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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

Appendix S1. Supplementary Text S1. Details of the SARS-CoV-2 RT-PCR test on nasopharyngeal swab.

Figure S1. Graphical representation of temporal patterns of viral shedding The attached graphs represent the smoothing curves of the delay: X = Days since symptom onset, Y = RT-PCR Cycle threshold (Ct) value. Comparison of RT-PCR initial Ct value and death at 1 month and comparison of a persistently RT-PCR positive test at 1 month and the Charlson Comorbidity Index were performed using the Mann–Whitney Wilcoxon Test. Oddsratio (OR), is the multiplication of the risk that PCR is positive at 1 month when the Charlson Index increases by 1.

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Medical students' motivations to help older adults during the COVID-19 pandemic

INTRODUCTION

Across the globe, the Coronavirus disease 2019 (COVID-19) pandemic continues to disproportionately impact the older population. Adults aged 65 years and older are at a greater risk of contracting the virus due to close living quarters in long-term care facilities, a less robust immune system, and a systemic unawareness of their unique health needs. Ironically, the continued social distancing mandate may present as a risk factor for poorer mental and physical health outcomes among older adults. 44

The pandemic has also impacted the medical student experience. Clinical rotations were halted abruptly, leaving students with limited patient interaction during a time when exposure to patients is critical for their personal and professional development. Social distancing guidelines have placed both the older population and medical students in an unusual and troubling position. The pandemic has elucidated an unaddressed problem with respect to socially isolated older adults, simultaneously leaving medical students willing and able to assist without knowing how to help.

Our initiative at Rutgers Robert Wood Johnson Medical School (RWJMS), "Caring Companions" (CC), connected medical students with older patients in the Rutgers RWJMS General Internal Medicine practice. The CC pilot was created at the onset of the pandemic and recruited medical students to volunteer and make weekly telephone calls to patients. Telephone initiatives such as CC represent cost-effective and easily

implementable solutions to ameliorate the consequences of isolation in the older population, simultaneously providing medical students quality experiences through engagement with persons aged 65 years and older. Other medical schools have also recognized this opportunity and created similar telephone initiatives to connect medical students to older adults. ⁷⁻⁹ Although prior research on medical student telephone initiatives with older adults during the pandemic has examined benefits to both students and older adults, little is known about why students choose to volunteer with older adults. We examine student motivations to provide medical schools with insight on how to engage student volunteers with the older population during and after the COVID-19 pandemic.

METHODS

An email was sent to Rutgers RWJMS students seeking volunteers for the CC initiative at the onset of the pandemic in April, 2020. Interested students completed a questionnaire indicating their year in school, professional interest, and motivation to participate in CC. Seventy-one students signed up to volunteer (39% 1st year, 11% 2nd year, 29% 3rd year, and 21% 4th year). Students' open-ended responses were deidentified and classified using the six functional motivations for volunteering detailed in the Volunteer Functions Inventory¹⁰: Values, Understanding, Enhancement, Protective, Career, and Social.

RESULTS

A total of 100 statements (39% of students gave multiple reasons) were coded and reported. The main motivations for participation (62% of responses) were classified as "Value-based" reasons, including concerns for the older population and compassion toward their isolation during social distancing mandates. Of the responses, 17% were related to "Understanding," with many students wanting to learn about older adults through practicing communication skills. Interestingly, 17% also reported motivations concerning "enhancement" and "protective" aspects of the self, including feeling needed or having a purpose. Only 4% reported wanting to gain experience that could help in their "Career." None of the participants reported "Social" motivators. Further examination of the "Values" category revealed subthemes of meeting the mental health needs of older adults or familial experience (e.g., losing a family

