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Bursting the Hidden Curriculum Bubble: A Surgical Near-Peer Mentorship Pilot Program for URM Medical Students

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Abstract

The hidden curriculum of unspoken professional expectations negatively impacts medical student interest in surgery. Medical student mentorship and early surgical exposure have been shown to demystify the hidden curriculum. Although residents and faculty play a vital role, near-peer mentorship may aid in uncovering the hidden curriculum and promoting medical student interest in surgery, especially for those learners who are underrepresented in medicine. We developed and implemented a formalized near-peer mentorship program composed of quarterly small group Surgical Peer Teacher led lessons and one-on-one Surgical Support Team mentorship meetings covering surgical curriculum topics for medical students at an academic medical school. This structured near-peer mentorship model provides a mechanism to demystify surgical culture, increase early access to surgical mentorship, and develop mentorship skills amongst students. This program aims to uncover the surgical hidden curriculum to improve surgical career support and interest among medical students with less exposure and access to physician role models. This longitudinal mentorship model is student-run and can be easily adapted to enhance existing support models at medical schools. Future studies will evaluate utilization, impact on surgical specialty interest, and efficacy in demystifying the surgical hidden curriculum.

Keywords

Near-peer; mentorship; medical education; surgical education; hidden curriculum; underrepresented in medicine

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COMPETENCIES: Professionalism

INTRODUCTION

The hidden curriculum of unspoken professional expectations that are influenced by surgeons' social, cultural, and belief systems is heavily embedded within surgical education and training.¹ While the hidden curriculum is typically used to describe unintentional lessons on interpersonal interactions and professionalism, we argue that the professional milestones and requirements to pursue a surgical career (i.e., executing a successful research project, accessing and maintaining mentorship relationships, networking for letters of recommendation, selecting strategic Sub-Internships, and applying for surgical residency) are also "hidden" or less accessible to students who identify as underrepresented in medicine (URM) due to their lack of mentorship access and sponsorship.

Traditionally, medical students have been expected to understand and abide by these professional requirements within the hidden curriculum without formal instruction or mentorship. This hidden curriculum has been shown to influence medical student's interest in pursuing a surgical career.^{2,3} In particular, medical students who have difficulty navigating the hidden surgical curriculum are more likely to view a surgical career as inaccessible.⁴ Historically, medical students have had to rely upon informal advice from peers, residents, or faculty mentors to illuminate the hidden surgical curriculum.⁵ This not only leads to the propagation of variable information to trainees, but ultimately favors individuals with previous exposure and access to physician relatives and role models.^{6,7} URM students are more likely to have limited access to these advantages and are at risk of missing critical surgical hidden curriculum knowledge that comes with such access. This claim is not only supported by anecdotal experiences of URM identifying medical students at our institution, but has been previously described by Odom et al.⁸ This qualitative study asked 43 URM identifying medical students to identify challenges that have inhibited their professional success in medical school. Participants identified discrimination and a lack of support from colleagues and educators as main inhibitors of their success. However, they also identified support, mentorship, and professional exposure as the main contributors to their success in medical school. This demonstrates that URM medical students still encounter substantial barriers to their professional development that may be mitigated through mentorship.

A new approach to surgical hidden curriculum demystification is necessary to create equitable access to mentorship and promote surgical interest among all medical students. One proposed mechanism for introducing medical students to the hidden surgical curriculum is through formalized teaching and open discussions.⁹ However, when implemented, these sessions have typically been led by faculty, and anecdotally there is concern that these faculty led sessions may hinder student participation. In contrast, near-peer learning and mentorship programs have been shown to create a collaborative and safe learning environment.¹⁰ Formalized near-peer mentorship programs have been shown to benefit both URM mentors and mentees.^{11,12} As such, near-peer mentorship programs may be a better mechanism for introducing students to the surgical hidden curriculum.¹³⁻¹⁵

Herein, we describe the implementation of a near-peer mentorship program to overcome the surgical hidden curriculum. We developed a formalized near-peer mentorship curriculum

consisting of quarterly small group near-peer led lessons and one-on-one near-peer mentorship meetings designed to cover hidden curriculum topics. Our ultimate goal is to eliminate barriers to medical student interest in pursuing a career in surgery, specifically among URMs. This is important and generalizable given the increasing recruitment and matriculation of URMs to medical schools throughout the country. As well as the need and desire to diversify the surgical workforce.

