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# Interprofessional Medical–Legal Education of Medical Students: Assessing the Benefits for Addressing Social Determinants of Health

Robert Pettignano, MD, MBA, Lisa Bliss, JD, Susan McLaren, MPH, FACHE, and Sylvia Caley, JD, MBA, RN

## Abstract

### Problem

Screening tools exist to help identify patient issues related to social determinants of health (SDH), but solutions to many of these problems remain elusive to health care providers as they require legal solutions. Interprofessional medical–legal education is essential to optimizing health care delivery.

### Approach

In 2011, the authors implemented a four-session didactic interprofessional curriculum on medical–legal practice for third-year medical students at Morehouse School of Medicine. This program, also attended by law students, focused on interprofessional

collaboration to address client/patient SDH issues and health-harming legal needs. In 2011–2014, the medical students participated in pre- and postintervention surveys designed to determine their awareness of SDH's impact on health as well as their attitudes toward screening for SDH issues and incorporating resources, including a legal resource, to address them. Mean ratings were compared between pre- and postintervention respondent cohorts using independent-sample *t* tests.

### Outcomes

Of the 222 medical students who participated in the program, 102 (46%) completed the preintervention

survey and 100 (45%) completed the postintervention survey. Postintervention survey results indicated that students self-reported an increased likelihood to screen patients for SDH issues and an increased likelihood to refer patients to a legal resource ( $P < .001$ ).

### Next Steps

Incorporating interprofessional medical–legal education into undergraduate medical education may result in an increased likelihood to screen patients for SDH and to refer patients with legal needs to a legal resource. In the future, an additional evaluation to assess the curriculum's long-term impact will be administered prior to graduation.

### Problem

Biology, genetics, behavior, physical and social environments, and access to or lack of health care are generally known as the determinants of health.<sup>1</sup> The social determinants of health (SDH) include “conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.”<sup>2</sup> Although health care providers have not historically considered SDH during patient assessment, increasing evidence supports the impact of social and behavioral factors on the health of individuals.<sup>3–6</sup> Increased

awareness has led to the development of screening tools to identify SDH issues and document the findings in the electronic health record,<sup>7</sup> but solutions remain elusive to health care providers as ameliorating many of these problems requires the expertise of lawyers.

One solution to identifying and addressing these health-harming legal problems is the medical–legal partnership (MLP), a health care delivery model that integrates legal assistance as a vital component of medical care.<sup>8</sup> The MLP provides an interprofessional approach to patient care by integrating lawyers into the health care team to assist in addressing SDH through legal means. To improve care for patients experiencing these challenges and to positively affect their health care outcomes, medical professionals should be trained to identify SDH with potential legal solutions and be provided with specific resources, such as MLPs, to address them.

Interprofessional education can improve providers' ability to identify and address medical, social, and legal issues affecting health, and it is therefore essential

to optimizing health outcomes and the delivery of health care. However, already-packed medical education curricula typically lack courses aimed at raising awareness of and identifying resources to assist in addressing SDH. In this report, we describe an innovative interprofessional medical–legal education program for third-year medical students and law students, and we provide a preliminary assessment of its impact.

### Approach

#### Curriculum development and implementation

The Health Law Partnership (HeLP) is a community collaboration serving low-income and minority children that addresses SDH that adversely affect their health and well-being. HeLP was created in 2004 by Children's Healthcare of Atlanta (Children's), the Atlanta Legal Aid Society, and the Georgia State University College of Law (GSU) to assist in improving the health and social well-being of low-income children and their families seeking care within the Children's system. HeLP has

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four components: (1) direct delivery of public health legal services; (2) education of professional students in multiple disciplines and of professionals within the health care system; (3) systemic advocacy on matters affecting public health; and (4) research, scholarship, and evaluation regarding the impact and efficacy of MLPs and other related topics. The education component of HeLP includes a GSU-based legal clinic that addresses the health-harming legal needs of clients while educating law students and health professions students through various curricula.