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TABLE 1 Percentage of coded responses and student quotes for each Volunteer Functions Inventory (VFI) ¹⁰ factor ($n = 100$)	
VFI ¹⁰ factors and sample student quotes	% of responses $(n = 100)$
Values: Concern and compassion for older adults facing isolation. "I just want to be there for the patients. My grandmother was just placed on hospice because of COVID. We couldn't be there. We couldn't even have a conversation with her before she deteriorated so bad she couldn't speak. That should never happen. No one should ever have to go through something like this alone." "I recognize how lonely the quarantine can get even when you are with your whole family. I want to use this opportunity to have some impact through the pandemic and be able to provide company to those who need it the most!"	62%
"I want to ensure the at risk don't suffer as much from isolation." "Helping someone feel less alone. My fiancée's grandpa just passed from COVID-19 and we know our check ins with him helped lift his spirits."	3
Understanding: Desire to practice communication with older adults. "I believe that this experience will inform me a lot about holistic patient care. As a future medical professional, I understand that taking care of patients includes their emotional and mental wellbeing." "Just better empathy for patients/elderly experiences." "Learning how to connect with and comfort patients in a time of global anxiety." "Knowledge on how the geriatric patients are dealing with this pandemic, learn more about what worries them what their wishes are. I hope to also be able to develop a longitudinal relationship with my assigned patient."	,
Enhancement: A way to help the ego grow and develop. "One of my favorite things about M3 year is getting to interact with patients, which honestly often boosted my selfesteem. Due to the pandemic, I have missed these experiences, and this has led to personal dissatisfaction. I hope this experience allows me to regain the feeling of doing something meaningful in the lives of patients." "The feeling that I was able to contribute to this crisis in some way." "Make someone feel less anxious and lonely, and know that I made a small difference."	17%
Protective: A way of protecting the ego from the difficulties of life. "During this pandemic, I have felt a distraught and powerless because I am not yet able to help clinically. I want to do what I can to help the community, especially members who are most vulnerable." "Since I am unable to offer any assistance within the health care setting during this pandemic, I am trying to find other ways I can help others during this sensitive time. I know a lot of people are struggling with uncertainty, anxiety and even boredom right now (as am I) and I would like to help alleviate some of that burden in any way I can. I think this would be a great opportunity for myself to do something to help, and would also gain emotional support by having someone new to talk to myself." "I feel so unable to help during this pandemic when so many others are making more sacrifices than me." "I am looking for some more social connection during this time—I find that I am having trouble feeling useful and hearing about this opportunity gave me hope that I can still contribute while feeling "stuck" in my medical education and life. Ideally I'll make a friend in the nearby community!"	17%
Career: Gain experience to help as a future physician. "Considering Internal Medicine/Geriatrics as a career—hope to learn more about the geriatric patients and their needs (outside of medical needs) and hope to help during a hard/scary time." "I hope to improve my bedside manner and develop new ways to express empathy to my patients." "I will be pursuing Physical Medicine and Rehabilitation where a large portion of our patient population is geriatric, so this will help me refine my skills in providing comfort and building rapport with this population."	4%
Social: Volunteering because others think it is important.	0%

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member). Table 1 depicts the types of student responses coded as each factor. Students also reported a total of 17 different professional interests, including 20% for internal medicine, 13% for pediatrics, and 20% undecided.

DISCUSSION

Our findings indicated that medical students across all 4 years of their curricula, with a wide variety of professional interests, were mostly motivated by their values to help isolated older adults during the COVID-19 pandemic. Most respondents shared at least one reason stemming from their values (vs other motives, such as career). A closer examination of the Values category revealed that the emergent need caused by the pandemic and the recognition that older adults are at a high risk of mental health issues were important factors to our volunteers. Seeing family or friends who were older adults who had suffered already was also an important subtheme.

This information will serve medical schools to better understand how to engage their student body to bridge the gap in exposure with older adults, simultaneously providing medical students with opportunities to foster their professional identity through important service-learning activities. Medical students' experiences with older patients, combined with their evident application of values to these interactions, can enrich their perceptions of an important patient population that many students will ultimately spend their futures caring for.

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CONFLICT OF INTEREST

The authors have no conflicts.