APPROACH

Design

This near-peer mentorship model is designed to support medical students throughout undergraduate medical education. All medical students are surveyed quarterly to invite them to join the program. Any medical students interested in participating in the program are eligible. However, URM medical students are encouraged and recruited to participate by advertising to URM support groups such as the Student National Medical Association (SNMA) and the Latino Medical Student Association (LMSA). In this model, near-peer mentors include both Surgical Peer Teachers (SPTs) and Surgical Support Teams (SSTs) (Fig. 1). Near peer mentors are diverse and from a wide array of backgrounds. Seventy-seven percent of near peer mentors, all involved surgical resident mentors, and the confidential advisor identify as URM. SPTs are volunteer third-year medical students (MS3s), fourth-year medical students (MS4s), and surgical residents who are interested in surgical education. SSTs also include second-year medical students. As medical students progress through their undergraduate medical education, they become peer mentors for students in the years below them (Fig. 2). MS4s are mentored by surgical residents in their professional development years. Students who are taking a professional development year between their third and fourth years of medical school are mentored either by MS4s who previously completed a professional development year or surgical residents. A faculty surgeon serves as a confidential advisor, and all near-peer mentors are encouraged to consult the confidential advisor when a topic is beyond their scope. The near-peer mentors have scheduled quarterly check-ins with the confidential faculty advisor to assess the program.

SSTs and SPTs follow the formalized curriculum described in Table 1. This curriculum was inspired by a previous near-peer resident mentorship program implemented at the Massachusetts General Hospital and was designed by medical students at our institution with approval by surgical residents and the our institutional medical student surgical education team. Curriculum topics were chosen based on unanimously desired topics selected by third- and fourth-year medical students. Sessions were scheduled to coincide with important professional milestones in order to improve student success in applying to surgical residency. Sessions are conducted during designated blocks embedded within the medical student curriculum called “ARCH weeks” that focus on Assessment, Reflection, Coaching, and Health. Medical students have limited scheduled obligations during “ARCH week” and are more likely to participate in mentorship sessions during this time.

One-on-One Quarterly Structured Mentorship Meetings (Led by SSTs)

SSTs are responsible for conducting one-on-one quarterly meetings with students interested in surgery (Table 1). Upon entering the program, SSTs and mentees fill out a short survey in order to pair SSTs with one or two mentees based on specialty, research, and extracurricular interests. SSTs and their mentees meet quarterly for one-on-one meetings. SSTs are given a formal mentorship worksheet that outlines topics to be discussed during each session based on the curriculum. Each session will be one hour in length, with the first half guided by the worksheet and the final half reserved for open discussion. At the conclusion of each session, both the SST and the mentee complete a short survey to provide feedback to improve future mentorship sessions.

Small Group Hidden Curriculum Sessions (Led by SPTs)

SPTs will facilitate quarterly, hour-long small group discussions with 5 to 10 students centered around pre-determined surgical hidden curriculum topics (i.e., surgical teams in and out of the operating room, surgical culture, and working with a difficult team member) (Table 1). These sessions are available to all medical students regardless of specialty interest in order to increase medical student engagement and exposure to surgery. The first half of these sessions will be dedicated to a formal presentation followed by open discussion. URM surgical faculty or residents will participate in guest speaker sessions to discuss their pathway to surgery. After each session, both the SPTs and the mentees complete a short survey to provide feedback in order to improve future mentorship sessions.