To create a medical-school-based interprofessional educational experience for students in law and medicine, HeLP Clinic faculty collaborated with medical faculty from the Morehouse School of Medicine (MSM), a school dedicated to training future physicians, scientists, and public health professionals in the investigation and elimination of health disparities and the achievement of health equity. The faculty met several times during the 2011 spring semester to develop an interprofessional curriculum for GSU law students enrolled in the elective HeLP Clinic course and the MSM third-year medical student class enrolled in the required Fundamentals of Medicine III course. This collaboration resulted in a four-session curriculum designed to educate students about MLPs and the ways in which they could collaborate to address SDH and the health-harming legal needs of clients and patients. The goals of this curriculum were to expose students to collaborative opportunities and to reduce barriers to collaboration for the benefit of patient health.

While HeLP serves a low-income pediatric population, it was important to the faculty to teach the students about topics and issues that focused on diverse populations to ensure that the topics covered resonated with the majority of medical students and law students in the class. The course topics were chosen to represent a range of practice areas that the medical students may enter and to present a range of medical, legal, and ethical scenarios in which interprofessional collaboration may be fruitful. The topics were also selected to highlight the similarities and differences in medical and legal practice, thereby enhancing interprofessional understanding.

The curriculum was implemented in the fall of academic year 2011. The GSU law students traveled to MSM to attend the four sessions with the medical students. To create an effective learning environment, faculty created icebreakers, mixed-discipline and discipline-specific small-group exercises, case studies, and discussion topics designed for both law and medical students. Each session was two hours in length, and the four sessions were distributed throughout the academic year. Slight modifications were made over time to the initial case studies used for small-group work, but the sessions in academic years 2011–2014 employed the following formats and content:

- *Session 1: Introduction to MLP.* Students participated in icebreakers, consisting of small-group discussions, organized by discipline, to describe “qualities that I want in my doctor” and “qualities that I want in my lawyer.” Students were also introduced to MLPs using HeLP as the illustration.
- *Session 2: Collaboration and case studies, pediatric and elder patients.* Students worked in discipline-oriented small groups to develop profiles outlining the similarities and the differences among professionals in medicine and law. Students were then combined into mixed-discipline groups consisting of six to eight medical students and two to three law students. These groups worked to solve the problems presented in two case studies. One study involved a pediatric patient and his family experiencing problems in following a care plan and in accessing public benefits. The second scenario involved an adult male diagnosed with cancer and facing loss of employment, health insurance coverage, home, and independence.
- *Session 3: Collaboration on end-of-life issues, both medical and legal.* Faculty presented medical, legal, and ethical issues involved at the end of life, including goals of care, advance directives, guardianship, and do-not-resuscitate orders. Students worked in mixed-discipline small groups to develop holistic solutions to problems presented in a case study involving a dying mother and her soon-to-be-orphaned young son. A frank, facilitated discussion of cultural issues involved with dying, respect for elders, grieving, and funeral practices highlighted different practices and views.

- *Session 4: Special education and the role of physicians in developing an appropriate education plan.* The large-group discussion focused on how doctors and lawyers practice. A special education case served as the case study for mixed-discipline small-group work, in which students focused on how physicians and lawyers can collaborate for the patient’s/client’s benefit. Time was allotted to discuss the Law and Medicine fourth-year elective for medical students, in which medical students spend a four-week block with HeLP and the HeLP Clinic working with faculty, staff attorneys, and law students to address health-harming legal problems affecting the well-being of low-income children.

### **Preliminary assessment of the impact of the curriculum**

A pre- and postintervention survey instrument was developed collaboratively by the HeLP Clinic faculty and the HeLP program evaluator to assess the effect of the interprofessional education curriculum. HeLP faculty obtained institutional review board approval from GSU and read the IRB-approved informed consent document to the students prior to survey participation. Although both law and medical students attended the joint sessions, only the medical students were invited to participate in the voluntary surveys.

**Survey content and administration.** Our goal was to determine whether the didactic program introducing third-year medical students to the benefits of MLPs and interprofessional medical–legal collaboration would have an impact on their beliefs regarding interprofessional practice and on their ability to identify and address SDH issues in their patients. The five-question survey instrument was designed to gather both baseline data and follow-up information about participants’ awareness of and attitudes toward screening for SDH and working collaboratively with an MLP or lawyer to address identified SDH needs. (For the questions, see Table 1; for the instrument, see Supplemental Digital Appendix 1 at <http://links.lww.com/ACADMED/A425>.) Responses were assigned a numeric value of 1 to 5, where 1 represented the least favorable response (e.g., “unimportant,” “extremely unlikely”) and 5 represented the most favorable response (e.g., “very important,” “extremely likely”).

