

## Letter to the Editor

# After the COVID-19 Pandemic: The Next Wave of Health Challenges for Older Adults

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The arrival of COVID-19 in the United States presents an unprecedented modern-day challenge for the research and medical communities. Much of the medical community is overwhelmed by the need to care for critically ill patients amid shortages in supplies and personal protective equipment. The research community is scrambling to identify effective treatment(s) and/or vaccines to flatten, or potentially stop, the epidemic curve.

In lieu of an effective treatment or vaccine, “social distancing” has become one of the primary means of prevention (1). This public health measure, which is necessary to save lives and preserve the health care system in the near term, may inadvertently induce lasting health effects with significant implications for older adults. The enactment of social distancing and lockdowns in certain regions has necessitated cancelling routine medical care, screening visits, and elective surgeries. Moreover, older and/or at-risk persons with pre-existing conditions may be afraid to go outside due to fears of being unable to maintain the recommended six feet of distance between themselves and others, or of contracting the virus from contact with surfaces. Per the Feb 28th *Report of the WHO-China Joint Mission*, the death rate in confirmed and suspected cases of COVID-19 rises exponentially with age, escalating from 0.4% among those aged 40–49 years to 3.6% among those aged 60–69 years to 14.8% among those aged >80 years (2). Moreover, the death rate in those with pre-existing conditions ranges from 6.0% for those with hypertension to 7.3% for those with diabetes to 10.5% for those with cardiovascular disease (2). Given these stark prognoses, social distancing remains the primary defense weapon of choice in the short-term. Nevertheless, the duration of these public health interventions remains unclear given the potential for recurrent outbreaks, leading to concerns about the longer-term health effects of social distancing, including:

1. *Reductions in physical activity and corresponding increases in sedentary behaviors* are anticipated as persons restrict their ac-

tivities to practice social distancing. Even though outdoor activities have been permitted and even promoted for physical exercise, those in more crowded urban areas, and those at greater health risk, may be reluctant to leave their homes for fear of contracting the virus. With the closure of cardiac rehab facilities, gyms and fitness studios, and most physical therapy facilities, engagement in daily physical activity will likely experience a steep decline. Such a decline may disproportionately affect older adults and those with comorbid conditions who remain indoors to defer risk. Moreover, even among healthy younger and middle-aged adults, restrictions in daily physical activity may fuel development of metabolic complications and subclinical disease.

2. *Increases in stress levels* due to perceived health risk, financial concerns, and uncertainty about the future could trigger alterations in sleep/wake cycles, prolonged low-grade inflammation, increased depressive symptoms, and greater fatigue burden (3–5). All of these risk factors have been linked to poor health outcomes in older adults and will likely outlast the immediate pandemic as the economy struggles to recover. Long-term exposure to such factors may affect health for months, or even years, postpandemic through inflammatory, hemostatic, and autonomic processes.
3. *Nutritional challenges* are likely due to a multitude of factors, including limited shopping hours, fear of going out even during “senior” or “at risk” hours, and long lines and potential unavailability of healthy foods as supermarkets struggle to keep up with demand. Greater consumption of processed, nonperishable foods which can be high in sodium and low in potassium may adversely affect blood pressure. Problems with both weight gain and weight loss are feasible under these scenarios, which may detrimentally affect health and both physical and cognitive functioning for months, or even years, to come.

4. *Limited access to routine health care and/or home care visits* may reduce risk of viral transmission but aggravate the onset and progression of chronic disease burden. Specifically, cancellation of screenings, routine clinic visits, and laboratory monitoring visits may lead to improper medication dosage or adherence and failure to recognize new or worsening disease statuses. As providers are reassigned or deployed to alleviate burdens on health care systems, cancellation of routine care visits may leave urgent care or emergency room visits as the only options for those in dire need of medical attention not related to COVID-19, at a time when hospitals need to attend to those left critically ill by the pandemic. Further, uncertainty about transmission risk may lead those in need of care to cancel home health care services, thus increasing the likelihood of improper medication management, self-care, and nutrition.

To combat these risks, telemedicine is a useful tool which allows providers to check-in with patients while minimizing exposure risk (6). In response to the COVID-19 situation, the Centers for Medicare & Medicaid Services and many large commercial health plans have expanded benefits for telemedicine visits as a means to encourage utilization in this time of need (7). Although this is an encouraging and necessary step, not all older patients may be amenable to telemedicine and providers need to be aware of the potential long-term impacts of the absence of direct patient contact, as well as the potential for a second wave of chronic health conditions fueled by the current pandemic.

In these uncertain times, research on remote monitoring of physical activity, sleep, anxiety/stress levels, nutrition, and access to care may help quantify the potential impact of COVID-19 on chronic health conditions and identify future intervention/treatment targets. Telemedicine and wearable technology provide a safer environment to conduct research with feasible protocols for remote collection. Also, such technology provides a platform for intervention work, including messaging services with reminders to take medications, wash hands for 20 seconds, stand and stretch, go for walks, meditate, and so forth. Perhaps more importantly, telemedicine and wearable technology can increase our knowledge about the potential side

effects of social distancing for older populations, informing future preparedness research and providing a more comprehensive understanding of ways to minimize the effects of future pandemics on long-term health in older adults.

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## Conflict of Interest

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