CONCLUSION

To our knowledge, this is the first longitudinal formal near-peer mentorship program designed to promote URM medical student interest and success in a surgical career. Our ultimate goals for implementing this program are to both mitigate the propagation of harmful surgical stereotypes and to improve URM support in surgery by uncovering the hidden curriculum. This program has the potential to deconstruct the surgical hidden curriculum for all medical students in a safe environment, thereby contributing to the professional development of the next generation of surgeons.

The concepts covered in our formalized near-peer mentorship curriculum are generalizable in undergraduate medical education. Although our institution has embedded dedicated time for wellness and mentorship throughout the medical school curriculum, the timing of these sessions is flexible and can be adapted to a diverse range of curricular design. We feel that the number of URM identifying near-peer mentors participating in the program will foster surgical interest and a sense of belonging among URM medical students. We recognize that some institutions may not have this same representation among their mentors. However, we believe that a formalized mentorship model administered by allies within the field will still be impactful and allow departmental support of URM medical students interested in surgery.

This program requires further investigation to determine the utilization, impact on surgical specialty interest (overall and among URM), and perceived efficacy in deconstructing

the surgical hidden curriculum. These future studies will inform mentorship topics and mentorship approaches.

We feel that this work is timely and will be of interest to many Departments of Surgery who aspire to support and recruit URM students to pursue surgery.¹⁶ As medical school admissions continue to diversify, we must ensure that URM students have equitable access to surgical mentorship and support.¹⁷ This is specifically important given the relatively small number of URM surgical faculty available to URM students for mentorship and sponsorship and the historically low proportion of URM surgery residency applicants invited to interview,^{18,19} We believe that this formalized mentorship model will break down barriers, bolster the professional development, and improve the pipeline of URM surgical residency applicants.

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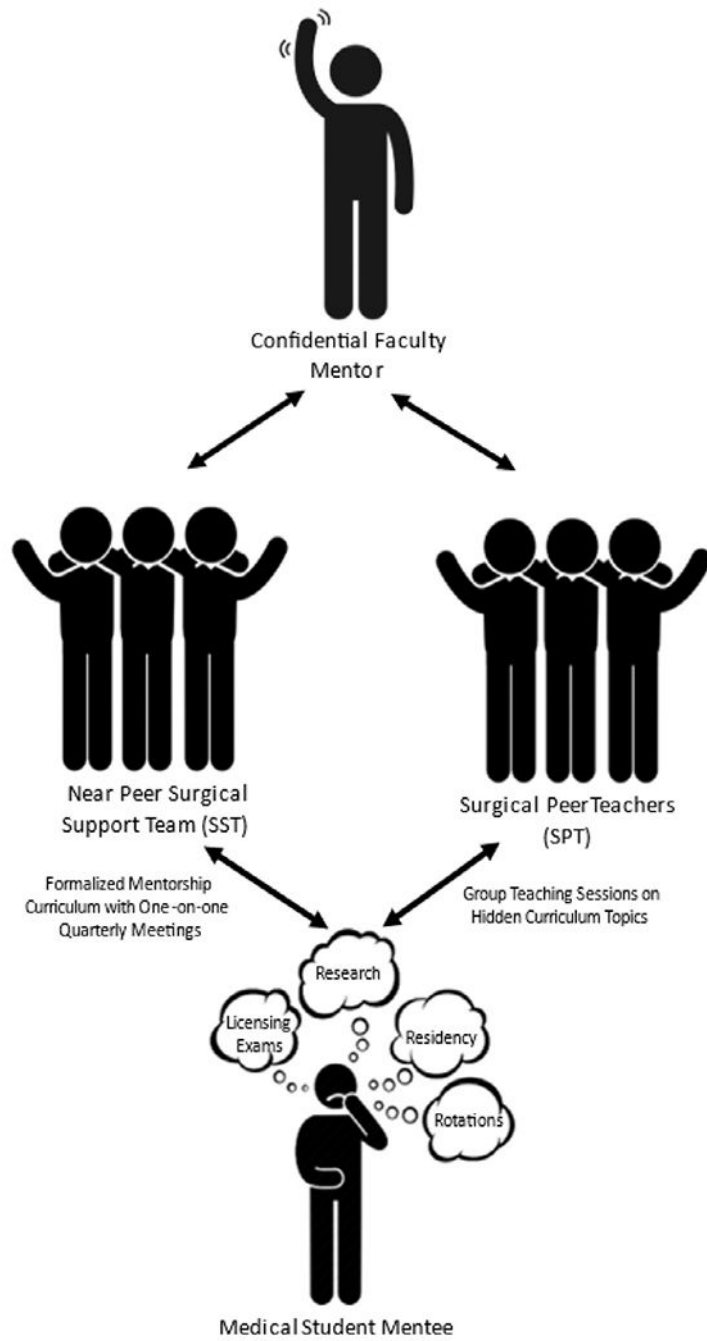