Table 1

**Comparison of Pre- and Postintervention Cohort Responses, Third-Year Medical Students in Fundamentals of Medicine III, Morehouse School of Medicine, Academic Years 2011–2014<sup>a</sup>**

Question	Survey	No. of respondents	Response rate, % (N = 222) <sup>b</sup>	Mean (SD)	P value	95% confidence interval	
						Lower	Upper
<b>1. How important is it for you to have knowledge of legal issues that affect the health and well-being of your patients in order to address their medical issues?<sup>c</sup></b>							
	Pre	102	45.9	4.58 (0.67)	.927	4.45	4.71
	Post	100	45.0	4.57 (0.64)		4.44	4.70
<b>2. How aware are you with the following issues that may affect the health of low-income patients?<sup>d</sup></b>							
Education	Pre	103	46.4	4.39 (0.72)	.118	4.25	4.53
	Post	100	45.0	4.54 (0.66)		4.41	4.67
Family stability	Pre	103	46.4	4.34 (0.79)	.257	4.19	4.49
	Post	100	45.0	4.46 (0.72)		4.32	4.60
Health insurance	Pre	103	46.4	4.21 (1.03)	.055	4.01	4.41
	Post	99	44.6	4.45 (0.73)		4.31	4.60
Housing/utilities	Pre	103	46.4	4.03 (0.98)	.085	3.84	4.22
	Post	100	45.0	4.25 (0.83)		4.09	4.41
Income	Pre	103	46.4	4.35 (0.79)	.138	4.20	4.50
	Post	100	45.0	4.51 (0.75)		4.36	4.66
Public benefits	Pre	101	45.5	3.67 (1.07)	.021	3.46	3.88
	Post	100	45.0	4.00 (0.92)		3.82	4.18
Transportation	Pre	103	46.4	3.98 (1.01)	.079	3.79	4.18
	Post	100	45.0	4.21 (0.83)		4.05	4.37
<b>3. How influential can involving lawyers on your treatment team be on providing patient care?<sup>e</sup></b>							
	Pre	103	46.4	3.58 (0.85)	< .001	3.42	3.75
	Post	100	45.0	4.21 (0.92)		4.03	4.39
<b>4. How likely are you to screen your patients for the following socioeconomic or legal issues?<sup>f</sup></b>							
Client/family income	Pre	103	46.4	4.14 (0.81)	.002	3.98	4.29
	Post	100	45.0	4.46 (0.66)		4.33	4.59
Children's education issues	Pre	103	46.4	4.08 (0.87)	.017	3.91	4.25
	Post	100	45.0	4.36 (0.80)		4.20	4.52
Family law	Pre	100	45.0	3.71 (0.94)	.025	3.53	3.89
	Post	98	44.1	3.99 (0.81)		3.83	4.15
Health insurance/care for uninsured	Pre	102	45.9	4.47 (0.83)	.045	4.31	4.63
	Post	100	45.0	4.67 (0.55)		4.56	4.78
Housing issues	Pre	103	46.4	4.17 (0.79)	.125	4.02	4.33
	Post	100	45.0	4.34 (0.74)		4.19	4.49
Public benefits	Pre	103	46.4	3.63 (0.99)	< .001	3.44	3.82
	Post	99	44.6	4.16 (0.78)		4.01	4.32
SSI/Disability	Pre	101	45.5	3.77 (0.96)	.001	3.59	3.96
	Post	96	43.2	4.20 (0.82)		4.03	4.36
<b>5. If you are aware that your patient is experiencing a socioeconomic, environmental, or legal issue that may affect their health, how likely are you to:<sup>g</sup></b>							
Inform the resident or attending physician?	Pre	103	46.4	4.50 (0.75)	.046	4.36	4.65
	Post	100	45.0	4.70 (0.63)		4.58	4.82
Refer to a social worker?	Pre	103	46.4	4.37 (0.89)	.040	4.20	4.54
	Post	100	45.0	4.60 (0.70)		4.46	4.74
Refer to a legal resource?	Pre	101	45.5	3.30 (1.08)	< .001	3.09	3.51
	Post	98	44.1	3.92 (0.93)		3.73	4.10

(Table continues)

Table 1  
(Continued)

Question	Survey	No. of respondents	Response rate, % (N = 222) <sup>b</sup>	Mean (SD)	P value	95% confidence interval	
						Lower	Upper
Advise the patient to seek assistance?	Pre	103	46.4	4.49 (0.68)	.107	4.35	4.62
	Post	100	45.0	4.64 (0.67)		4.51	4.77
Do nothing?	Pre	103	46.4	1.77 (1.25)	.880	1.53	2.01
	Post	100	45.0	1.74 (1.30)		1.49	1.99

Abbreviations: HeLP indicates Health Law Partnership; pre indicates preintervention; post, postintervention; SSI, Supplemental Security Income.

