

An Academic-Practice Partnership to Advance Million Hearts®

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ABSTRACT

Background: An academic-practice partnership between a college department of nursing, the YMCA, and one health system was developed to provide student learning opportunities in cardiovascular disease prevention, while advancing the goal of Million Hearts®. **Method:** Using The Ohio State University College of Nursing's Million Hearts Fellowship Module, students learned to provide Million Hearts screenings, educate and coach participants in the college and greater community, and deliver a free home blood pressure monitor. Pre- and postscores were obtained to assess change in students' knowledge and participants' blood pressure, lifestyle scores, and perceived stress scores. **Results:** A statistically significant improvement in mean participant blood pressure and lifestyle scores was observed. **Conclusion:** This academic-practice partnership provided an opportunity for students to learn about prevention within a national, population health initiative and for participants to achieve measurable, healthy outcomes. The college's participation in a national Million Hearts consortium enabled practice partners to prioritize cardiovascular disease prevention in the community. [J Nurs Educ. 2021;60(2):103-106.]

Nursing faculty continue to be challenged with how best to address population health within the curriculum in a manner that demonstrates tangible student and population health outcomes. One way that faculty may provide meaningful student learning experiences in population health is by addressing cardiovascular disease (CVD). Given that CVD is a leading cause of death in the United States, claims one in three lives, and costs the U.S. health care system more than \$200 billion annually (Centers for Disease Control and Prevention

[CDC], 2020a), designing learning experiences that can address it is important.

One known modifiable risk factor for CVD is blood pressure, and although there are approximately 75 million Americans with hypertension, only approximately half have it under control (CDC, 2020b). For those uncontrolled, approximately 11 million are not even aware that they have hypertension (CDC, 2020b). Efforts in the community to help improve blood pressure control include teaching self-monitoring of blood pressure and coaching (using the principles of motivational interviewing) to improve confidence in making lifestyle changes. Motivational interviewing is a "collaborative conversation style for strengthening a person's own motivation and commitment to change" (Miller & Rollnick, 2013, p. 12). There is evidence that self-monitoring blood pressure can reduce blood pressure and is an effective part of managing hypertension (Tucker et al., 2015). A systematic review of health and wellness coaching showed coaching to have a positive impact on hypertension (Sforzo et al., 2017). Although a variety of strategies have been used to address this serious population health issue, Million Hearts® has received increasing attention. Million Hearts is a joint initiative of the Centers for Medicare and Medicaid and the CDC that aims to save 1 million lives in 5 years by preventing heart attack and stroke (U.S. Department of Health & Human Services, 2020).

Partnerships between clinical settings and community agencies that make CVD prevention a priority have been key to successful practice and systems changes (American Heart Association, 2021a). In 2014-2015, a partnership between a local health department and health system resulted in the training of faith community nurses to provide coaching and education on blood pressure self-monitoring to participants in the community who were at risk for hypertension. Results showed significant improvement in aggregate blood pressure and lifestyle satisfaction scores from pre- to postintervention (Cooper & Zimmerman, 2017). Similar outcomes could be achieved through academic-practice partnerships that share knowledge and commitment to population health and preventive care in the academic preparation of future nurses (American Association of Colleges of Nursing, 2021).

To contribute to the prevention of CVD at the population level and provide student learning opportunities in CVD prevention, Hood College Department of Nursing developed Hood Million Hearts. Hood Million Hearts integrated The Ohio State University (OSU) College of Nursing's Million Hearts Fel-

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lowship Module into Hood College's undergraduate nursing curricula to educate nursing faculty and students on CVD prevention. Then, as trained Million Hearts fellows, faculty and students provided an intervention to campus and community participants to help minimize CVD risk factors. The purpose of this article is to describe an academic-practice partnership between Hood College and community partners, including the local YMCA, health department, and health system. This partnership has allowed the college and greater community to prioritize cardiovascular health and contribute to the national Million Hearts goal to preventing 1 million heart attacks and strokes.

Background

As the first university-wide partner within the national Million Hearts initiative, OSU launched the National Interprofessional Consortium to Advance Million Hearts and the Million Hearts Fellowship Module in 2013. Both activities have contributed to the Million Hearts aim of preventing 1 million heart attacks and strokes in 5 years by increasing the number of Million Hearts screenings (Gawlik & Melnyk, 2015).

The National Interprofessional Consortium to Advance Million Hearts is composed of more than 150 universities and organizations across the nation who are collaborating to improve population cardiovascular health and well-being (OSU College of Nursing, 2020). Through this consortium, more than 80,000 Million Hearts screenings have been conducted nationally, with a goal of screening 100,000 in 5 years (OSU College of Nursing, 2020). Participating organizations help meet this goal by adding the numbers screened in their own community to the Consortium's database.

