Is Exposure to a Student-run Clinic Associated With Future Primary Care Practice?

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BACKGROUND AND OBJECTIVES: The number of student-run clinics has increased in recent years, but student outcomes from participation are largely unknown. This study explored whether or not there is an association between presence of a student-run clinic at a medical school and future practice of medical school graduates in a primary care specialty.

METHODS: A 2005 survey of all student-run clinics associated with medical schools was supplemented by direct survey of schools missing from this dataset. We used multiple linear regression to test associations between presence of a student-run clinic and current primary care practice, using specialty designation in the American Medical Association Physician Masterfile and controlling for medical school confounders (urban versus rural, private versus public, and absence versus presence of family medicine department.)

RESULTS: In 2005, 72 medical schools had at least one student-run clinic, and 43 schools did not (93.5% response rate). After controlling for confounders, the correlation coefficient between presence of student run clinic in 2005 and current primary care practice is -0.0122.

CONCLUSIONS: We found no association between having a student-run clinic in 2005 at a medical school and proportion of its graduates who currently practice primary care. Since there are considerable limitations of an institution-based study, it may be useful to study specialty choice for individual students who participate in student-run clinics, given that prior research has shown longitudinal educational experience with underserved population is associated with increased likelihood of choosing primary care careers.

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Student-run clinics have emerged in many medical schools to fulfill the dual purpose of providing service-learning opportunities for students and providing access to care for indigent populations. There is little research or evaluation of whether or not these clinics affect educational or professional outcomes. One of the challenges of studying student-run clinics is lack of consistency of design of student-run clinics, level of student participation, and how, or whether, the experience is formally incorporated into the curriculum. In 2005, Simpson and Long completed a systematic survey of student-run clinics and their characteristics. A 2009 literature review on student-run clinic research identified areas for future research including student outcomes and specialty choices following involvement in a student-run clinic. One study published in 1985 demonstrated an increase in family medicine and overall primary care Match rate after involvement in a student-run clinic at one medical school. Since then, there have been a number of studies examining medical student performance following involvement in a student-run clinic but none on specialty choice.

A recent study of influences on medical student specialty choice identified multiple factors associated with increased likelihood of choosing a primary care career: attending a public school, a rural school, or a school with a department of family medicine independently predicts likelihood of choosing a primary care career. The current study also included having a community health elective and student desire to serve an underserved community as relevant factors. While neither of these is specific to involvement in a student-run clinic, they may increase the likelihood of doing so. This study seeks to test the association between the presence of a student-run clinic at a medical school and future practice of medical student graduates in a primary care specialty.

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Methods
We obtained the list of student-run clinics collected in 2005 from Simpson and Long.1 They identified 111 student-run clinics at 47 of 123 allopathic medical schools. Medical schools in US territories were excluded. We contacted the 76 schools missing from Simpson and Long’s data to ask if, to the best of their knowledge, they had a student-run clinic in 2005. We emailed the deans or directors of Student Affairs or director of Service-Learning at each medical school. If they did not reply, we followed up with a second email and then a phone call. Email surveys were sent in February 2011, and follow-up contact was conducted in March 2011. The American Medical Association Physician Masterfile was used to identify the proportion of 2005 US graduates from each medical school who are currently practicing in a primary care specialty (general practice, family medicine, general internal medicine, general pediatrics, medicine/pediatrics, geriatrics). We chose to examine data on current physician practice rather than Match rate as primary care Match rate tends to overestimate actual primary care practice.8 An IRB Exemption was granted by the Harvard School of Public Health.

We then performed a linear regression of the proportion of 2005 US medical graduates currently practicing primary care to the presence of student-run clinics at their medical school in 2005. Based on negative predictive factors associated with choosing a primary care career identified in an earlier study,7,8 we performed a multiple linear regression controlling for those negative predictive factors: schools that were private, urban, or without a department or center of family medicine.

Results
A total of 68 of the 76 surveyed schools responded (90.8% response rate). Combined with Simpson and Long’s initial data, we had student-run clinic data for 115 of 123 allopathic schools (93.5%). Seventy-two schools had at least one student-run clinic and 43 schools did not in 2005. Without controlling for confounders, 16.5% of 2005 medical graduates at schools without student-run clinics in 2005 and 14.6% of 2005 graduates at schools with student-run clinics are currently practicing primary care (P=.132) (Figure 1). The correlation coefficient without controlling for confounders is -0.0189. Multiple linear regression reduced the production of primary care to 7.1% of 2005 medical graduates at schools without student-run clinics and 5.9% at schools with student-run clinics (Figure 2). Controlling for confounders modified the correlation coefficient to -0.0122 (P=.286).

Discussion
We found no difference in future practice in a primary care specialty based on presence or absence of a student-run clinic at a medical school. As the number of practicing primary care physicians continues to decrease in large part due to the decreasing number of medical students deciding to enter primary care, it is imperative that we determine what factors affect medical student interest in primary care.

Figure 1: % of 2005 Medical School Graduates Currently in Primary Care Practice Based on Student-run Clinic Presence Without Controlling for Confounders

Without controlling for confounders, we found 16.5% of 2005 US medical graduates at schools without student-run clinics and 14.6% of 2005 graduates at schools with student-run clinics are currently practicing primary care. When controlling for confounders, the proportion of 2005 medical graduates at schools with student-run clinics is 7.1% compared to 5.9% at schools without student-run clinics. The correlation coefficient is modified to -0.0122 (P=.286).
be improved if individual students are studied longitudinally or retrospectively instead of institutions. As more medical schools open student-run clinics and encourage service-learning experiences during medical school, it will be important to determine whether these experiences affect student specialty interest and eventual student practice patterns.

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References