FIGURE 1. Hidden curriculum mentorship opportunities for medical students.

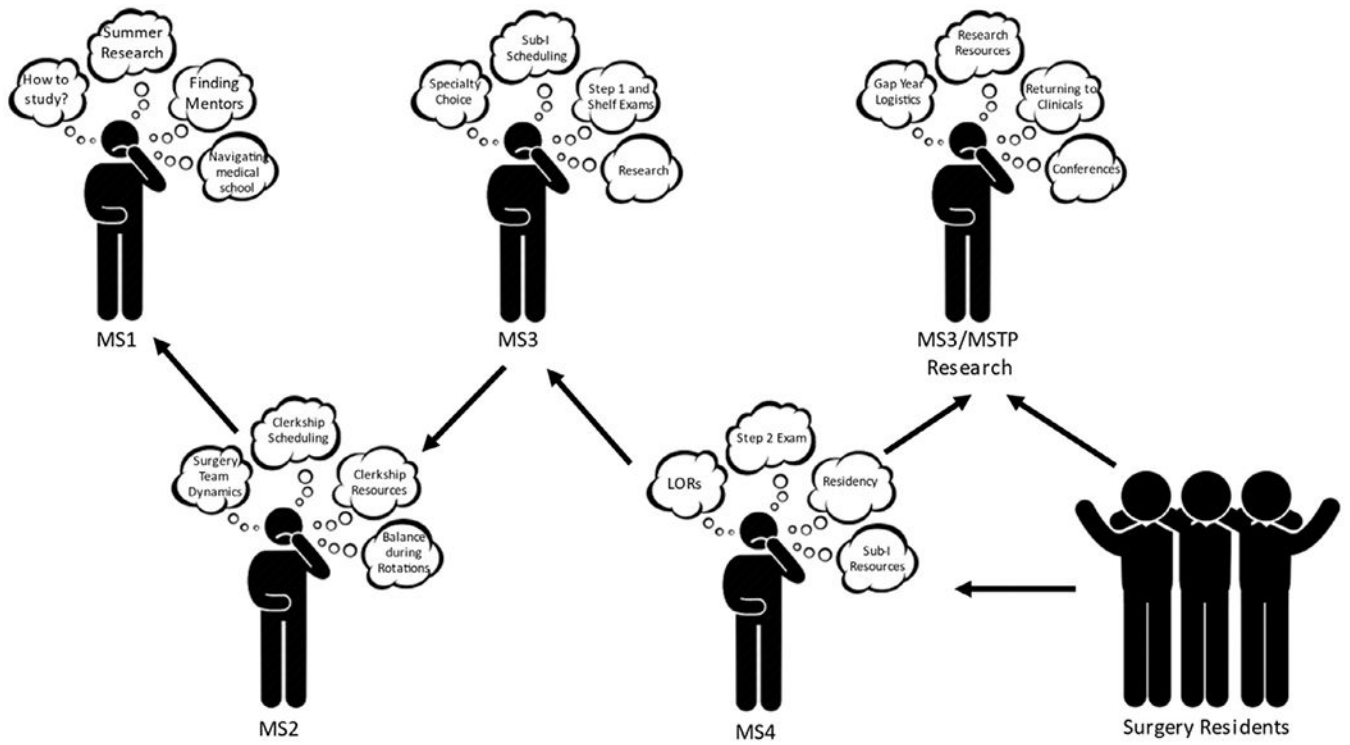


FIGURE 2.
Near-peer mentorship framework.

