

## Letter to the Editor

## Assessing the Impact of the COVID-19 Pandemic and Accompanying Mitigation Efforts on Older Adults

**Peggy M. Cawthon, MPH, PHD,<sup>1,2,\*</sup> Eric S. Orwoll, MD,<sup>3</sup> Kristine E. Ensrud, MD,<sup>4,5</sup> Jane A. Cauley, DrPH,<sup>6,\*</sup> Stephen B. Kritchevsky, PhD,<sup>7,\*</sup> Steven R. Cummings, MD,<sup>8</sup> and Anne Newman, MD<sup>6</sup>**

<sup>1</sup>Research Institute, California Pacific Medical Center, San Francisco. <sup>2</sup>Department of Epidemiology and Biostatistics, University of California, San Francisco. <sup>3</sup>Department of Medicine, Oregon Health and Sciences University, Portland. <sup>4</sup>Center for Chronic Disease Outcomes Research, Minneapolis VA Health Care System, Minnesota. <sup>5</sup>Division of Epidemiology and Community Health, University of Minnesota, Minneapolis. <sup>6</sup>Department of Medicine, University of Minnesota, Minneapolis. <sup>7</sup>Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pennsylvania. <sup>8</sup>Sticht Center for Healthy Aging and Alzheimer's Prevention Wake Forest School of Medicine, Winston-Salem, North Carolina.

\*Address correspondence to: Peggy Cawthon, MPH, PHD, 550 16th Street, San Francisco, CA 94143. E-mail: [pcawthon@sfcc-cpmc.net](mailto:pcawthon@sfcc-cpmc.net)

Dear Editor,

The ongoing COVID-19 pandemic is having a profound effect on every aspect of daily life worldwide. Many communities are following social and physical distancing rules to mitigate the spread of the virus. Older adults are particularly susceptible to severe disease and death (1). The impact on research studies, especially studies that involve older adults, is considerable (2).

Given the very recent emergence of COVID-19 disease, its sequelae are not well described. Among those who become infected, observational studies will be uniquely able to describe the before-and after-condition of participants in numerous physiological, behavioral, physical, cognitive, and mental health components. Such information would help guide the continued clinical management that may be required for those who recover from acute disease. In addition, observational studies will also be able to describe the effects of the social distancing rules on the health and well-being of participants. Given the variations in the timing and strictness of these rules across the United States and worldwide, these data could help inform which aspects of social distancing may have particularly detrimental (or perhaps surprisingly beneficial) effects on older adults.

To our knowledge, no tools for the assessment of the impact of the COVID-19 pandemic and accompanying social distancing rules on daily life in older adults currently exist. We have developed a short questionnaire for older adults (Table 1). We plan to administer this questionnaire to participants in the Osteoporotic Fractures in Men Study (MrOS, aged ≥85 years) (3) and the Study of Muscle Mobility and Aging (SOMMA, aged ≥70 years). Both studies have paused in-person assessments; so, study staff will instead administer the questionnaire by phone or by mail. An added benefit of administration of this questionnaire is that study staff can continue

productive research work and meaningful engagement with study participants to maximize retention, while working from home to abide by social distancing rules.

The questionnaire includes items about actions people have taken during this time, including those related to social distancing (such as limiting contact with others) as well as positive actions in response to the crisis (such as offering help to others). We suggest that questions about living situation, including whether someone lives alone or with others, and the type of residence (assisted living, nursing home, senior complex, private home, or apartment) also be included, as the impact of social distancing rules may vary on type of residence. The questionnaire is reasonably short, and includes the three item loneliness scale (4). We also note that participant reports of much difficulty or inability to obtain food or medicine would prompt staff to seek an intervention or notify their health care provider or next of kin (as this information is already on file for study participants).

We ask about diagnosis of COVID-19 and self-report of symptoms. Other questionnaires and smartphone apps have been developed to track and monitor symptoms of COVID-19 (5); however, that is not the goal of the present questionnaire. We acknowledge that collection of medical records for hospitalized events and/or serological evidence of infection will be needed to formally adjudicate cases and details about treatment. We do not ask about intubation and ventilation for several reasons. First, those responding to this questionnaire during the early phase of the pandemic are unlikely to have recovered from intubation/ventilation sufficiently to answer questions from study staff. Second, self-reported information about intubation/ventilation may be inaccurate; we recommend collection and adjudication of medical records to collect such data.

