

Masters Program with Strong Peer Mentoring Serves as Excellent Pipeline for Admissions to Boston University Henry M. Goldman School of Dental Medicine

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RATIONALE AND SIGNIFICANCE

Boston University School of Medicine (BUSM), in collaboration with Boston University Goldman School of Dental Medicine (BUGSDM), implemented a credential enhancing pipeline program in 2005 to increase the number of under-represented minority (URM) and disadvantaged students recruited to BUGSDM. Now completing its 10th year, the Oral Health Sciences (OHS) Master's program has been extremely successful in preparing students from varying backgrounds for dental school admission. Implementation of an innovative longitudinal cross school peer mentor program within OHS has benefited the mentees (OHS students) as well as the mentors (OHS graduates attending BUGSDM).

INTRODUCTION

URMs in Dentistry:

Decreasing the health disparities gap¹ is a nationwide priority. Although 25% of the general population are URMs only 13% of dental school enrollees are URMs; thus there is a need to prepare more students of color academically for admissions to dental school². BUGSDM, in collaboration with the graduate school at BUSM, implemented a pipeline program (2005) funded by the Robert Wood Johnson Foundation and California Endowment. The program aimed to enhance the academic preparedness of students from disadvantaged backgrounds and those from all race/ethnicities underrepresented in the field of dentistry.

The OHS Program:

The OHS program is a rigorous 32 credit graduate Master's degree program. The students take several of their classes with the DMD 1 students at BUGSDM, enabling the faculty to compare the students' readiness for the rigors of a dental school education. With the implementation of a strong advising/mentoring system, students improve not only their credentials and academic readiness, but also their studying and test-taking skills.

Peer Mentoring:

This preliminary study assessed the OHS longitudinal peer mentor program. As in other peer mentoring programs, mentors work with underclassmen; however, a unique feature of our program is that mentees who are successful in gaining admission to BUGSDM often go on to serve as mentors to a new class of matriculating OHS students. Having successfully gone through the OHS program, the mentors are well-situated to advise.

REFERENCES

¹Formicola et al. (2010). J Dent Educ 74, S67-S73.
²ADEA, U.S. Dental School Applicants and Enrollees, 2000-14

METHODS

Academic success of students enrolled in OHS during the years 2006-2015 was assessed by evaluating undergraduate GPA (UGPA), OHS-GPA, DAT academic average and successful matriculation to dental school. One-way ANOVA was used to determine significance. Race/ethnicity information was collected from admissions records.

Mentoring Program:

The peer mentor program was implemented to improve academic success of OHS students by providing both academic and community support to students (including disadvantaged and URM) in the rigorous OHS program. Faculty provide academic skills support and graduates of OHS attending BUGSDM provide additional support by participating in the following activities:

- Weekly group review sessions
- Individual Tutor in DMD courses
- Panel participant (study skills, thesis, capstone)
- Facebook group administrator
- Tour guide
- Teaching assistant
- Admissions ambassador

To assess the usage of the mentoring program, enrolled DMD students at BUGSDM who graduated from OHS between 2010-2014 were surveyed anonymously.

Outcomes were measured as (i) percent of students participating in mentoring activity and (ii) positive open response comments. Students had multiple opportunities to get involved at both the MS and DMD levels promoting collaboration between BUGSDM and BUSM. Mentors are provided guidance by Program Director. The survey completion rate was 58%; participants answered questions as an:

**OHS graduate student receiving mentoring
OHS alumni/DMD student at BUGSDM**

Questions asked of mentees on the survey were:

As an incoming OHS student:

- Did you speak to an OHS student / alum before arriving for orientation?
- Did you meet the OHS Director and have a tour of the campus before orientation?
- Did you find the lunch /tour with OHS alumni / DMD students at orientation helpful?
- Did you find the OHS Facebook group helpful?

As an OHS student, did you:

- Did you find the study skills panel offered by DMD students helpful?
- Did you receive tutoring in the OHS Biochemistry, Physiology and/or Microbiology?
- Did you find the weekly Physiology & Biochemistry review session helpful?
- Did you speak with an OHS alumni regarding a thesis or capstone opportunity?

Questions asked to mentors on the survey were:

As an OHS alumni/DMD student:

- Did you serve as a tutor or TA for DMD Biochemistry, Physiology and/or Microbiology?
- Did you serve on the study tips panel, and thesis or capstone panel?
- Did you serve as a weekly review session teaching assistant?

