Socially Accountable Medical Education: An Innovative Approach at Florida International University Herbert Wertheim College of Medicine

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Abstract

Problem
Despite medical advances, health disparities persist, resulting in medicine's renewed emphasis on the social determinants of health and calls for reform in medical education.

Approach
The Green Family Foundation Neighborhood Health Education Learning Program (NeighborhoodHELP) at Herbert Wertheim College of Medicine provides a platform for the school's community-focused mission. NeighborhoodHELP emphasizes social accountability and interprofessional education while providing evidence-based, patient- and household-centered care. NeighborhoodHELP is a required, longitudinal service–learning outreach program in which each medical student is assigned a household in a medically underserved community. Students, teamed with learners from other professional schools, provide social and clinical services to their household for three years. Here the authors describe the program's engagement approach, logistics, and educational goals and structure.

Outcomes
During the first six years of NeighborhoodHELP (September 2010–August 2016), 1,470 interprofessional students conducted 7,452 visits to 848 households with, collectively, 2,252 members. From August 2012, when mobile health centers were added to the program, through August 2016, students saw a total of 1,021 household members through 7,207 mobile health center visits. Throughout this time, households received a variety of free health and social services (e.g., legal aid, tutoring). Compared with peers from other schools, graduating medical students reported more experience with clinical interprofessional education and health disparities. Surveyed residency program directors rated graduates highly for their cultural sensitivity, teamwork, and accountability.

Next Steps
Faculty and administrators are focusing on social accountability curriculum integration, systems for assessing and tracking relevant educational and household outcomes, and policy analysis.

Problem

Since Flexner, medical education in the United States has traditionally focused more on the identification and treatment of disease and less on population-oriented approaches.[1] This focus has led to the specialty-centric model that characterizes much of the U.S. health care system today. Despite increased specialization and medical advances, health disparities persist—even at the doorsteps of U.S. academic health centers.[2,3] These ongoing disparities, coupled with the growing burden of chronic disease, have resulted in a renewed emphasis on accountability and the social determinants of health (SDOHs) in medical education.[1,4,5]

The Herbert Wertheim College of Medicine (HWCOM) at Florida International University (FIU) has embraced a social-accountability-focused mission that incorporates attention to the SDOHs in education, health care, and research. In this report, we describe the Green Family Foundation Neighborhood Health Education Learning Program (NeighborhoodHELP), a service–learning program that benefits learners and communities alike. NeighborhoodHELP integrates social sciences, early clinical experience, interprofessional teamwork, and attention to the SDOHs to prepare socially accountable and culturally sensitive future physicians, while partnering with a network of community agencies to improve the health of medically underserved households. Here the authors describe the program's engagement approach, logistics, and educational goals and structure.

Approach

Program description

NeighborhoodHELP challenges students to address complex real-world behavioral, environmental, ethical, medical, legal, and social issues through a household-centered approach in which teams visit medically underserved households in Miami-Dade County, Florida.[6] Household members receive services in exchange for helping to educate students. We define "household" as a group of individuals residing together within a dwelling, and we define "household-centered care" as identifying and helping to manage the social determinants that can improve the health outcomes of members of a household. The core

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team includes students from medicine, nursing, social work, and physician assistant studies; their faculty; and community outreach workers. Teams assess SDOHs related to their assigned households and respond to and monitor those determinants longitudinally. More specifically, students—under faculty supervision—assess and research problems, provide education and counseling, and connect household members to services in the community. The teams engage professionals from other fields depending on needs. For example, a team will engage students and faculty from the law school when it identifies an SDOH issue that is legally remediable. Likewise, master's-level social work students, working with behavioral faculty and staff, provide counseling when necessary; public health graduate students work on population health initiatives; and education and premedical students provide tutoring, career advising, and educational counseling.