The OSU Million Hearts Fellowship Module is a free, publicly accessible resource that educates health professionals and students on conducting and interpreting a biometric assessment. It also includes a triage protocol for participants based on blood pressure measurement at the screening and motivational interviewing questions for change. The module is based on concepts integral to nursing practice, including promotion of population health, engaging in interprofessional practice, and preventing CVD (Gawlik & Melnyk, 2015). OSU suggested incorporating the 85-minute module into curricula as requiring it as part of an existing course or clinical hours and using it as an outreach opportunity with other colleges and community settings.

Implementing Hood Million Hearts Community Need

The county's 2019 Community Health Assessment revealed that risks for CVD existed. Moreover, the county had not met the state benchmark of reducing the proportion of those in the county with hypertension in 2016 (Frederick County, MD Government, n.d.). Chronic health, including hypertension, was named as one of three top health priorities in the county for the next 3 years (Mongilio, 2019). Given these needs, faculty decided to incorporate the OSU Million Hearts Fellowship Module into Hood College's undergraduate Nursing curriculum and to provide Hood Million Hearts as an intervention to both the campus and community.

Recruitment

Students. Nursing faculty notified students about Hood Million Hearts by email and asked them to reply by describing what they knew about Million Hearts and how they viewed it as advancing their nursing career. Participating students had the option of earning credits for Hood Million Hearts either through the existing community health nursing course clinical or as a 2-hour independent study. Since the launch of these activities, the number of students participating has increased from two in the summer of 2018 to nine by the end of 2019.

College Community. Initial recruitment for Hood Million Hearts participants began with college faculty, staff members, and students. Thus, participants needed to be part of the college community and more than 18 years of age to participate. When Hood Million Hearts began in 2018, the goal was to recruit at least 10 participants; however, 20 registered and participated. Increasing interest from the college and greater community has resulted in 58 participants by the end of 2019.

Hood Million Hearts was marketed to the college community by the Human Resources Department through regular Healthy U emails sent to faculty, staff, and students, and tweets from the Department of Nursing's Twitter™ page. Marketing materials included a registration link to SurveyMonkey™. Registration requested participants' full name, if they were age 18 or older (yes/no), email, telephone number, how they preferred to be contacted (email, telephone call, or text), and if they were able to meet during the initial week of the project (yes/no). Marketing and registration began approximately 1 month before students' initial meetings with participants. Based on preferences noted in the registration, students contacted participants to set up an initial meeting.

Community-at-Large. In the fall of 2018, the local health department, hearing of Hood Million Hearts and recognizing that they needed help with community blood pressure screenings, expressed an interest in collaborating with the college. The health department agreed to provide free blood pressure monitors for college participants in exchange for trained nursing students who would provide community screenings. Several of the community screenings took place weekly at the local YMCA. Using the remaining blood pressure monitors from the health department, Hood Million Hearts was offered on campus and at the YMCA in fall 2019. During the fall, the regional health system requested college permission to refer outpatients to Hood Million Hearts and recruitment began for 2020. Community partners used flyers and social media for marketing and participants also registered through SurveyMonkey.

Student Training

The students took a Million Hearts pretest before completing the required OSU Million Hearts Fellowship Module. Faculty also provided a 2-hour orientation on Million Hearts to describe tools used by Hood Million Hearts, and to ensure students demonstrated accurate blood pressure measurement with the home monitors. Next, the students completed the module before providing the intervention. Hood faculty confirmed with OSU faculty that an account was created by each student to access the module and that a certificate of completion was granted following data being uploaded to the OSU

site. A Million Hearts posttest was completed by students after the intervention.

Funding

Hood Million Hearts was initially funded as part of Hood College's Summer Research Institute in 2018, which is an opportunity provided annually for faculty to involve students in research. Funding provided a summer stipend for one faculty and two students to launch Million Hearts on campus and to purchase home blood pressure monitors for participants. Ongoing funding was necessary to cover the cost of monitors and has been provided by either the Department of Nursing or the College's wellness fund from Human Resources. Blood pressure monitors were also provided by the local health department in exchange for students helping with their program.

Intervention

After they were trained, students conducted initial in-person Million Hearts screenings with participants, during which they (a) obtained participant blood pressure, height, and weight; (b) calculated body mass index; (c) assessed stress using the Perceived Stress Scale-4 (PSS-4) (OSU College of Nursing, 2020); (d) assessed satisfaction in seven lifestyle areas using the Model for Health Blood Pressure (Cooper & Zimmerman, 2016); (e) interpreted findings for participants; and (f) provided a free blood pressure monitor and instruction on how to use it. Students asked participants if they had a health care provider and referred them to the provider based on high blood pressure readings. Hood Million Hearts followed the 2017 American Heart Association Blood Pressure Guidelines (American Heart Association, 2021b) and the OSU triage protocol in the module (OSU College of Nursing, 2020).

