Developing a Professional Pathway in Health Equity to Facilitate Curricular Transformation at the University of Michigan Medical School

Brent C. Williams, MD, MPH, Patricia B. Mullan, PhD, Andrew J. Haig, MD, Preeti N. Malani, MD, Julie S. Perry, MD, Michelle Riba, MD, Joy M. Williams, MD, Joseph C. Kolars, MD, and Rajesh S. Mangrulkar, MD

Abstract

Problem
Medical schools are challenged to realign curricula to address society's needs in a rapidly changing environment, and to support new instruction and assessment methods that require substantial faculty time.

Approach
In 2010, the University of Michigan Medical school began planning the Global Health and Disparities Path of Excellence (GHD Path), an optional co-curriculum for students interested in health disparities, with explicit goals to (1) draw attention to the school's social mission; (2) test new, faculty-intensive methods of learning and assessment for all students; and (3) serve as a template for additional co-curricular paths.

Outcomes
Intended outcomes of the program include enhancing students' competency in leadership related to ameliorating health disparities and the study institution's ability to plan feasible and effective schoolwide reforms in self-directed learning, faculty advising systems, narrative-based feedback for goal setting, Web-based student portfolios, and additional Paths of Excellence.

Next Steps
During academic year 2013–2014, the GHD Path is adding more community-based experiences. The faculty development and support model will be streamlined to decrease resources required for program development while retaining key features of the advising system. Lessons from the GHD Path are central to planning schoolwide reform of instructional methods, faculty advising, and student portfolios. The use of a small-scale program to pilot new ideas to inform longer-term, larger-scale changes at our institution might prove useful to other schools striving to meet societal needs while implementing innovative methods of instruction and assessment.

Problem

Medical schools struggle to develop and implement curricula responsive to current and emerging societal needs in a rapidly evolving health care environment. For example, to address societal as well as individual patient needs, the Association of American Medical Colleges Medical Schools Outcomes Project recommends reforms directed at enhancing physicians' skills in improving health systems' efficiency and effectiveness and in providing team-based and culturally competent care.[1]

It is also difficult to quickly reform instructional methods because many of the most promising innovations, such as including direct observation-based assessment of competency and using feedback to direct individualized learning, require substantial faculty time and training. Further, medical schools' complex organizational structures can limit capacity for rapid change. Studies of the diffusion of innovations have emphasized the importance of seeing the results of small-scale, low-risk experiments before committing to widespread adoption.[2(p163)]

In 2010, the University of Michigan Medical School (UMMS) initiated the Global Health and Disparities Path of Excellence (GHD Path), a set of school-sponsored experiences alongside the formal curriculum, herein termed a co-curriculum, for students interested in learning about and addressing health disparities. The GHD Path was also intended to facilitate schoolwide reforms by (1) fostering more explicit attention to the school's social mission; (2) providing an online portfolio "work space" to evaluate the feasibility, costs, and effectiveness of new methods of learning and assessment; and (3) serving as a template for additional Paths of Excellence, which eventually will be required of all UMMS students.

In this Innovation Report, we describe the goals, structure, and outcomes of the GHD Path's planning phase and first year of operation; we also discuss the role of a small, flexible pilot program curriculum in informing broader changes at our medical school.

Approach

Purposes and goals of the GHD Path

In 2010, UMMS's senior associate dean for education issued a written charge to the assistant dean for medical education to develop a "pathway of customized, self-regulated learning" in global health and disparities that would provide lessons to "create room in the curriculum for every (student) to choose a path (of excellence)."

Behind this charge were several larger, implicit goals. The first was to expand and integrate UMMS's social mission into the culture and curriculum of the medical school. A second goal was to develop and test instructional methods that could be

Please see the end of this article for information about the authors.

Correspondence can be addressed to Dr. Williams, 2800 Plymouth Rd., Building 16, Room 430W, Ann Arbor, MI 48109-2800; telephone: (734) 647-9688; e-mail: bwilliam@umich.edu.