Prior to launching NeighborhoodHELP, we conducted a door-to-door survey of 1,845 households in the target neighborhoods to assess community needs and strengths.[7] The survey highlighted a critical need for enhanced primary and preventive care services. To address these needs, NeighborhoodHELP not only uses mobile health centers (MHCs), which offer a range of integrated primary care, behavioral, and preventive services, but also collaborates with dental, radiology, and specialty partners to provide access to care for members of participating households.

A team of outreach staff members (described below) supports the students, recruits households, facilitates communication between households and student teams, and brokers services through an extended network of community partners. This academic-community network infrastructure empowers students and faculty to identify and address SDOHs that affect households, to facilitate access to community resources, and to engage in policy analysis and advocacy.

Community engagement approach

Community stakeholders (e.g., leaders, members, and employees of schools, faith-based organizations, and government agencies) have partnered with the program since its inception, and we have developed an engagement approach to promote sustainable relationships with these stakeholders, as well as with communities, organizations, and households. The outreach team comprises program managers, program specialists, police officers, and policy coordinators.

The *program managers* form relationships with and provide services to community agencies that, in turn, refer households to the program. This arrangement builds trust within communities since the program's success depends on partners' referrals of households and, in reciprocity, the households and communities benefit from the services that NeighborhoodHELP provides. The *program specialists*, typically recruited and hired from the communities being served, visit referred households to enroll them in the program, assess and address needs, and provide support to assigned student teams. *Police officers* from FIU provide gun safety training and supply gunlocks to household members with firearms. They also monitor the safety of teams, communicating with students, other team members, and local police during students' household visits. Finally, *policy coordinators* develop targeted programs and initiatives aimed at promoting policies and services that facilitate healthy lifestyles, and they help communities become empowered, healthy, and resilient.

The integration of community stakeholders in planning, designing, implementing, and evaluating NeighborhoodHELP has fostered trust between HWCOM and the communities it serves. This ongoing mutually beneficial relationship reinforces and sustains collaborative efforts and builds community capacity and resiliency.

Household visit logistics

Students coordinate with their households to schedule visits. A scheduling office assigns faculty to supervise the students. A homegrown electronic database—"the portal"—facilitates household enrollment and maintenance, visit scheduling, outcome tracking, and interdisciplinary communication. Once a household agrees to participate, a program specialist performs an SDOH assessment, recording the results in the portal, which then creates a customized "household health risk" profile. The profile outlines household needs and strengths in 10 SDOH categories: availability of food; housing; income; employment; transportation; daily activities; health care; technology; legal literacy; and life skills and education. After the initial household visits that focus on developing rapport and assessing needs, the student team develops a holistic care plan to address social and medical needs. Subsequently, student teams provide direct services (e.g., offering health education and/or counseling, facilitating food stamp applications, addressing immigration issues) via home visits, asynchronous work, and MHC visits. The student teams also refer households to services provided by our network of partners (e.g., specialty referrals, job training). Faculty and student teams provide a minimum of three to four follow-up household visits per year. Household visits last about 60 to 90 minutes, excluding 30-minute "huddles" by the team before and after each visit. Students communicate monthly with their households to follow up on household needs and care plans and to coordinate visits and services with team members. Students document status and interactions in the portal and electronic medical record (EMR) to track household progress over time. The process of assessment and service provision occurs iteratively throughout the program. Students periodically assess and reflect on their efforts. Prior to graduation, students work with their assigned household to develop a plan for transitioning it either out of the program or to a new student team.

