

The Impact of “See the City You Serve” Field Trip: An Educational Tool for Teaching Social Determinants of Health

Aileen Y. Chang, MD, MSPH
 Tracie L. Bass
 Monique Duwell, MD, MPH
 Jeffrey S. Berger, MD, MBA
 Raksha Bangalore, MD
 Nancy S. Lee, MD

Richard L. Amdur, PhD
 Marcus Andrews, BA
 Esme Fahnstock
 Lamek Kahsay
 Jehan El-Bayoumi, MD, FACP

ABSTRACT

Background There has been limited evaluation of tools for teaching social determinants of health (SDOH).

Objective We evaluated a field trip as a tool for teaching SDOH to incoming medical interns.

Methods Incoming interns from The George Washington University participated in a bus field trip of Washington, DC, guided by community partners. The field trip introduced trainees to local neighborhoods. Pre- and postactivity surveys developed by the authors were analyzed using a Wilcoxon signed rank test. Reflection responses were recorded and counted for recurrent themes.

Results Incoming interns participated in 2015 (85 of 90, 94%) and in 2016 (96 of 116, 83%). Postactivity, basic knowledge of DC geographic health disparities increased, and a greater percentage of interns reported being at least somewhat comfortable understanding the neighborhoods from which their patients come (2015: 58% versus 89%, $P < .0001$; 2016: 65% versus 88%, $P < .0001$); identifying challenges to health care that affect low-income patients (2015: 74% versus 90%, $P < .0023$); describing community resources (2015: 29% versus 67%, $P < .0001$; 2016: 29% versus 50%, $P < .0001$); and referring patients to local community resources (2015: 25% versus 64%, $P < .0001$; 2016: 36% versus 52%, $P < .0001$). Interns reported that this experience improved their understanding of patients' background and local resources, and that they would change the way they practice.

Conclusions A bus field trip guided by community partners is a feasible way to increase residents' perception of their understanding of local disparities and comfort in addressing SDOH.

Introduction

Social determinants of health (SDOH) play an important role in overall health, yet trainees often are not aware of these in the populations with which they work. Medical schools and residency programs are expanding SDOH education with a variety of interventions.¹⁻⁷ Currently, there is no consensus on the best practices to teach the SDOH,¹ though multiple programs include opportunities to visit local low-income communities and interact with individuals from those areas.^{3,6,7} However, there are limited reports of the impact of field experiences on preparing learners to address SDOH with patients. This article describes the feasibility and acceptability of a local community field trip and its impact on learner perceptions.

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Editor's Note: The online version of this article contains the list of community-based organization participants, a script used in the study, and the pre- and postsurvey.

Methods

Intervention

“See the City You Serve” was a field trip for incoming interns to The George Washington University (GWU) School of Medicine and Health Sciences Graduate Medical Education programs. Community leaders from a broad range of service organizations contributed to the design and execution of the activities. During the field trip, community leaders guided a 3-hour bus trip through Washington, DC, teaching the interns about challenges that affect patients from low-income minority neighborhoods and about available resources. On each bus, approximately 3 to 5 community leaders rode along with a group of 20 to 25 interns, sharing their experience while explaining how to access local resources. We evaluated the impact of the activity on intern knowledge of and comfort in directing patients to local resources. Our hypothesis was that this experience would improve knowledge of local health disparities and empower interns to better assist patients.

The field trips occurred on June 16, 2015, and June 16, 2016, during intern orientation week, and were coordinated, staffed, and paid for by the Rodham Institute, a GWU institute dedicated to health equity in DC. At GWU, the graduate medical education (GME) orientation schedule was set by the associate dean for GME and approved by the Graduate Medical Education Committee. This activity was part of a larger effort to involve learners in the DC community.

Leaders were identified from the Rodham Institute's Community Collaboration Network Database, were selected by the institute's executive leadership based on their experience working directly with vulnerable populations, and were invited via e-mail. They included representatives from community-based organizations (list provided as online supplemental material). There was no formal training for the community leaders prior to the event. Each facilitator was given a script (provided as online supplemental material) with information about DC health disparities to highlight; however, the majority of the facilitator commentary was unscripted.

Participants

All GWU incoming interns were required to participate.

Design and Measures

The preactivity and immediate postactivity surveys (provided as online supplemental material) included 4 sections: personal background (2 questions); knowledge of local DC disparities (3 multiple-choice questions); comfort level identifying and addressing SDOH (4 questions scored with a 4-point Likert scale); and open-ended questions, asking interns to reflect on the impact of the activity (4 questions). Local health disparities experts and GWU faculty reviewed and revised the surveys. The average time to complete the survey was 15 minutes.