Acad Med. 2014;89:1153–1156.
First published online May 13, 2014
doi: 10.1097/ACM.0000000000000286

implemented throughout the curriculum, including more active learning and narrative assessment to inform and direct learning, based in individualized counseling by faculty to engage students in reflection and planning students' self-directed learning and leadership experiences.[3] Collaboration with software architects and information services also guided the development of a learning portfolio to serve as a "workspace" for students and their advisors to guide and document goal setting and progress.[4]

GHD Path development

A GHD Steering Committee was established in 2010. It consisted of a director and six clinical faculty members (termed "GHD faculty") with clinical and research interests in health disparities, both domestic and international, and a faculty member in medical education. Committee members were supported at 10% effort and met weekly over 18 months to design the GHD Path. The steering committee met to develop (1) a mission statement and set of core competencies to be achieved through participation in the GHD Path, (2) curricular content and instructional methods, (3) metrics and methods of assessment defining progress along the GHD Path, and (4) criteria defining successful completion of the GHD Path. Three working groups focusing on each of the latter three goals met several times, and included more than three dozen students and other invited faculty.

Relevant literature reviewed by the GHD Steering Committee included research on scholarly concentration programs and health disparities curricula in medical schools. A unique difference between the GHD Path and other existing disparities curricula was our program's combination of domestic and international health disparities in a single program.

The resulting mission statement describes the immediate purpose of the GHD Path: to "*integrate foundational, investigative and experiential learning that will prepare medical students to be agents of sustainable change to reduce domestic and global health disparities.*" Twenty-six target competencies were defined related to four domains: (1) Social Determinants of Health Disparities, (2) Tools and Strategies to Promote Sustainable Change, (3) Health Care Systems and Policy, and (4) Professional and Leadership Development.

GHD Path structure. By the end of the planning period in fall 2011, the GHD Path structure included three main components: (1) a scholarly field project mentored by any UM faculty member, termed a capstone project; (2) a series of structured small-group experiences; and (3) regular engagement with a longitudinal GHD advisor throughout medical school. Application to and enrollment in the GHD Path required students to attend several seminars, write a narrative application, complete independent reading, and describe plans for a summer field project related to disparities, mentored by a UM faculty and expected to serve as most students' capstone project. The GHD Path program also established criteria—receiving failing exam scores requiring remediation for two or more courses—that would require students to leave the GHD Path.

At enrollment of the first cohort of GHD students, which occurred in March 2012, the program assigned a GHD Steering Committee faculty member to each student as a GHD advisor. In addition to group meetings and e-mails, each student met two to four times with his or her advisor during the first year in the path (March 2012 to March 2013). Discussions focused on short- and long-term personal and professional goals and students' plans to accomplish them.

GHD Path assessment and portfolio. Student performance in the GHD Path is in part assessed on the basis of the completion of a disparities-focused capstone field project, documented by a written summary modeled on Glassick's[5] (modified from Boyer) criteria for scholarly educational work: clear goals; adequate preparation evidenced by explicitly linking the project to existing research; appropriate methods; significant results; effective presentation; and reflective critique.

During the planning period, we collaborated with educational instructional technology experts to develop a Web-based portfolio to serve as a "workspace" for GHD activities—for documenting students' short- and long-term goals, as well as space for GHD advisors and students to provide narrative assessment of the students' progress toward goals.

Assessment of a student's progress and successful completion of the program was also based on semistructured narrative feedback from the student (self-assessment), GHD advisor, and collaborators and preceptors with whom the student worked. We secured the dean's support for recognizing student completion of the GHD Path in the dean's letter with an explanation of the unique activities of individual students.

Program implementation

In March 2012, 31 first-year medical students applied and were accepted as the first GHD Path cohort. Four students eventually left the co-curricular GHD Path—two for academic reasons, one to allow time for participation in several disparities-related student groups, and one to take a year off to start a health-disparities-related business.

We refined the online portfolio substantially throughout the year, largely because of student feedback. Originally envisioned as a multipurpose site to include functions such as information access and communication with peers and consultants, the portfolio became more narrowly focused as a semistructured framework informing advisor–advisee conversations on key topics, goal setting, and archiving progress towards scholarly project completion.