Educational integration

Participation in NeighborhoodHELP is mandatory for all medical students. This interprofessional, household-centered approach to health care places the SDOHs at the core of the curriculum, providing students with a longitudinal, community-based, service–learning structure (Figure 1). Students apply the ethical, social, behavioral, and clinical knowledge and skills they learn throughout the curriculum to the goal of improving the health of the members of underserved households (List 1). Central to its mission, the college has outlined social accountability competencies that medical

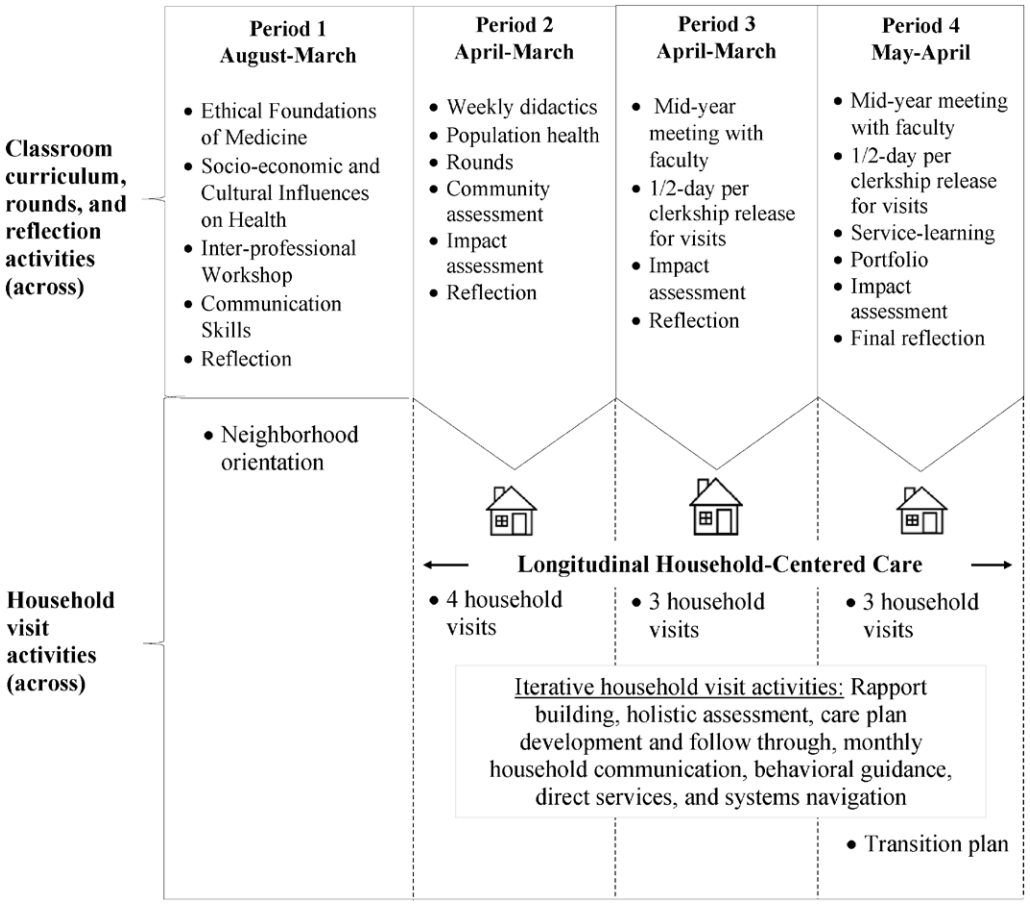

Figure 1 The Green Family Foundation Neighborhood Health Education Learning Program (NeighborhoodHELP) at Herbert Wertheim College of Medicine (HWCOM) at Florida International University (FIU). To facilitate a meaningful service–learning experience, classroom activities align with service to households and community partners, periodic reflection, assessment of impact, and the development of a service–learning portfolio. The figure reflects the longitudinal coordination of classroom learning, rounds, and reflection activities (top row) with iterative student household visitation activities (bottom row), across the four periods (loosely aligned with traditional academic years) of the medical school curriculum (columns). NeighborhoodHELP is integrated with the Medicine and Society curricular strand which comprises the following courses: Ethical Foundations of Medicine and Socio-economic and Cultural Aspects of Health (Period 1), the Community Engaged Physician I–III course series (Periods 2–4), and the Community Practicum (integrated through all periods). Student household visits, represented by the house, begin in Period 2 and initially focus on assessing health needs in the context of the social determinants of health and on developing a holistic care plan to address identified needs. Subsequently, student teams provide direct services to household members and assist them in navigating the health and social services systems, including services provided by the NeighborhoodHELP network of university and community partners. This process of assessment and service provision occurs iteratively.

students are expected to master by graduation (List 2). NeighborhoodHELP provides students with the opportunity to develop and apply these competencies through real-world activities designed to effect improved health and well-being.

