Impact of a Mentored Otolaryngology-Head and Neck Surgery Clerkship for Underrepresented Minority Students

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Abstract

Objectives: To describe the impact of a mentored clerkship initiative on underrepresented minority (URM) medical students interested in otolaryngology-head and neck surgery (OHNS).

Study Design: Prospective observational study

Methods: An outreach effort to recruit URM students to the specialty was initiated in 2008, consisting of a three-month research clerkship and a one-month clinical rotation. Financial assistance and faculty mentorship were provided to the students. Upon completion of the clerkship, students completed a post-rotation evaluation form. Students were followed regarding residency applications, match status, and publications. Post-rotation evaluations were compiled and reviewed. The number of overall publications including publications resulting from interaction with faculty was calculated.

Results: Fifteen students participated in the clerkship from eleven medical schools. Seven students participated in the clinical clerkship, five in the research clerkship, and one in both clerkships. Evaluation 5-point Likert average scores and comments revealed high student satisfaction with the rotations (4.85), provided individual mentorship (4.85), and exposure to academic medicine (4.82). Participants indicated the rotation favorably impacted their decision to apply for OHNS residency training and increased their interest in academic medicine. The participants had an average number of 1.7 publications, with 1.18 publications in OHNS journals. Six publications resulted because of direct interaction between students and faculty during the clerkship. Seven students applied for OHNS residency programs, and six matched successfully.

Conclusions: Mentored clerkships for URM medical students interested in OHNS can intensify student interest in applying to OHNS residency training programs, expand the number of research opportunities, and increase student interest in academic medicine.

Introduction

Minority groups, including African-Americans, Hispanics or Latinos, and Asian-Americans, represent greater than 37% of the total US population with women constituting 50.8% and projections that Non-Hispanic whites will become the minority by 2042.1

Multiple studies investigating the composition of medical students, resident physicians, and faculty have revealed a dearth of underrepresented minorities in the pool of trainees and academic physicians.2,3,4 Underrepresented minorities (URM) include African-Americans, Hispanics, and Native Americans. Moreover, minority representation in otolaryngology-head and neck surgery (OHNS) has been reported as significantly lower compared to other medical specialties.5

Establishing faculty mentorships and role models to future minority trainees proves essential in influencing a medical student’s choice of clinical field for residency training.6

An initiative named the Johns Hopkins Department of Otolaryngology-Head and Neck Surgery Clerkship Program for Underrepresented Minority Medical Students aims to offer underrepresented minority medical students, interested in Otolaryngology-Head and Neck Surgery, mentorship while providing clinical and research opportunities at a tertiary academic medical department. The objective for the department is to develop a pipeline of URM medical students to recruit and retain within the field of OHNS with the hope of increasing the physician diversity within the OHNS specialty.

Methods

2008 – Clerkship Program created for URM medical students
• Publicized by posting information on websites, SNMA flyers, and contacting dean of medical students at traditional URM medical schools.
• Standard application process for 1-month clinical or 3-month research/clinical clerkship. Financial assistance provided for registration and housing.
• Mentors provided with facilitated introduction and weekly meetings to discuss feedback, concerns, research interests, teaching, and career mentorship.
• Completion of Clerkship – Students receive feedback from mentors, residents, and clerkship coordinator
• Post-rotation evaluations are filled by students
• Remain in contact to learn about student’s residency application, residency field, matched residency, and research involvement with publications

Evaluation Form Questions
1. Did the rotation meet my expectations
2. The rotation was a good exposure to a broad range of subjects in otolaryngology-head and neck surgery
3. The rotation was a good exposure to academic medicine
4. I received appropriate mentorship during my rotation
5. The rotation favorably impacted my decision to consider applying to an otolaryngology residency
6. The rotation favorably impacted my decision to consider working in an academic position upon completion of my residency
7. If research was part of your rotation my research experience was educational and met my expectations

Results

15 clerkship students (August 2009 and October 2014), 9 students in the clinical clerkship, 5 in the research clerkship, and 1 in both clerkships.

Comments:
• “It was great to come in as a visiting student and know already that I had a mentor who was there to bounce ideas off of and serve as an advocate.
• “Having a faculty mentor was an extremely positive component of the clerkship. The mentorship allowed me to feel at home in the department. I believe this played a significant role in my positive experience here.”
• “Meeting with my mentor every week was also beneficial as it allowed me to get feedback and direction.”
• “My faculty advisors not only provided effective guidance for my summer projects, but also influenced my future career plans.” Further commenting that the mentors “truly demonstrated their investment in my success as a medical student, researcher, and future physician.”

Publications
Average 1.7 per clerkship participant; average 1.18 in OHNS journals. 6 publications direct result of faculty-student interaction

Residency Match:
• 7 students applied to OHNS residency programs; 6 students matched successfully; 3 matched at Johns Hopkins Department of OHNS

Johns Hopkins Resident Diversity (2008 compared to 2014)
• URM representation increased from 9% to 16% of total residents
• African American representation increasing from 0% to 8%
• Hispanic representation decreased from 9% to 8%
• Native American representation remained 0%

Discussion

The clerkship offers medical students an opportunity to become integrated into the clinical teams, immersed in research, and aligned with a mentor in a setting valuing diversity, inclusion, and support. Feedback on the clerkship had students reporting meaningful mentorship, valuable research experience with resulting publications, and favorable impact on the decision to consider academic medicine.

Additionally, clerkship students applied to OHNS residency programs with a majority matching successfully, and 3 at our own institution. This has increased the URM resident representation at our institution from 9% to 16% over 6 years proving higher than the previously reported national URM OHNS resident representation of 8.3% (2010).6

A significant factor contributing to the success of the clerkship is the role of mentorship. Prior studies show students exposed to positive role models within a field had higher odds of choosing that specialty (OR 3.6; 95% CI 1.4–9.3).7 Serving as role models, mentors have significant impact by providing advice regarding career choices and academic endeavors.

Importance of increasing OHNS physician diversity lies in that minority physicians disproportionately serve patients from minority groups and disadvantaged backgrounds.8 Moreover, patient-physician race concordance improves quality of care defined by better interpersonal care, technical aspects of care, and elimination of disparities.9 Increasing diversity within otolaryngology residency programs could produce a future collective of otolaryngologists that would potentially increase access and improve quality of care for patients from underserved populations and diverse groups.

Conclusions

Mentored clerkships for underrepresented minority medical students interested in OHNS:
• Increases student interest in applying to OHNS residency training programs
• Expands the number of research opportunities
• Increases student interest in academic medicine.
• Creates pipeline to recruit and retain URM medical students within OHNS residency programs

References

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Figure 1. Diversity Clerkship Medical Student Home Institutions

Figure 2. Evaluation Form Results. n=13

Figure 3. Student Outcomes After Diversity Clerkship.