In the spring of 2012, GHD faculty structured and the newly enrolled GHD students led four 2-hour small-group seminars in three groups of 9 to 10 students. Discussions related to readings in foundational concepts in health disparities and to students' summer projects. In response to student feedback, the content of the small-group seminars starting in fall 2012 (the beginning of the students' second year of medical school) shifted from reviewing foundational background information in health disparities to application, focusing on three case studies that provided a relatively elaborate look at health care programs in resource-limited settings.

Program evaluation

Evaluation of the GHD Path program includes Web-based anonymous surveys of student and faculty experiences; review of the quality and range of students' scholarly activities; review of the GHD program progress by UMMS's governance, including the Curriculum Policy Committee; and ultimately, GHD Path

students' scholarly contributions and career trajectories.

The regular and largely open-ended feedback that we received from GHD students and faculty via Web-based surveys played a critical role in modifying the GHD Path. In half-day retreats in fall 2012 and spring 2013, faculty reviewed the feedback and planned next steps. In addition, in fall 2012, a GHD student advisory group provided advice on GHD learning experiences.

Outcomes

GHD Path student activities and achievements

The 29 students who completed faculty-mentored summer projects conducted 11 domestically and 18 in low- and middle-income countries (10 in Sub-Saharan Africa, 4 in Central and South America, 3 in Asia, and 1 in Israel). Their projects covered a wide range of contexts and content, including clinical interventions, medical technology, epidemiology, health services organization, medical sociology, program evaluation, and medical education. By the end of the GHD students' second year, they had planned or submitted 14 manuscripts, and 3 had been accepted for publication.

During the GHD Path's first year, we used student feedback to organize and create additional learning experiences. In response to student requests for more "real-world" experiences, in fall 2012 we tasked students with independently designing and implementing field projects in small groups during their second year of medical school, separate from their capstone summer projects, termed GHD field projects. Examples of GHD field projects included a compare-and-contrast analysis of three types of social service organizations based on interviews with high-level managers; an interview with a successful academic physician who had developed clinical programs as well as a research program ameliorating disparities; and a review of financing mechanisms for social service organizations.

After receiving feedback from students that they wanted to explore career paths through greater interaction with physicians active in addressing health disparities, we organized four "meet-the-doc" dinner conversations from fall 2012 to spring 2013. In these forums, pairs of physicians working in health disparities shared their experiences.

Survey results

Student and faculty reviews of the GHD Path have been highly positive. Students commended and rated highly the self-directed, independent learning of the capstone and independent GHD field projects. Students and faculty now view the advisor–advisee relationship as the "heart" of the GHD Path. In addition, most students and faculty welcomed the semistructured format for the advisor–advisee discussions using the portfolio, as it allowed students to flexibly tailor their self-assessment and self-directed learning in meaningful ways. Students particularly valued their own involvement in the construction of the GHD Path, and the program's responsiveness in making changes based on their feedback and suggestions.

Impact of the GHD Path on students

We intended four broad outcomes for the GHD Path medical students: (1) skill development in self-directed goal setting, implementing learning plans, and securing feedback on performance throughout their professional lifetimes; (2) competence in scholarship (through completion of capstone projects); (3) competence in organizational leadership through the second-year field experiences and accompanying small-group seminars; and (4) commitment throughout their careers to ameliorating health disparities in the United States and around the world. We primarily used the advisor–advisee relationships and portfolios to monitor students' progress in self-regulated learning and professional development. Although we have made substantial progress in defining metrics to measure the capstone projects and career trajectories, significant work remains in defining specific metrics for self-regulated learning and organizational leadership.

Impact of GHD Path on UMMS

At UMMS, the GHD Path has already increased awareness of the school's social mission. GHD Path's director met regularly with the associate dean for medical student education and senior associate dean for education and global health initiatives to keep GHD Path's process and lessons aligned with overall organizational reform goals; in addition, both deans participated in a day-and-a-half GHD faculty development retreat. Regular discussions with the Curriculum Policy Committee and the Academic Review Boards promoted awareness and elicited feedback and suggestions for the program. GHD faculty served as liaisons to other key committees, including those charged by UMMS's deans with a complete curricular revision that involves developing new paths, to share ideas, resources, and the GHD Path's progress.