**Table 1.** Questionnaire for Assessing the Impact of the COVID-19 Pandemic on Older Adults (QAICPOA)

Question	Responses
1. How concerned are you about the COVID-19 pandemic?	Not at all, somewhat concerned, very concerned
2. Have you been diagnosed with COVID-19 by a doctor or other health care provider?	Yes, no, I'm not sure
2a. If yes, were you hospitalized?	Yes, no, I'm not sure
2a.i. If yes, How many days were you in the hospital?	_____days
2b. If yes, What symptoms did you have? (mark all that apply)	Fever, cough, shortness of breath, diarrhea, vomiting, temporary loss of smell, I had none of these symptoms
2c. If no, Have you had any of the following symptoms since the beginning of 2020? (mark all that apply)	Fever, cough, shortness of breath, diarrhea, vomiting, temporary loss of smell, I had none of these symptoms
2d. If no, were any of the above symptoms due to a condition or disease other than COVID-19?	Yes, no, I'm not sure, I didn't have any symptoms
3. Has a close friend or family member been diagnosed with COVID-19?	Yes, no, I'm not sure
4. Which of the following have you done in the last several days to keep yourself safe from coronavirus (in addition to what you normally do)? (mark all that apply)	<ul style="list-style-type: none"> <li>• Cancelled a doctor's (or other health care) appointment</li> <li>• Visited a doctor (or other health care provider) in person</li> <li>• Had a "telehealth visit" with a doctor or other health care provider</li> <li>• Worn a face mask</li> <li>• Washed/Sanitized hands</li> <li>• Worked or studied at home</li> <li>• Cancelled/postponed work or school activities</li> <li>• Stockpiled food/Water</li> <li>• Prayed</li> <li>• Avoided public places/crowds</li> <li>• Avoided in-person contact with high-risk people</li> <li>• Avoided in-person contact with friends or family</li> <li>• Isolation from other person(s) who lives with me</li> <li>• Cancelled/postponed travel</li> <li>• I am not taking any of these steps</li> <li>• Getting food or medicine for neighbors</li> <li>• Donating blood</li> <li>• Donating money</li> <li>• Contacting friends or family to keep in touch</li> <li>• Providing childcare</li> <li>• Other: _____</li> <li>• I am not taking any new actions</li> </ul>
5. Which of the following new actions are you taking to help your family, friends or your community respond to the COVID -19 pandemic and social distancing rules?	<ul style="list-style-type: none"> <li>• I communicate with them more often than before, I communicate with them about the same as before, I communicate with them less often than before</li> <li>• Speaking in person, with phone calls, with video calls, by email, by social media, by postal mail, by texting, other: _____, none of the above</li> <li>• Daily, several times per week, once per week, 1–2 times per month, rarely or never</li> <li>• Yes, no, I'm not sure</li> </ul>
6. Compared to the months before the outbreak began, how has the frequency of your communication with close friends and family changed?	
7. How are you continuing to stay in touch with others? (mark all that apply)	
8. How often are you communicating with others?	
9. Before any social distancing rules went into place, did you have regular contact with young children (elementary school age or younger)?	
9a. If yes, how often would you see young children?	Daily, several times per week, once per week, 1–2 times per month
10. How much has your sleep been interrupted or disturbed because of concern about the outbreak?	Not at all, somewhat, a lot
11. Who is providing you with social support during the outbreak? (mark all that apply)	Someone I live with, friend or family who comes by my place, friend or family who I talk with on the phone (or video chat), other: _____, I do not have support
12. How much difficulty do you have obtaining the food that you need because of the COVID-19 pandemic or social distancing rules?	None, some, much, unable or very difficult
13. How much difficulty do you have obtaining the medicine that you need because of the COVID-19 pandemic or social distancing rules?	None, some, much, unable or very difficult
14. How much difficulty do you have with getting routine medical care that you need because of the COVID-19 pandemic or social distancing rules?	None, some, much, unable or very difficult
15. How often do you feel that you lack companionship?	Hardly ever, some of the time, often
16. How often do you feel left out?	Hardly ever, some of the time, often
17. How often do you feel isolated from others?	Hardly ever, some of the time, often

We did not include questions about the impact of the pandemic on employment or finances given the advanced age of participants in our studies; such information may be valuable in studies of the younger old. We have limited information on the finances of our participants. Studies with more detailed information about the financial status of participants before the outbreak began would be better suited to address the impact of potential economic strain on health and well-being. Such studies should consider additional questions about financial strain related to the COVID-19 pandemic.

Depending on the duration of the pandemic and social distancing measures, we envision that this questionnaire could be repeated at regular intervals to capture changing impacts of the disease and mitigation strategies. We acknowledge that this questionnaire may not be ideal and welcome suggestions for improvement.

We are sharing this questionnaire with the research community, and hope that a diverse set of other studies will utilize it to increase knowledge about the effects of COVID-19 disease and the efforts to mitigate its spread. A formatted version of the questionnaire, a phone script, sample cover letter, and annotated version of the questionnaire are available at [qaicpoa.com](http://qaicpoa.com). Widespread use of a single instrument will ease data sharing and harmonization in future work. We encourage studies to administer this questionnaire while also gathering other pertinent information that may be particularly useful to understand the impact of the pandemic and social distancing on the particular disease or condition being studied. For example, in SOMMA, we will administer this questionnaire along with the already scheduled 6-month follow-up phone questionnaire about mobility and study outcomes.

This is a challenging time. Collecting data about the impact of COVID-19 disease and migration efforts may provide insights about the condition and ongoing management of those who have recovered, the impact of mitigation strategies on the health and well-being of older adults, and may inform responses to future pandemics.

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