24 – 24.43) across seven studies included in their meta-analysis, where a score of 26 to 30 indicates normal cognitive performance. Excluding one study that reported median vs. mean MoCA score did not change the results, nor did excluding two studies that included patients with neurological symptoms during the COVID-19 infection (the others specifically excluded such patients). This means that the result was not biased by certain studies that differed in significant ways from the others.

The researchers also analyzed MoCA scores according to time since COVID-19 diagnosis. The mean MoCA score less than 3 months after COVID-19 diagnosis was 22.32 (95 percent confidence interval 20.60 – 24.04), whereas the mean MoCA score 3 months or more after COVID-19 was 24.19 (95 percent confidence interval 23.58 – 24.80). In both cases, there was cognitive impairment because the upper end of the 95 percent confidence interval was below the normal score of 26 or higher.

Across 8 studies that reported the proportion of post-COVID patients who developed cognitive impairment, the overall proportion was 65 percent (95 percent confidence interval 44 percent - 81 percent). This result means that of all patients aged 65 and older, and who did not have a dementia diagnosis prior to hospitalization with COVID-19, 65 percent developed cognitive impairment associated with their COVID-19. A similar sensitivity analysis either did not change this result or actually *increased* the proportion with cognitive impairment.

The proportion of post-COVID patients with cognitive impairment measured within 3 months vs. after 3 months of the COVID-19 diagnosis was 85 percent (95 percent confidence interval 67 percent to 94 percent) vs. 49 percent (95 percent confidence interval 31 percent - 68 percent), respectively. Two studies measured MoCA scores in patients without COVID-19 with an average score of 26.

Two studies measured longitudinal change in patients' MoCA scores, showing that cognitive function significantly improved between the first (T1) and second (T2) measurement. The average T1 score was 19.1; the average T2 score was 23.4. Notably the

T2 score remained below the threshold 26.

Most of these studies reported results on adults aged 65 years old and older, and thus the findings apply primarily to the elderly. The MoCA score results were from hospitalized patients, suggesting more severe COVID-19 disease. Also, many of the studies included results from prior to availability of the vaccine, and no studies reported or broke down their results by vaccination studies.

All these factors limit the generalizability of the results. It is therefore hard to extrapolate the results to the general population.

Nevertheless, some conclusions may be drawn. First, the age group most likely to be hospitalized with COVID-19 and that accounts for approximately 60 percent of all hospitalizations with COVID-19 in the United States is 65 years and older. Second, the overwhelming majority of hospitalized individuals have not been vaccinated. One study found that between January and August 2023, of all individuals over the age of 65 who were hospitalized with COVID-19, only 23.5 percent had received the recommended vaccine schedule.

The net effect is that although hospitalizations for COVID-19 have been declining, they still overwhelmingly occur in unvaccinated individuals over the age of 65. Thus, the results presented in this new study are still highly concerning.

Also, given that the burden of cognitive disability or dementia in the elderly was already high prior to the pandemic, the implications of the study are staggering. In the United States in 2019, cognitive disability was the second most common type of disability. Worldwide in 2019, the World Health Organization reported that dementia is one of the top ten causes of disability in people aged 60 and older.

The same World Health Organization report cited a global cost of dementia of \$1.3 trillion with a projected rise to \$2.8 trillion in 2030. That projection of course was prior to the COVID-19 pandemic and based on global trends in dementia onset and increases in the cost of healthcare that existed at that time.

The ruling class through its criminal “let it rip” policy has added hundreds of thousands and likely millions of cases of dementia to this global toll during the course of the pandemic with their associated societal costs.



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