To facilitate central curriculum management and integration, each HWCOM course is set within one of five longitudinal curriculum strands—(1) Human Biology; (2) Disease, Illness and Injury; (3) Clinical Medicine; (4) Professional Development; and (5) Medicine and Society—which run concurrently across four sequential periods of study (each period loosely follows an academic year; see Figure 1). The strands help organize educational objectives and courses to maximize horizontal and vertical integration. NeighborhoodHELP is positioned within the Medicine and Society strand which focuses on social science and the impact of the SDOHs on health and health care. In Period 1, prior to their first household visit, students participate in didactic and small-group learning sessions that focus on ethics, the socioeconomic and cultural aspects of health, community engagement, interprofessional teamwork, patient-centered communication, and motivational interviewing. Once students begin their household visits (in Period 2), they have ongoing didactic and experiential learning activities that align with the Healthy People 2020 leading health indicators and social determinants.[8] Other content, including policy, medical–legal partnerships, primary care, and behavioral health, are also introduced in Period 2 to build the knowledge, skills, and attitudes needed for meaningful interactions with household and community members. During the clerkship and senior clinical periods (Periods 3 and 4), classroom activities are curtailed, and students receive release time to visit their households once per clerkship or rotation (to accomplish at least three visits per year). While NeighborhoodHELP is positioned within the Medicine and Society strand, its principles (ethics and the SDOHs) are integrated into preclinical cases and clinical activities across the four-year curriculum. Likewise,

List 1

Herbert Wertheim College of Medicine Green Family Foundation Neighborhood Health Education Learning Program (NeighborhoodHELP) Goals

Student Curricular Goals

1. Enhance students' understanding of the social determinants of health by having them provide longitudinal, household-centered care.
2. Increase students' cultural humility by exposing them to multicultural communities.
3. Develop students' interprofessional collaborative team skills by fostering interactions among medical students and professionals from multiple professions.
4. Offer a holistic, community-focused approach to clinical medicine while developing students' patient-centered communication skills.
5. Develop students' understanding of ethical issues that may arise in underserved communities.
6. Cultivate empathic and reflective practice in students.

Student Household-Centered Community Impact Goals

1. Increase the health literacy of households in the communities we serve.
2. Work with community partners to address the social determinants of health.
3. Address gaps in health care by advocating better access to services including clinical, behavioral, and educational.
4. Improve health outcomes.

content from each strand (especially Clinical Medicine and Professional Development) is integrated into activities of the NeighborhoodHELP program. For example, communication skills—integral to the services students provide through NeighborhoodHelp—are presented as part of the clinical skills course; professional behavior and health systems constitute topics in the Professional Development strand; and household activities reinforce relevant basic and clinical science subjects.

Additionally, NeighborhoodHELP is integrated with the HWCOM Panther Learning Communities (PLCs), an educational and social structure that promotes a sense of community within the school. The student body and core faculty are divided among four PLCs. Each PLC aligns with geographic areas served by NeighborhoodHELP. Student leaders are appointed to oversee programs within each PLC that address identified community needs (e.g., education pipeline activities, health education and screening services, support for women's health services, and health system policy initiatives). By training and empowering medical students to create and administer programs, the PLCs complement and support the curriculum and offer additional resources to NeighborhoodHELP households and student teams. The integration of the PLCs and NeighborhoodHELP brings the institution, students, and faculty into an extended network that engages collaboratively with the communities that HWCOM is committed to serving.