At the end of the initial meeting, students scheduled time to meet with participants in person within 2 weeks. A minimum of two follow-up meetings were scheduled throughout the semester to provide coaching to participants. Coaching involved a discussion on progress with blood pressure self-monitoring and lifestyle changes. The discussion on lifestyle changes was based on the two (of seven total) areas chosen by the participant at the initial meeting. Final meetings were held at the end of the semester to collect postdata (same measures as at initial meeting). Participants met with students in a private room for all meetings.

A Blackboard site housed resources for faculty and students to use when screening and coaching participants. Resources included screening tools, a list of local primary care providers and clinics, community smoking cessation resources, and evidence-based educational tools. Students also used the Blackboard discussion board for reflection on their encounters with participants.

Data Collection

Student Data. Faculty collected pre- and postintervention test scores from each participating student to determine a change in knowledge. Data were collected each semester, from summer 2018 through fall 2019.

Participant Data. Students collected pre- and postintervention data from participants to determine whether there is change

in pre- and postintervention systolic and diastolic blood pressures, PSS-4 scores, and lifestyle scores. Data were collected each semester, from summer 2018 through fall 2019.

Participants were identified by an assigned number, which was recorded along with age, gender, race/ethnicity, smoking status, if they have a health care provider, and if referrals were made to a health care provider. All data were recorded on an Excel® spreadsheet.

Institutional Review Board. Hood Million Hearts was reviewed by the college institutional review board and was considered to be exempt. An informed consent explaining the project was reviewed and signed by every participant prior to beginning the screening.

Results

From June 2018 through November 2019, nine nursing students completed a Million Hearts pre- and postknowledge test and 58 participants participated in Hood Million Hearts. Data were analyzed using SPSS® version 26 software.

Paired *t* tests assessed changes in student pre- and posttest scores. The mean student knowledge score increased from 7.88 (*SD* = 1.69) to 9.33 (*SD* = 1.11); this increase was statistically significant ($t = -2.72$, $df = 8$, $p = .026$); however, when adjusting for multiple comparisons, findings became statistically insignificant.

Paired *t* tests were used to assess participant changes in pre- and postintervention systolic and diastolic blood pressure readings, pre- and postlifestyle area scores (higher scores correlate with increased confidence), and pre- and post-PSS-4 scores (higher scores correlate with more stress). Mean systolic blood pressure decreased from 125.16 (*SD* = 17.34) to 121.40 (*SD* = 16.03); this decrease is statistically significant ($t = 2.70$, $df = 57$, $p = .009$). Diastolic blood pressure decreased from 80.03 (*SD* = 11.01) to 79.97 (*SD* = 9.03); this decrease was statistically significant ($t = 2.70$, $df = 57$, $p = .009$). The first lifestyle area mean score increased from 4.07 (*SD* = 2.30) to 6.69 (*SD* = 2.62); this increase was statistically significant ($t = -8.27$, $df = 57$, $p = .000$). The second mean lifestyle area score increased from 4.78 (*SD* = 2.47) to 6.19 (*SD* = 2.62); this increase was statistically significant ($t = -4.15$, $df = 57$, $p = .000$). The PSS-4 mean score decreased from 6.53 (*SD* = 3.30) to 6.05 (*SD* = 2.86); this decrease was statistically significant ($t = 1.183$, $df = 57$, $p = .242$), but when adjusting for multiple comparisons, findings became statistically insignificant.

Discussion

Incorporating Million Hearts into the curriculum was undertaken with minimal effort. In addition, incorporating Million Hearts made visible the link between faculty work at the national level with local efforts and reinforced the link between practice and education. Hood Million Hearts was a valuable service-learning experience connected to a national, population health initiative. It provided students with an opportunity to appreciate the value and apply the practice of prevention and motivational interviewing. Students also observed the impact of the intervention on participants' health and helped to build community partnerships.

College and community members and partners benefited from the program. Hood Million Hearts provided the college

with an opportunity for outreach into the community and provided community partners with an opportunity to achieve organizational, local, and state goals. Thus, this strategy reflects how collaboration among partners can be mutually beneficial while not requiring extensive involvement or resources. Hood Million Hearts chose to provide free blood pressure monitors to each participant, and although not required, it was an incentive for participation that allowed participants to actively monitor their health. At the college organizational level, the partnership and resulting findings contributed to the college earning gold-level recognition from the Healthiest Maryland Businesses 2020 Wellness @ Work Awards (<https://www.hood.edu/news/hood-college-receives-gold-award-wellness-work>). Given that chronic health conditions was considered to be one of three top health priorities in the county (Mongilio, 2019), the college was poised to collaborate with county-wide efforts to address hypertension and continues to contribute to achieving the national Million Hearts goal to preventing 1 million heart attacks and strokes.

Conclusion

Faculty were able to incorporate a national prevention program into the curriculum with little effort. Doing so provided a service-learning opportunity with demonstrable participant and community outcomes. Moreover, the project positioned the college to have a voice at the local and state level.

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