<sup>a</sup>The pre- and postintervention survey respondents were third-year medical students who participated in a four-session interprofessional medical–legal education curriculum as part of the required Fundamentals of Medicine III course. The interprofessional curriculum was also attended by law students in the elective Health Law Partnership (HeLP) Clinic course at the Georgia State University College of Law. For the survey instrument, see Supplemental Digital Appendix 1 at <http://links.lww.com/ACADMED/A425>.

<sup>b</sup>The response rate is the percentage of the 222 students who took the class who responded to the item.

<sup>c</sup>The response scale for this question ranged from unimportant = 1 to very important = 5.

<sup>d</sup>The response scale for this question ranged from 1 = not aware at all to 5 = extremely aware.

<sup>e</sup>The response scale for this question ranged from 1 = not at all influential to 5 = extremely influential.

<sup>f</sup>The response scale for this question ranged from 1 = extremely unlikely to 5 = extremely likely.

The preintervention survey was administered to the third-year medical students at the beginning of each first joint session during academic years 2011–2014. At the conclusion of the fourth joint session described above, and prior to dismissal, the survey was readministered to the medical students as the postintervention survey.

**Data analysis.** Data were summarized into pre- and postintervention response cohorts for analysis in 2015. Percent change in favorable responses among the pre- and postintervention cohorts was assessed. Mean scores were calculated and compared using an independent *t* test. We considered a *P* value < .05 to be statistically significant.

**Outcomes**

During academic years 2011–2014, 222 third-year MSM students participated in the interprofessional medical–legal curriculum, which formed part of a required course. Of those 222 students, 102 (46%) completed the preintervention survey and 100 (45%) completed the postintervention survey. In general, there were statistically significant differences among pre- and postintervention cohort ratings at a 95% confidence level.

The postintervention survey results indicated that students self-reported an increased likelihood to screen patients for socioeconomic and legal issues in the areas of income, education, family law, health insurance, public benefits,

and Supplemental Security Income/ Disability (Table 1). Independent-sample *t* tests indicated the increased mean postintervention ratings for these areas to be significant at *P* < .05.

Comparison of pre- and postintervention cohort responses showed that the greatest change in students’ attitudes post intervention was in referring patients to a legal resource when aware that their patients are experiencing socioeconomic, environmental, or legal issues that may affect health. The percentage of respondents who reported that they would be extremely likely or likely to refer patients with a possible legal issue to a legal resource increased by more than 25 percentage points (Figure 1). There was also a statistically significant increase in the mean rating on this item, from 3.30 pre intervention to 3.92 post intervention (*P* < .001) (Table 1).