The GHD Path produced several initiatives in UMMS's general curriculum. First, several GHD faculty worked with course directors and students to add or modify existing lectures and small-group seminars to expose all first-year students to more disparities-related content. Second, we implemented a series of 16 noon seminars in health disparities, open to all UMMS students. Third, GHD faculty have served as advisors to several highly visible student groups that initiated activities in health disparities during 2012, which helped foster an open exchange of ideas and results of "mini-experiments" between students and the GHD Path. Fourth, GHD Path's semistructured format and regular student meetings with faculty advisors, not previously part of the UMMS experience, are now being considered as the base model for the faculty advising system for all students, as well as for additional Paths of Excellence. Fifth, UMMS as a whole is incorporating similar forms of self-directed and active learning into the structure and content of subsequent Paths of Excellence.

Finally, the development of the GHD Path's online portfolio has provided important information for the expansion of portfolio-based learning throughout UMMS. Portfolios are now envisioned for three functions: (1) recording discussions with advisors; (2) prompting assessment and goal setting along five dimensions (*knowledge*, *skills*, *networking*, *career planning*, and *leadership*); and (3) charting progress towards completion of learning and competency goals.

Next Steps

Next steps around the GHD Path will focus on three areas. First, we plan to pilot collaborative projects between small groups of GHD students and community-based organizations as a form of leadership training. Second, we will test a postprogram development

"second-generation," more sustainable faculty model. GHD-supported clinical faculty will continue with four (including the director) core faculty who will organize and operate the GHD Path and serve as advisors, and four additional faculty without direct support who will serve as GHD advisors. Advisors will meet with a defined number of students flexibly, within their own schedules. Third, the lessons of the GHD Path are now central sources of information in several planning groups designing and implementing an expanded faculty advising system, narrative-based feedback and assessment models, portfolios, and Paths of Excellence for all students.

Our initial experience with the GHD Path of Excellence has demonstrated the utility of small-scale programs with rapidly cycling feedback to inform longer-term, larger-scale changes at the medical school. As we continue the experiment, we anticipate facilitating continued change in the culture and curriculum while fostering career paths of students as leaders in transforming health care in the 21st century.

Acknowledgments: The authors are grateful for Paula Meyer's tireless administrative support for the GHD Path of Excellence, and to the many students and faculty who contributed ideas and work to the development of the GHD Path.

Funding/Support: A grant from the University of Michigan Center for Research on Learning and Teaching Faculty Development Fund provided partial support.

Other disclosures: None reported

Ethical approval: The program was reviewed and received exempted status from the UMMS institutional review board.

Dr. B. Williams is associate professor, Department of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. Mullan is professor, Department of Medical Education, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. Haig is professor, Department of Physical Medicine and Rehabilitation, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. Malani is associate professor, Department of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. Perry is assistant professor, Department of Obstetrics and Gynecology, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. Riba is professor, Department of Psychiatry, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. J. Williams is associate professor, Department of Family Medicine, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. Kolars is senior associate dean for education and global initiatives, University of Michigan Medical School, Ann Arbor, Michigan.

Dr. Mangrulkar is associate dean for medical student education, University of Michigan Medical School, Ann Arbor, Michigan.

References

1 Association of American Medical Colleges. Medical School Objectives Project (MSOP). https://www.aamc.org/initiatives/msop/. Accessed March 25, 2014.
2 Rogers EM. Diffusion of Innovations. 4th ed. New York, NY: Free Press; 1995.
3 Van Der Vleuten CPM, Schuwirth LWT, Driessen EW, et al. A model for programmatic assessment fit for purpose. Med Teach. 2012;34:205–214.
4 Driessen E, van Tartwijk J, van der Vleuten C, Wass V. Portfolios in medical education: Why do they meet with mixed success? A systematic review. Med Educ. 2007;41:1224–1233.
5 Glassick CE. Boyer's expanded definitions of scholarship, the standards for assessing scholarship, and the elusiveness of the scholarship of teaching. Acad Med. 2000;75:877–880.