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“Don’t I need research to get a residency?” Incorporating scholarly activity at a regional campus

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Abstract

The impact of Step 1 becoming pass-fail is yet to be known. Many believe the value and power of scholarly activity will increase across specialties, but opportunities for such activities differ across universities and even between campuses. At the Augusta University/ University of Georgia Medical Partnership, a regional campus of the Medical College of Georgia, we hoped to better understand our students' current scholarly activity production and their reasoning behind pursuing these activities. Student surveys indicated that the three highest specialties of interest were primary care-based; students, on average, had one or two poster presentations and one or fewer manuscripts published in medical school thus far. The top reasons to pursue research were the transition of Step 1 to pass-fail, interest in a competitive specialty, and the encouragement of mentors. We hope by understanding our current medical students, we can further cater to their needs through the creation and implementation of new scholarly activity opportunity initiatives.

Conflict of Interest Statement

There are no conflicts of interest.

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation. No animals were used in this study.

Statement of Funding

There is no funding for this study to disclose.

INTRODUCTION

Consistent calls from the Association of American Medical Colleges (AAMC) to increase medical schools' class sizes have been a substantial factor in creating regional medical campuses (RMC) across the United States¹. In response to the physician shortage, medical schools have worked to increase matriculants by launching these RMCs. The RMCs are usually in smaller cities and rural areas and have, in part, a goal of attracting students who are interested in primary care. These RMCs often have missions that differ from their main campus, emphasizing rural and community medicine². RMCs are classified into one of four models, although variations within the models can occur. The basic science, clinical,

longitudinal/distributed, and combined models are based on the number of years and whether the years are spent on basic sciences, clinical clerkships, or a combination of both². The AU/UGA Medical Partnership is considered a four-year combined model, including two years of basic science curriculum and two clinical years. It is relevant to note that the size of RMCs may impact the resources available for scholarly activity.

Studies such as Indiana's 2009 investigation of an RMC medical student's choice of specialty and practice location show that graduates are more likely to practice primary care.³ Students who match into more competitive specialties tend to have higher

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numbers in both board scores and research. Every medical student, from whichever campus they attend, should have ample opportunities for research and scholarship.

While medical student engagement in scholarship helps students learn to critically evaluate new information, communicate, describe study findings, and participate in the advancement of medical knowledge, it also provides opportunities for increased competitiveness in future residency applications. RMCs may be disadvantaged in attracting students due to a perceived lack of opportunities for scholarly activity. Other barriers may be concerns about access to funding and availability of mentors and projects, discouraging some from considering an RMC for their medical education. RMCs share concerns about bolstering students' level of engagement in scholarly activities but may lack a clear picture of objective data. Though potential barriers may exist, faculty and leaders may not be aware of opportunities. With the shift of board exams, specifically Step 1 to pass-fail, meaningful scholarly experiences will likely have increased importance. In lieu of this change, program directors must rely on Step 2 CK scores, medical school reputation, Dean's letters, applicant familiarity, and scholarly activity.⁴

Our 4-year campus, the Augusta University/ University of Georgia (AU/UGA) Medical Partnership, is an RMC of the Medical College of Georgia (MCG) in Athens, GA. The first class of 40 medical students started in 2010, sharing the mission to combat the expected shortage of physicians in Georgia, and now matriculates 60 students yearly. While its creation and mission are built upon serving Georgia's primary care needs, the AU/UGA Medical Partnership graduates physicians who enter all areas of medicine, including many highly competitive subspecialties. While there are some opportunities to complete basic science research with the University of Georgia, there is a lack of clinical research opportunities.

This study aimed to obtain a snapshot of the current involvement in the scholarly activity of medical students at the AU/UGA Medical Partnership. The Partnership supports medical students through the Medical Scholar Program (MSP), a fully funded

opportunity to complete IRB-approved research between their first and second years. Scholarly activity also includes clinical case reports. Students can apply for up to \$500/year towards travel and registration expenses to present their work. Our survey-based project seeks to examine experiences related to scholarship in academic medicine at all levels of Undergraduate Medical Education (UME) at the AU/UGA Medical Partnership and identify factors related to medical students' perspectives, motivations, and barriers.

METHODS

Subjects

The project to evaluate the research program was reviewed by the IRB at the University of Georgia and determined not to be human subjects research because personal identifiers were not collected in the surveys. Medical students at the AU/UGA Medical Partnership between their first and fourth years of training were surveyed via Google Forms to collect their responses regarding scholarly activity and reasoning for pursuing such.

Measures

All data collected was based on scholarly activity completed during medical school. Students were asked to exclude all activities conducted before matriculating. The survey contained questions regarding the number of scholarly activities submitted and accepted for posters, oral presentations, and journal publications. In addition, it asked about how students found their academic opportunities, time spent, where they presented their work, and the costs of travel and application fees. Information regarding personal specialty interests and reasons for pursuing scholarly activities were also recorded. The survey is included as a supplemental attachment (Supplemental 1). The current year of medical school education was included for each student who responded to the survey.

Analyses

General statistical analyses, including counts and frequencies, were conducted in Excel.

