A student-led telephone-based clinical learning program for outreach to older adults

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INTRODUCTION

The COVID-19 pandemic has exacerbated social and healthcare inequities for older adults by increasing social isolation, worsening food or resource insecurity, and decreasing access to medical care.\(^1\) Despite a rapid adoption of video-based telehealth during the pandemic, a 2021 survey of adults ages 65 or older found that 39% did not own a smartphone, while 36% did not have home broadband.\(^2\) Telephone-based outreach is an effective and accessible alternative form of telehealth for health-related interventions in this group.\(^3\)

However, incorporation of telehealth into undergraduate medical curricula remains limited, with students receiving variable training in telehealth communication skills and opportunities for direct telehealth encounters across institutions.\(^4\) Here, we describe a student-led telephone-based clinical learning pilot program for medical and nurse practitioner (NP) students in response to the increasing needs of older adults during the COVID-19 pandemic. Goals of this pilot were to support community-dwelling older adults by addressing barriers to healthcare delivery, and to promote the development of health professions students’ communication and health coaching skills.

METHODS

To design this program, we collaborated with an academic geriatrics primary care clinic that serves community-dwelling adults ages 70 and above. The learning objectives were to (1) identify and address unmet needs in a geriatric patient population through collaboration with an interprofessional team; (2) apply health coaching skills (e.g., relationship-centered communication, teach-back methods from motivational interviewing), which had been previously introduced in the first-year institutional curriculum, in a telehealth setting; and (3) identify and address common communication barriers (e.g., sensory or cognitive impairment, language barriers) among older adults. To meet these objectives, we utilized principles from workplace learning, in which students learn through active participation and collaboration in patient care. These principles included peripheral participation, socio-cultural learning, scaffolding, and reflection. Learning activities were incorporated to correspond with each principle (Table S1).

We developed three call types: screening calls, social calls, and telehealth training calls. Screening calls assessed for healthcare concerns and unmet needs regarding food, medications, medical supplies, caregivers, access to...
telehealth, and social isolation. Students called patients based on patient risk of social isolation or unmet needs during the COVID-19 pandemic, as assessed by the clinic primary care physicians (PCPs). Risk stratification factors included limited caregiver support, mobility issues, limited English proficiency, and/or cognitive decline. Students identified needs using a standardized patient questionnaire (Table S2) and coordinated appropriate follow-up with an interprofessional clinical team through the electronic health record (EHR). Patients could choose to receive weekly semi-structured social calls from the same students for up to 13 weeks to help address social isolation, and/or telehealth training calls to practice using video communication software prior to upcoming telehealth appointments (Figure 1).

A geriatrics faculty lead provided oversight and guidance on the design and implementation of the program,
while five medical student liaisons led the implementation and oversaw daily program operations (Table S3). Medical and NP students participated as part of credited coursework or as volunteers for either 3 weeks (5 h/week) or 13 weeks (2 h/week).

Students completed an anonymous online survey for post-program evaluation. Knowledge and attitudes before versus after program participation were compared using Wilcoxon signed-rank tests. This study received an exemption from the University of California, San Francisco Institutional Review Board.

RESULTS

Twenty-three students participated in the program, including 5 (22%) pre-clerkship students, 16 (70%) clerkship students, and 2 (9%) NP students. Nine of the 16 clerkship students (56%) opted for academic credit while 7 (44%) participated on a volunteer basis.

Students placed telephone calls to 335 patients, including all 124 (100%) identified by PCPs as high-risk, and 211 of 835 (25%) non-high-risk patients. Of the patients called, students successfully spoke with 247 patients (74%) and assisted 25 of 28 patients (89%) who requested telehealth training, allowing 22 patients to complete a video-based telehealth appointment within two months of training. Students engaged 30 of 47 patients (64%) who desired social calls.

Twenty-one students (91%) completed the post-program survey. Most ($n = 18$, 86%) felt this program provided moderately or highly meaningful clinical exposure. Compared to before the program, students reported increased knowledge about vulnerabilities in the geriatric population and improved confidence in multiple skills, including collaborating with an interprofessional team to address patient needs (objective 1), navigating the EHR, and triaging patient health concerns (all $p < 0.01$). After participation, all students felt comfortable communicating with patients or caregivers by telephone (objective 2), with 20 (95%) expressing confidence in relationship-centered communication. The most frequently encountered communication barriers addressed (objective 3) were patient technological ability ($n = 16$, 70%), cognitive impairment ($n = 8$, 35%), language barriers ($n = 6$, 26%), and sensory impairment ($n = 6$, 26%). All students ($n = 21$, 100%) believed this program would be a beneficial pre-clerkship learning experience.

DISCUSSION

This program effectively provided health professions students with a structured opportunity to improve health communication skills while identifying and addressing social, technological, and healthcare barriers faced by older adults. While other telephone-based programs have been developed during the COVID-19 pandemic for older adults vulnerable to disruptions in routine care and social isolation, our program is distinct in creating three separate call types with individualized service and learning goals. During screening calls, students applied clinical knowledge to triage health concerns and medical or social work needs. With social calls, students practiced relationship-centered communication while building longitudinal relationships. In telehealth training calls, a unique facet of our program, students practiced health coaching skills, such as teach-back, with patients of varying technological literacy, helping older adults overcome structural barriers to accessing healthcare independently during the COVID-19 pandemic. Multiple students and PCPs remarked that calls not only improved patient isolation but also promoted re-establishment of care of multiple patients previously lost to follow-up.

This model of remote clinical learning could be adapted as a part of a pre-clerkship course on communication skills, a geriatrics elective for clerkship students, or a student-run extracurricular initiative to support community-dwelling older adults, especially those with barriers to in-person health services. Although similar tele- phone outreach programs have described improved learner outcomes in clerkship students, our program was distinct in including pre-clerkship students, who may particularly benefit from this telehealth opportunity to develop communication skills and gain early exposure to geriatrics. Primary limitations of our program were the reliance on self-directed learning and reflection, as well as an institutional policy restricting pre-clerkship students to “read-only” EHR use which limited direct interprofessional collaboration. Additionally, due to time limitations of the pilot, we were unable to pair all patients who expressed interest in social calls with students, particularly later in the program, and patients were notified accordingly. Future iterations of this program could incorporate structured didactics to improve learner outcomes and should consider the impact of institution-specific structural limitations on program operations.

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AUTHOR CONTRIBUTIONS

Arushi Gulati contributed to program design, data collection, and manuscript preparation. Pooja Lalchandani contributed to program design, data collection, and manuscript preparation. Isabella Auchus contributed to
program design, data collection, and manuscript preparation. Janice Grandi contributed to program design, data collection, and manuscript review, and editing. Elle Clelland contributed to program design, data collection, and manuscript review, and editing. Pei Chen contributed to program design, manuscript review, and editing. All authors have approved the submitted version, agreed to be personally accountable for their own contributions, and ensured the accuracy and integrity of the work.

CONFLICTS OF INTEREST
The authors declare that they have no competing interests or sources of funding to disclose.

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

Table S1. Overview of workplace learning framework utilized in program design.
Table S2. Standardized list of questions used in outreach calls to evaluate patient healthcare concerns and unmet needs.
Table S3. Overview of program leadership roles and responsibilities.

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