PIPELINE SUCCESS

The OHS program has been very successful, with 89% of graduates, including 31 URM's, matriculating to dental school between 2006-2015.

- Of those matriculating to BUGSDM 23 were URM (23/31)
- Other schools accepting URMs (Meharry, Tufts, NYU)

Strong OHS performance is predictive of acceptance to dental school; UGPA does not correlate.

Enrolled Student Demographics 2006-15		
	Number (n=159)	Percent
Male	80	50.3
Female	79	50.0
Disadvantaged	22	13.8
SES 1 -1 st gen college	15	9.4
Native American, Pacific Islander	4	2.5%
African American	13	8.2%
Asian	47	24.5%
Hispanic/Latino	22	30.0%
White	58	36.5%
Decline to declare	15	9.4%
Total URM	39	24.5%

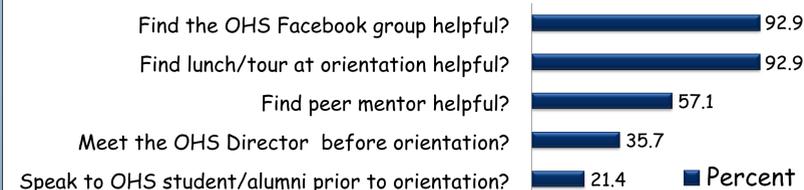
OHS Graduate Academics

Mean ± s.d.	Admitted DMD (n=49772) * ADEA	OHS admitted to DMD (n=159)	OHS-URM admitted to DMD (n=36)	OHS not admitted to dental school (n=12)
UGPA	3.53± 0.02	3.07 ± 0.07 p<0.001	2.97 ± 0.16 p<0.001	3.05 ± 0.17 p<0.001
OHS GPA	N/A	3.50 ± 0.30 p<0.001*	3.30 ± 0.32 p<0.001	3.04 ± 0.16 p<0.001
DAT	18.25+0.41	18.32 ± 2.13 p=0.08	17.07 ± 1.04 p<0.001	16.5 ± 1.71 p<0.001

MENTORING PROGRAM PRELIMINARY RESULTS

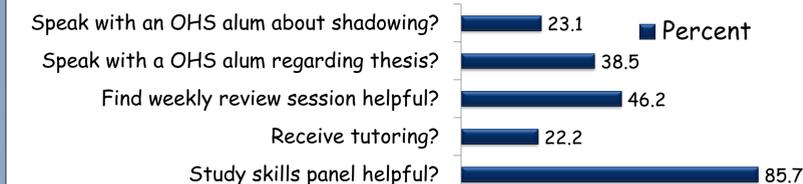
The survey completion rate was 58%

OHS Student Contact with Peer Mentors at the Beginning of OHS Program (n=16)



MENTORING PROGRAM PRELIMINARY RESULTS

OHS Student Contact with Peer Mentors Throughout the OHS Program (n=14)



Open Response Comments

- **Mentor:** Very rewarding – (I) feel strongly about ensuring that the program stays strong, as it was such a positive experience for me, it also helped me keep up with the material, which will ultimately aided me when I taking my National Boards
- **Mentee:** It was very helpful to have someone who had been through the program to help us know what to expect, and what was expected of us. It was nice for us to have contact with upper years for guidance and help
- **Mentee:** I think the review sessions foster discussion which helps when studying for biochem(istry) and physio(logy).
- **Mentee:** I think that one of the best aspects, and what makes BU OHS so unique, is that there are so many resources in the form of OHS alumni. It's a big community, and especially great to be able to talk with someone who successfully completely the program as you are going through it yourself.
- **Mentee:** I believe mentors are essential in the journey through GMS (OHS) and towards dental school

CONCLUSION

Preliminary results indicate that the cross-school OHS – DMD mentoring program benefits both the OHS student and BUGSDM students who graduated from OHS as supported by:

- (1) Strong participation rate at the MS & DMD levels
- (2) Positive survey feedback
- (3) Strong success rate for matriculation to dental school (90%)

Results indicated that group review sessions (46%), individual tutoring (22%) and study skills support (84%) are the most beneficial services utilized.

Development of (i) formal training for mentors and (ii) assessment of academic activities through defined metrics at the DMD and MS levels individually are needed. Additionally, tracking of URM mentee involvement with BUGSDM academic success will substantiate the positive benefits of this program.