This study received Institutional Review Board exemption from the GWU Office of Human Research.

Analysis

We report pre-post intervention survey results. The pre- and posttest values were compared for each participant using a Wilcoxon signed rank test. All analyses were done using SAS version 9.3 (SAS Institute Inc, Cary, NC) with statistical significance level set at an alpha of 0.05. Written responses to the open-ended questions were recorded and coded for themes by 4 independent trained coders. Differences in coding were adjudicated by an independent

What was known and gap

Social determinants of health (SDOH) play an important role in health care, yet trainees are often not aware of them in their patient populations.

What is new

Interns participated in a bus field trip of their patients' neighborhoods, guided by community partners.

Limitations

Single site, single specialty study reduces generalizability; instrument without established validity evidence.

Bottom line

A bus field trip of local neighborhoods is a practical, time-efficient, and feasible way to increase resident perception of local health disparities and the SDOH.

reviewer. Adjudication was necessary in 44% of codes in 2015 and 79% in 2016. We report recurrent themes in the responses to these questions that were mentioned, unambiguously, at least 5 times.

Results

Our study population who participated in the activity included 85 of 90 (94%) interns in 2015 and 96 of 116 (83%) interns in 2016 from anesthesiology, obstetrics and gynecology, emergency medicine, surgery, several surgical specialties, internal medicine, radiology, and ophthalmology. In 2016, we added physical therapy interns. Our goal was to use the activity as an interprofessional learning opportunity to help our mission of improving health equity through education. Having learners representing different health professions participate allows for diverse perspectives. In 2015 and 2016, 21% (18 of 85) and 13% (12 of 96), respectively, of participants were from DC, and 93% (79 of 85) and 73% (70 of 96), respectively, had experience working with underserved populations (TABLES 1 and 2). Basic knowledge of DC disparities increased after the activity. Postactivity, a greater percentage of interns correctly identified the number of DC wards (2015: 65% versus 100%, $P < .0001$; 2016: 71% versus 100%, $P < .0001$); the wards with the lowest per capita income (46% versus 100%, $P < .0001$; 2016: 85% versus 100%, $P = .0002$); and the degree of cancer mortality disparities in DC (2015: 53% versus 97%, $P < .0001$).

Comfort with understanding and addressing SDOH improved after the intervention. Postactivity, a greater percentage of interns reported being at least somewhat comfortable understanding the neighborhoods from which their patients come (2015: 58% versus 89%, $P < .0001$; 2016: 65% versus 88%, $P < .0001$); identifying health care challenges that affect low-income patients (2015: 74% versus 90%, $P = .0023$);

TABLE 1
 “See the City You Serve” Field Trip Survey Results (2015)

Characteristics of The George Washington University (GWU) 2015 Intern Class (N = 85)			
Interns from Washington, DC, n (%)	18 (21)		
Experience working with underserved populations, n (%)	79 (93)		
	Pretest	Posttest	P Value ^a
Washington, DC, knowledge			
Correctly identified the number of DC wards, n (%)	55 (65)	85 (100)	< .0001
Correctly identified DC wards with lowest income, n (%)	39 (46)	85 (100)	< .0001
Correctly identified racial disparities in cancer mortality in DC, n (%)	45 (53)	82 (97)	< .0001
Comfort understanding and addressing social determinants of health			
Understanding the neighborhood from which your patients come, n (% at least somewhat comfortable)	49 (58)	76 (89)	< .0001
Identifying challenges to health care that affect low-income patients, n (% at least somewhat comfortable)	62 (74)	75 (90)	.0023
Describing community resources, n (% at least somewhat comfortable)	24 (29)	56 (67)	< .0001
Referring patients to local community resources outside of GWU, n (% at least somewhat comfortable)	21 (25)	53 (64)	< .0001

^a Wilcoxon signed rank test.

describing community resources (2015: 29% versus 67%, $P < .0001$; 2016: 29% versus 50%, $P < .0001$); and referring patients to local community resources (2015: 25% versus 64%, $P < .0001$; 2016: 36% versus 52%, $P < .0001$).

In their responses to the open-ended questions, interns reported that the most striking part of their experience was geographic health disparities (21%, 38 of 181); lack of health centers and grocery stores in southeast DC (8%, 14 of 181); health disparities statistics (12%, 22 of 181); and seeing poverty (9%, 17 of 181). Interns reported this experience would change their practice of medicine through better understanding of SDOH (24%, 44 of 181); patients' background (25%, 46 of 181); and existing resources to help patients (7%, 12 of 181).

Interns reported that the activity could have been improved with better bus air conditioning and a handout with a city map of community resources. In their orientation survey, 75% (64 of 85) of interns identified the “See the City You Serve” exercise as the most helpful part of orientation week.