**Next Steps**

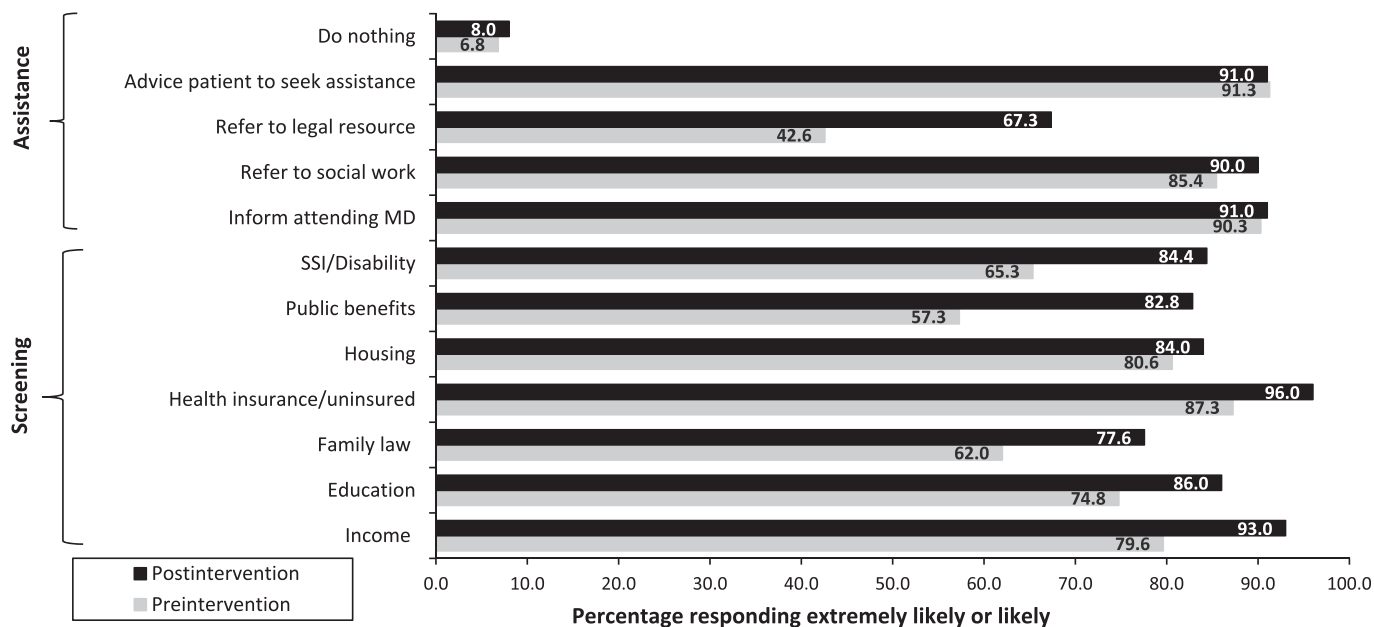
Incorporating interprofessional, collaborative medical–legal education into undergraduate medical education can help future physicians understand the importance of screening for and identifying SDH and of advocating for the inclusion of lawyers on care coordination teams to help improve the health status of their patients. Such education may result in an increased likelihood that physicians will screen patients for SDH and health-harming legal needs. Our survey results indicate that after participating in our innovative curriculum,

medical students reported being more likely to refer patients to a legal resource, such as an MLP, and to recognize the influence a lawyer can have on improving patient care when the lawyer is part of the treatment or care coordination team.

Our preliminary assessment of our curriculum’s impact was limited by the low response rate. This may have overstated the results and introduced the potential for bias (i.e., the students more likely to screen may also have been more likely to respond). Conversely, because the medical students in this study chose to enroll in a medical school with a mission of assisting the low-income population, their baseline level of knowledge and awareness regarding the effects of SDH on health may have understated the impact of this educational experience for the general medical student population.

Further analysis of the effects of early education of medical professionals in the practice of interprofessional medical–legal collaboration and the generalizability of this specific type of education to other medical education venues is needed to determine if there is greater patient treatment plan compliance when SDH are addressed, if patient satisfaction with care is increased, and if a more efficient allocation of health care resources results.

Our next steps will include matching pre- and postintervention survey responses by participant to allow the identification of specific effects of our educational program



**Figure 1** Percentage of respondents who self-reported being extremely likely or likely to screen patients for or assist patients with social determinants of health or legal issues: comparison of preintervention and postintervention cohort survey results, academic years 2011–2014. Respondents were third-year medical students at Morehouse School of Medicine enrolled in the required course Fundamentals of Medicine III, which included a four-session medical–legal interprofessional curriculum that was also attended by law students in the Health Law Partnership (HeLP) Clinic elective at the Georgia State University College of Medicine. Percentages are based on 102 responses to the preintervention survey and 100 responses to the postintervention survey. For the survey questions, see Table 1. For the instrument, see Supplemental Digital Appendix 1 at <http://links.lww.com/ACADMED/A425>.

on attitudes toward screening for SDH and MLP collaboration. In the future, we will administer an additional evaluation prior to graduation to assess the long-term impact of this curriculum. We also plan to propose multicenter studies, through the participants in the National Center for Medical-Legal Partnership, to further understand the particular components of interprofessional education that result in individuals’ changes in knowledge, skills, and perceptions and in improved practice of screening for and addressing SDH issues.

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