Assessing the Impact of Street Medicine Oakland on Medical Student Perceptions of Clinical Preparedness

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Introduction

- Medical students spend the first two years of medical school focusing on didactic learning supplemented with clinical skills training as they prepare for their hospital rotations
- Opportunities for in-field practice of clinical skills are typically sparse for medical students during their M1 and M2 didactic years
- Research suggests clinical supervisors rank professionalism and willingness as the two most important characteristics in students that promote clinical preparedness, but there is limited research on interventions that promote students' self-perceptions of clinical preparedness[1]
- Medical students at Oakland University William Beaumont (OUWB) have the opportunity to volunteer with Street Medicine Oakland (SMO), an organization that provides medical care to individuals experiencing homelessness at HOPE Shelter in Pontiac, MI
- These outreach events provide students with exposure to medical care in a nontraditional setting, opportunities to provide medical care for individuals experiencing homelessness, and clinical skills mentoring from peers, residents, and physicians
- Medical volunteer experiences promote confidence and empathy in medical students[2]
- Higher reported provider confidence is correlated with improved clinical outcomes[3]
- Determination of possible impacts of SMO outreach on student preparedness allows for cultivation of greater volunteer opportunities for medical students at OUWB

Aims and Objectives

- This study aims to determine how SMO outreach impact student perceptions of clinical preparedness during their preclinical years
- Assess student confidence in various aspects of the clinic experience as a proxy for overall perception of clinical preparedness
- Identify facets of SMO outreach that best promote the development of clinical skills and identify domains that could be improved

Methods

- An online Qualtrics survey was distributed to SMO volunteers following HOPE Shelter outreach
- The survey assessed student comfort levels in specific activities before and after participation in SMO outreach
- Participants were asked to score their comfort levels on a Likert scale from 0-100, with 0 representing extremely uncomfortable and 100 representing extremely comfortable
- Domains assessed included comfort taking a thorough HPI, completing a focused physical exam, formulating an assessment and plan, and presenting to a physician
- Surveys were distributed to 36 students after outreach with 11 volunteers responding (31% response rate)
- A paired t-test was utilized to analyze the mean change in comfort level across each domain assessed with a p value <0.05 used as the cutoff for statistical significance

Results

Table 1: Mean Student Responses

	Before Volunteering	After Volunteering	P Value
Comfort with providing direct patient care at the bedside	60	77	$p < 0.05$
Comfort with taking a thorough HPI	74	84	$p = 0.07$
Comfort with performing a thorough physical exam	52	71	$p < 0.05$
Comfort with formulating an assessment and plan	39	67	$p < 0.05$
Comfort with presenting your patient encounter, assement, and plan to an attending	48	69	$p < 0.05$

- 9 of the 11 surveyed participants volunteered at least 4 different times at HOPE Shelter
- Survey participants indicated plans to pursue careers in: emergency medicine, internal medicine, pediatrics, OBGYN, undecided
- The domains assessed in Table 1 were also assessed with regards to providing care to patients experiencing homelessness
- Statistically significant increases in confidence were found in 11 of 14 assessed categories

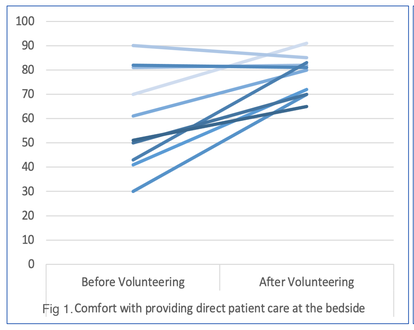

Fig 1. Comfort with providing direct patient care at the bedside

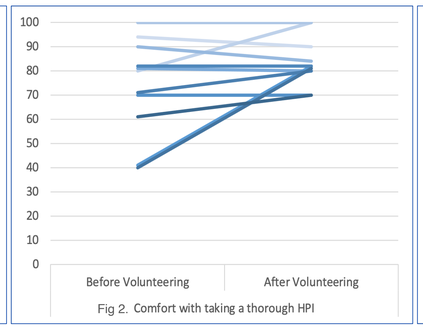

Fig 2. Comfort with taking a thorough HPI

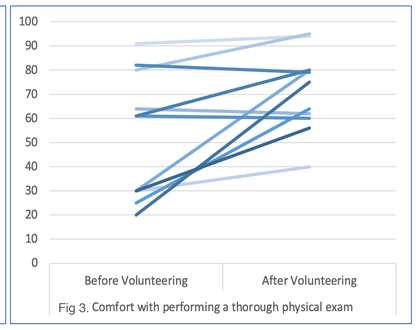

Fig 3. Comfort with performing a thorough physical exam

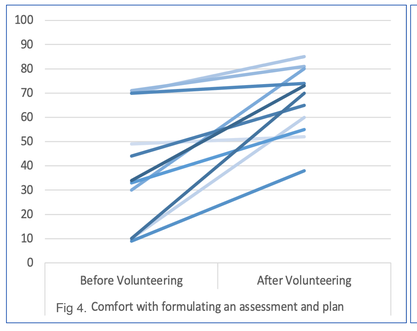

Fig 4. Comfort with formulating an assessment and plan

Fig 5. Comfort with presenting your patient encounter, assement, and plan to an attending

Conclusions

- These results support the hypothesis that volunteering with SMO improved student perceptions of their clinical preparedness
- Providing medical students with opportunities to practice their clinical skills in a nontraditional medical setting leads to increased confidence in their bedside abilities
- Results of this study provided SMO with data to guide the restructuring of pre-outreach instructional procedures to further promote educational opportunities that would foster student preparedness and success
- Limitations to this study include the small sample size (n=11) and retrospective nature of the survey
- Future studies should follow student volunteers throughout their medical school education with frequent pre and post outreach surveys to track clinical skill developments overtime
- Additional research should be directed towards exploring how SMO volunteer opportunities impact student empathy

References

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