List 2

Herbert Wertheim College of Medicine "Social Accountability" Competency Domain and Critical Competencies

SOCIAL ACCOUNTABILITY (SA): Working collaboratively to meet the health needs of patients and society to demonstrate improved health outcomes and reduce health disparities.

SA 1. Demonstrate an understanding of the influence and potential implications of social determinants of health on beliefs, behaviors, and outcomes, and incorporate this knowledge into patient care.

SA 2. Identify and utilize appropriate sources of information to analyze significant public health issues, applying data to reach defensible conclusions.

SA 3. Accurately describe the organization and basic financial models of the U.S. health care system and potential impact of this system on patients for whom the student has provided care.

SA 4. Accept and report personal biases and errors, identify potential sources of errors, and develop action plans to reduce risk of future errors.

SA 5. Collaborate with stakeholders inside and outside the health care system to coordinate optimal care and improve health.

SA 6. Apply knowledge of health advocacy, systems, and policy to identify strategies for reducing health disparities and promoting individual and population health.

Sustainability

NeighborhoodHELP faculty are funded by an appropriation from the State of Florida to medical schools, and this appropriation is part of HWCOM's core education budget. As such, core faculty engage in household visits as an integral part of their teaching role. Funding for NeighborhoodHELP's community infrastructure and operations is provided by philanthropic endowment, supplemented by grants. Because of this structure, NeighborhoodHELP is financially sustainable and able to stay in communities in perpetuity.

Outcomes

We have measured initial outcomes in the number of households and household members who have participated in and benefited from NeighborhoodHELP; in the provision of services, particularly legal services, rendered; in graduating students' perceptions of their education; and in receiving residency directors' views of HWCOM graduates' attributes.

During the first six years of NeighborhoodHELP (September 2010–August 2016), 1,470 interprofessional students conducted 7,452 visits to 848 households with, collectively, 2,252 members. Household surveys after the first two years indicated that visits by outreach workers or student teams resulted in increased use of preventive health services and a trend toward decreasing the use of the emergency room as a regular place of care.[6] (The surveys were conducted prior to the addition of clinical services with MHCs.) From August 2012, when clinical services were added, through August 2016, student teams provided services to a total of 1,021 household members across 7,027 MHC visits. Participating households received a variety of free preventive, clinical, social, behavioral, dental, and legal services.

From September 2010 to August 2016, student teams identified 1,403 legally remediable SDOHs: 35% were health care access issues, 19% immigration, 19% family stability, 17% financial stability, and 10% housing. Through advocacy, in collaboration with the interprofessional teams, students and faculty from the law school successfully secured $520,000 in direct financial benefits (e.g., disability payments, negotiated debt reduction) for the households.

Student course evaluations indicate that NeighborhoodHELP fosters learning and an appreciation for cultural competence, patient-centered communication skills, and social accountability. In the 2015 Association of American Medical Colleges (AAMC) Graduation Questionnaire, 95.7% of HWCOM graduates reported participating in required interprofessional education (IPE) activities compared with the national average of 79.7%. In addition, 92.4% of graduates reported IPE experience involving active engagement with patients compared with the national average of 68.3%. Graduates also reported more experiences than their peers at other schools related to health disparities (84.1% vs. 61.7%) and cultural awareness (88.4% vs. 64.2%).[9,10]

Finally, each spring, for the purpose of program evaluation and curricular quality improvement, HWCOM sends a survey to directors of residency programs where the most recent graduates are training. Among the highest ratings HWCOM graduates have received are the marks for their communication skills, cultural sensitivity, teamwork, and accountability.

