Dementia among overlooked conditions linked to high risk of severe COVID-19 in older people

May 13 2020

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A new analysis shows which certain pre-existing diseases may put older people at risk of developing more severe COVID-19, implying they may

need special treatments and more shielding.

A team based at the University of Exeter and the University of Connecticut in the U.S. found that older people with dementia were three times more likely to have severe COVID-19 than older people with no dementia. This may have been as a result of greater exposure to the virus, for example in nursing homes, or it may be caused by the dementia disease process itself.

The authors also found a higher risk of severe infection among people with pre-existing diagnoses of depression, chronic lung disease, diabetes, atrial fibrillation (causing an irregular heartbeat), or reduced kidney function increased risks by between 80% and 30%. The team found that heart disease and stroke were similarly common in people with and without COVID-19 after taking other background factors into account, suggesting these diseases are not especially risky.

The study, which is currently available in pre-print and us under journal review, focussed on common conditions in older people, so different risks might apply in younger groups, or groups with special health problems including those with impaired immune systems.

The team used results from 448 people aged 65 to 86 years old who tested positive for COVID-19 predominantly while in hospitals, at the peak of the epidemic in England. This COVID-19 positive group had taken part in the UK Biobank study, and the research team compared their health histories with data from more than 250,000 other older people in the study.

The researchers found that older men were at 80 percent higher risk than older women, and found that this was not due to men having more pre-existing diseases. The team found that black older people were more than three times more likely to be affected than white, after accounting

for the 15 pre-existing conditions they studied. Less socially privileged older people, identified through having no educational qualifications, were 70 percent more likely to test positive for COVID-19 than those with university degrees.

Professor David Melzer, who led the team, said: "These initial results suggest that some risky pre-existing diseases in older people may have been overlooked, especially dementia, depression, atrial fibrillation and pre-existing kidney disease. Our findings should help stimulate COVID-19 research on the special needs of older patients with these high-risk conditions. The findings may also have implications for how the current isolation of older people could be managed as the epidemic recedes. A more precision approach may be possible, given the different risks that different older people face."

Dr. Janice Atkins, Research Fellow and first author of the study, said: "Results of COVID-19 tests for UK Biobank participants are a valuable resource for researchers. Our initial analyses have shown that some specific pre-existing conditions are disproportionally common in older adults who develop severe COVID-19, which may have implications for policy makers during future phases of the outbreak."

Provided by University of Exeter