Discussion

We found that a brief bus trip guided by community leaders improved incoming interns' understanding of, and comfort in addressing, the SDOH. Furthermore, interns reported that this experience would change the way they practice medicine. Our intervention adds to the growing number of residency programs testing experiential education strategies to increase appreciation of health disparities, including clinical simulations and community “treasure hunts,”⁸ and more

intensive community introductions, ranging from 2 days⁹ to 1 month.¹⁰

Our study illustrates the critical role of nonacademic partners in medical education. As the medical system faces increasing pressure to address population health at a reduced cost while improving health, the role of community leaders grows in importance.^{11,12} These leaders can give practical advice that helps residents care for their patients, and their input can be incorporated into longitudinal resident SDOH curriculum.

This study has multiple limitations. Our analysis was done using a single site, with a pre- and posttest survey. It also lacked validity evidence; therefore, respondents may not have interpreted the questions as intended.

Future research will include the study team following the 2 cohorts to assess long-term impact. We hypothesize that this activity will have a lasting impact given the responses; however, reflections do not always translate into actions. Future research goals include evaluating the longitudinal effects of the SDOH curriculum on resident empathy, career decisions, and work satisfaction.

Feasibility information for programs that wish to replicate our intervention is as follows. All facilitators, faculty, and GME staff volunteered. Their clinical/administrative sites supported this activity, and involved 6 faculty members who worked for 4 hours each. Additionally, institutional program assistant time was approximately 10 hours each for 3 staff members. The program cost was for transportation services (\$1,350 for 4 buses).

TABLE 2

“See the City You Serve” Field Trip Survey Results (2016)

Characteristics of The George Washington University (GWU) 2016 Intern Class (N = 96)			
Intern from Washington, DC, n (%)	12 (12.5)		
Experience working with underserved populations, n (%)	70 (73)		
	Pretest	Posttest	P Value ^a
Washington, DC Knowledge			
Correctly identified the number of DC wards, n (%)	67 (71)	90 (100)	< .0001
Correctly identified DC wards with lowest income, n (%)	81 (85)	89 (100)	.0002
Correctly identified racial disparities in cancer mortality in DC, n (%)	52 (55)	12 (14)	< .0001
Comfort understanding and addressing social determinants of health			
Understanding the neighborhood from which your patients come, n (% at least somewhat comfortable)	62 (65)	78 (88)	< .0001
Identifying challenges to health care that affect low-income patients, n (% at least somewhat comfortable)	73 (77)	76 (86)	.10
Describing community resources, n (% at least somewhat comfortable)	28 (29)	45 (50)	< .0001
Referring patients to local community resources outside of GWU, n (% at least somewhat comfortable)	34 (36)	46 (52)	< .0001

^a Wilcoxon signed rank test.

Conclusion

The “See the City You Serve” activity was a tool to inform incoming interns of the SDOH of the communities they will serve. This experience was acceptable to the interns who participated, was feasible with many volunteers and funding for bus transportation, and improved immediate knowledge and perceptions of comfort level in managing the social aspects of patient care. The program was feasible at a cost of \$1,350, and was an acceptable way to expose residents to SDOH, with 75% of interns indicating it was the most useful part of orientation.

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Aileen Y. Chang, MD, MSPH, is Assistant Professor of Medicine and Assistant Director of Research, The Rodham Institute, The George Washington University School of Medicine and Health Sciences (GWU SMHS); **Tracie L. Bass** is Executive Coordinator, The Rodham Institute, GWU SMHS; **Monique Duwell, MD, MPH**, is Director for Special Projects, The Rodham Institute, GWU SMHS; **Jeffrey S. Berger, MD, MBA**, is Associate Professor of Anesthesia, GWU SMHS; **Raksha Bangalore, MD**, is a Medical Graduate, GWU SMHS; **Nancy S. Lee, MD**, is a Medical Graduate, GWU SMHS; **Richard L. Amdur, PhD**, is Clinical Professor of Surgery and Lead Biostatistician, Medical Faculty Associates, GWU SMHS; **Marcus Andrews, BA**, is a Fellow, Rodham Institute Internship Program; **Esme Fahnestock** is an Intern, Rodham Institute Internship Program; **Lamek Kahsay** is an Intern, Rodham Institute Internship Program; and **Jehan El-Bayoumi, MD, FACP**, is Professor of Medicine and Founding Director, The Rodham Institute, GWU SMHS.

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Corresponding author: Aileen Y. Chang, MD, MSPH, The George Washington University School of Medicine and Health Sciences, Department of Medicine, 2150 Pennsylvania Ave NW, Washington, DC 20037, 202.677.6562, chang@gwu.edu

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