AUTHOR CONTRIBUTIONS

Study concept and design: Erin P. McDonnell, Corinne R. Corbett, Rebecca S. Berger, Kristen M. Coppola, Zahava Nilly Brodt-Ciner; acquisition of data: Erin P. McDonnell, Corinne R. Corbett, Rebecca S. Berger, Zahava Nilly Brodt-Ciner; analysis and interpretation of data: Erin P. McDonnell and Kristen M. Coppola; preparation of manuscript: Erin P. McDonnell, Corinne R. Corbett, Rebecca S. Berger, Kristen M. Coppola, Zahava Nilly Brodt-Ciner.

SPONSOR'S ROLE

None.

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Comment on: "Advance" care planning reenvisioned

INTRODUCTION

The COVID-19 pandemic has brought into sharp focus the challenges, fragility, and uncertainties of advance care planning (ACP) discussions with people living with life-limiting illnesses. ACP programs have been adapted to accommodate the pandemic (e.g., "Serious Illness Conversation guide" and "Vital Talk"*) and underscore the importance of timely ACP for COVID-19 patient management. If conducted well, ACP discussions facilitate a holistic, collaborative, and person/family-centric approach to addressing wishes and preferences before the onset of rapid illness deterioration. In the context of COVID-19, however, there has been concern that focus on process goals (e.g., completion rates of ACP), a conflation of ACP with Do Not Attempt Cardiopulmonary Resuscitation decisions, and the general uncertainty that surrounds these discussions,2 have led to the anticipated benefits of ACP being questioned.

In her recent editorial "'Advance' care planning reenvisioned," Moody expressed similar concerns and makes the case for "reconsider[ing] whether current approaches to ACP are realistic for most individuals" and their family because "in life, it is rare for people to make decisions far in advance of an event, yet in medicine, we ask patients to do just that." The reenvisioning Moody proposes calls for the adoption of "adaptive care planning"; a responsive and flexible approach that takes into consideration the dynamism of illness and clinical practice in which what "ultimately matters most are decisions made in the moment(s) in response to unfolding clinical events."

We provide further reflections on what "adaptive care planning" may look like by (i) outlining a hybrid approach to ACP; and (ii) proposing a theoretical framework to accompany the implementation of this approach.

A HYBRID APPROACH: REALISTIC DECISION-MAKING IN THE MOMENT AND PREPARING FOR THE "NEAR" FUTURE

We support Moody's sentiment on the importance of being able to make adaptive, in-the-moment decisions.

Indeed, the value of this is supported by recent evidence in frail older people⁴ and individuals with multiple sclerosis⁵ in which the difficulties, instability, and (sometimes) perceived irrelevance of making future decisions based on incomplete information or hypothetical decisions have been highlighted.

A hybrid approach, however, embraces ACP as a multicomponent process and resists the false dichotomy of seeing ACP as either decisions made in the moment, or decisions made for the future. Rather, we contend that the virtues of Moody's approach may be combined with approaches to ACP whereby opportunities are given to plan for the near future. One benefit of allowing the opportunity to plan for the near future is that it allows health professionals to maintain the trust of patients and their families by engaging in, and regularly reviewing, parallel care plans in which two sets of ACP are made; one for stability or improvement, and another for deterioration.⁶

The coalescence of these types of ACP may mutually enrich one another, enhancing person/family-centric communication in ways that prepare all involved for making difficult decisions in the near future, whilst maintaining the flexibility for adaptive and responsive decisions to be made "in the moment."

A SOCIOECOLOGICAL APPROACH TO IMPLEMENTATION

Effectively implementing high-quality ACP, however, requires an understanding of how ACP conversations can be brought to occur in a systematic, skilled, and consistent manner by (and across) services. This requires serious consideration of the multiple "wrap-around" preconditions that underpin implementing holistic, multicomponent, and person/family-centric ACP. We believe that the best way of understanding these is through a socioecological "lens" in which a "whole systems strategic approach" is adopted.⁷

This approach appreciates that there exist multiple, interconnected elements that reside at different societal and organizational levels of influence (e.g., individual, interpersonal, organizations, systems, and cultural) that are necessary to consider before, during, and after