Next Steps

We are enhancing our focus on educational and household outcomes, and on curricular, service, and research alignment through four unique projects. One of our goals is to demonstrate student progression toward entrustment for interprofessional collaboration and in other essential NeighborhoodHELP activities. We have undertaken this project as part of the AAMC Core Entrustable Professional Activities (EPAs) for Entering Residency Pilot, and as such it involves workplace-based student assessments related to household-centered care using the EPAs framework. Another goal is to further integrate social accountability content across the curriculum as a component of the American Medical Association (AMA) Accelerating Change in Medical Education consortium initiative. This goal involves both mapping the HWCOM social accountability competency domain (List 2) to course-level student learning objectives and further integrating the SDOHs into case-based teaching throughout HWCOM courses to enhance preparation for and achievement of NeighborhoodHELP student goals (List 1). Our third goal is to develop metrics and data systems to support household-centered care, continuous quality improvement, and demonstration of NeighborhoodHELP outcomes. We are working with RAND Corporation both (1) to implement an evaluation framework for monitoring program-relevant measures at the individual, household, program, and system levels and (2) to develop information technology systems that display a household-level SDOHs dashboard in the EMR. Finally, we hope to promote objective analysis and debate on population health questions of regional and national concern through the NeighborhoodHELP Aetna Foundation Health Policy Analysis Academy. The Academy will investigate how "value" can be assigned to specific NeighborhoodHELP strategies aimed at addressing the SDOHs.

Medical schools that receive public funds have an obligation to be principal players in improving the nation's health. NeighborhoodHELP is well suited for demonstrating social accountability and developing the professional competencies and activities necessary to address today's social and behavioral determinants of health. We hope that our approach will stimulate conversation and serve as a catalyst to advance efforts in medical education reform.

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Other disclosures: None reported.

Ethical approval: The household survey was approved by the Florida International University Institutional Review Board; educational program evaluation data were considered exempt.

Previous presentations: Members of the Herbert Wertheim College of Medicine faculty, staff, and administration have given presentations of the different aspects of the curriculum in a variety of venues, including the following: "Inter professional Teams: Neighborhood-HELP" (Rock J, Allen S) Liaison Committee on Medical Education Webinar, June 23, 2016; "Addressing Disparities in the Provision of Medical Care: A Multisectoral Model for Marrying Medical Education and Household Health in Miami" (Ryan G, Brewster L, Brown D) Roundtable presentation at the 37th Annual Fall Research Conference of the Association for Public Policy Analysis and Management, November 12, 2015, in Miami, Florida; "Innovations in Healthcare Delivery Systems" (Greer PJ) Presentation at the 9th Annual Future of Medicine Summit, September 18, 2015, in West Palm Beach, Florida; "Learning by Example" (Greer P, Brown D, Lage O) Invited presentation for an Institute of Medicine Consensus Study on Educating Health Professionals to Address the Social Determinants of Health, September 15, 2015, at the Institute of Medicine in Washington, DC; "Innovations in Caring for Underserved Communities" (Greer PJ) Plenary speech at the 11th Annual Association of American Medical Colleges (AAMC) Health Workforce Research Conference, April 29–May 1, 2015 in Alexandria, Virginia; "Evaluation framework for a new model of integrated sociomedical outreach at Florida International University" (Brown D, Brewster L, Greer PJ, et al) Poster presented at the 45th Annual Urban Affairs Association Conference, April 10, 2015 in Miami, Florida; Improving Quality and Health Outcomes for All: The Family Physician and the Social Determinants of Health (Brown D, Pollack K, Suarez G, Wright D) Presentation at the

American Academy of Family Physicians Scientific Assembly, October 25, 2014 in Washington, DC; "Building Interprofessional Healthcare Teams, One Household at a Time" (Lage O, Delzell J, Brown D, et al) Presentation at the 2014 American Academy on Communication in Healthcare Research & Teaching Forum, October 17, 2014 in Orlando, Florida; Training a Community-Oriented Primary Care Workforce—A Curricular Experience (Greer P) Presentation at the AAMC Annual Learn Serve Lead Meeting, November 3, 2012 in San Francisco, California; and "A New Model of Interprofessional Medical Education" (Brown D, Greer P, Brewster L, et al.) Poster presentation at the American Board of Internal Medicine Foundation Forum, August 2010 in Vancouver, British Columbia, Canada.

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