TABLE 1.

Near-Peer Mentorship Curriculum

	Summer	Fall	Winter	Spring
MS1 SPT	<ul style="list-style-type: none"> - Welcome to medical school - What is the hidden curriculum- Study resources - Overview of research and group opportunities 	<ul style="list-style-type: none"> - Look for mentors-Guest Speaker 	<ul style="list-style-type: none"> - Select a summer research project 	<ul style="list-style-type: none"> - Research resources
SST	<ul style="list-style-type: none"> - Expectations of mentoring relationship 	<ul style="list-style-type: none"> - Explore research & clinical interests - Discuss summer plans, identify grants - Navigate shadowing opportunities 	<ul style="list-style-type: none"> - Complete Career Development Plan - Connect mentee with a resident mentor - Discuss summer research plans 	<ul style="list-style-type: none"> - Having a productive summer
MS2 SPT	<ul style="list-style-type: none"> - Guest Speaker 	<ul style="list-style-type: none"> - MS3s and the surgical team in and out of the operating room -Surgical culture 	<ul style="list-style-type: none"> - Prepare for clerkships--'What I wish I knew' - Clerkship study resources 	<ul style="list-style-type: none"> - Working with a difficult team member
SST	<ul style="list-style-type: none"> - Transition to MS2 - Wrap up summer projects 	<ul style="list-style-type: none"> - Clerkship scheduling -Surgical skills 	<ul style="list-style-type: none"> - Time management during clerkships - Wellness during clerkships 	<ul style="list-style-type: none"> - Career goals - Picking a specialty
MS3 SPT	<ul style="list-style-type: none"> - Step 1 resources - Pick a research project 	<ul style="list-style-type: none"> - Guest Speaker 	<ul style="list-style-type: none"> - Should I take a research year? - Surgical Sub-I -'What I wish I knew' 	<ul style="list-style-type: none"> - Step 2 resources - Residency application timeline
SST	<ul style="list-style-type: none"> - The Step 1 study schedule - Sub-I Selection 	<ul style="list-style-type: none"> - Any questions during Step studying - Step 1 Study Time 	<ul style="list-style-type: none"> - Specific surgical Sub-I resources - Should I take a research year? - Away rotations 	<ul style="list-style-type: none"> - Create a Step 2 study schedule - CV workshop - Ask for LORs
Gap Year	<ul style="list-style-type: none"> - Transition to the research year - Create a conference/abstract deadline calendar - Gap year logistics 	<ul style="list-style-type: none"> - Program specific logistics (MPH, MAS, MSTP) - How to stay involved - Publication goal setting 	<ul style="list-style-type: none"> - Sub-I selection - Where and how do I publish a paper? 	<ul style="list-style-type: none"> - Return to the clinical setting
MS4 SPT	<ul style="list-style-type: none"> - Application Logistics - Define your personal version of success, build your brand, what do you value? 	<ul style="list-style-type: none"> - Interview Logistics (Thank you letters, what to wear, questions to ask, advocating for yourself) - Interview Resources 	<ul style="list-style-type: none"> - Writing an interest or intent letter? - Managing post-interview communication 	<ul style="list-style-type: none"> - How to prepare for residency - Preliminary year logistics
SST	<ul style="list-style-type: none"> - Personal Statement - Activity Description 	<ul style="list-style-type: none"> - Review your definition of: your personal version of success, build your brand, what do you value? - Making a rank list - What happens if you don't match 	<ul style="list-style-type: none"> - Surgical residency resources 	