RESULTS

Eighty medical students responded to the survey out of 210, a response rate of 38%. The response rate was greatest from the first-year class ($n = 36$), followed by second-year ($n = 19$), third-year ($n = 14$), and then fourth-year ($n = 11$). Students could select up to three specialties of interest. The top three specialties selected were internal medicine (23), family medicine (18), and surgery (16) (Figure 1).

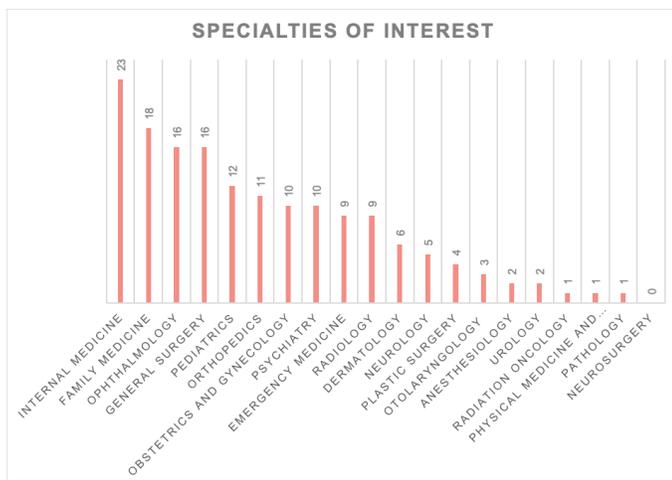


Figure 1. Medical Student Selection of Specialties of Interest

On average, each medical student submitted at least two (2.1) poster presentations while in medical school, with at least one being accepted (1.66). They, on average, per person, submitted 0.81 abstracts for oral presentation, over half of these being accepted (0.68). On average, 0.7 manuscripts were submitted for publication per person, with an average of 0.43 being published per student. Figures 2A and 2B demonstrate the distribution of students by journal publications and poster presentations, divided further by submitted and accepted. Medical students participated more frequently in poster presentations than in journal publications.

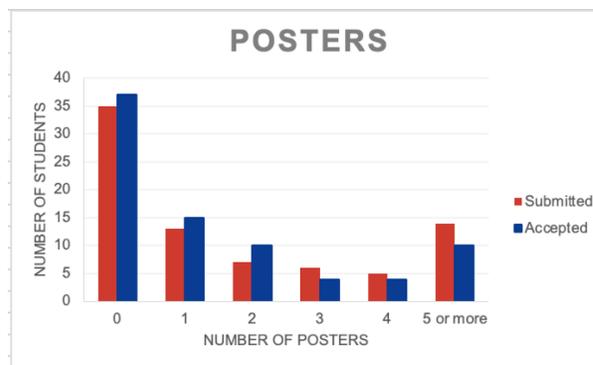


Figure 2A. Number of Poster Presentations Submitted and Accepted By Medical Students

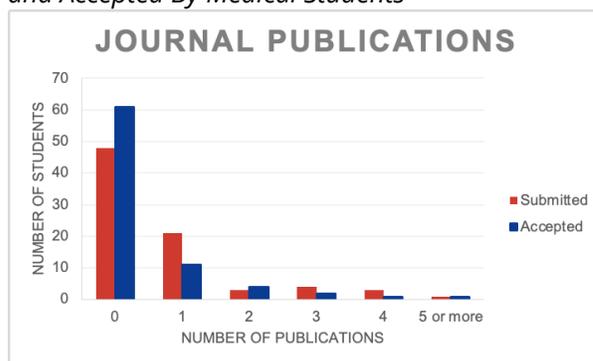


Figure 2B. Number of Journal Publications Submitted and Accepted By Medical Students

These research opportunities were found in a variety of ways. The most common was continued research through the MSP program ($n = 29$, 27%). Twenty-three students (21%) found a new research mentor on their own, twenty-one (19.3%) found a new research mentor through the Medical College of Georgia, fourteen (12.8%) found research opportunities through preclinical community health sites, twelve (11%) found research opportunities through upperclassman, seven (6.4%) continued research through connections made before matriculating, and three (2.8%) found new opportunities during their clinical rotations.

Thirty-seven students selected that they spent one to four hours a week on research, six spent four to nine hours, and one spent ten to fourteen hours; none spent over fifteen hours weekly (Figure 3). Most students presented their scholarly works within the Southeast region ($n = 57$, 74%) (Figure 4).

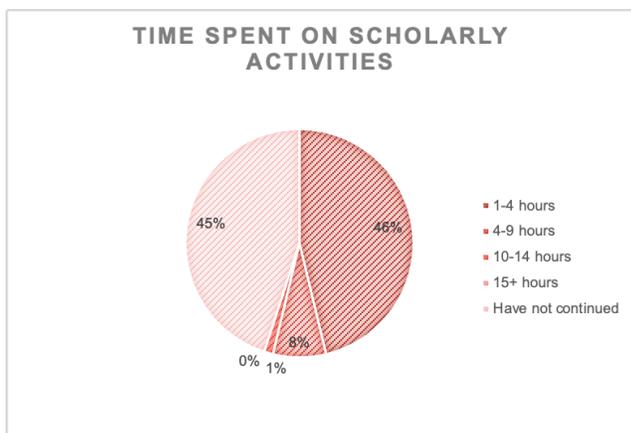


Figure 3. Time Spent on Scholarly Activities By Medical Students

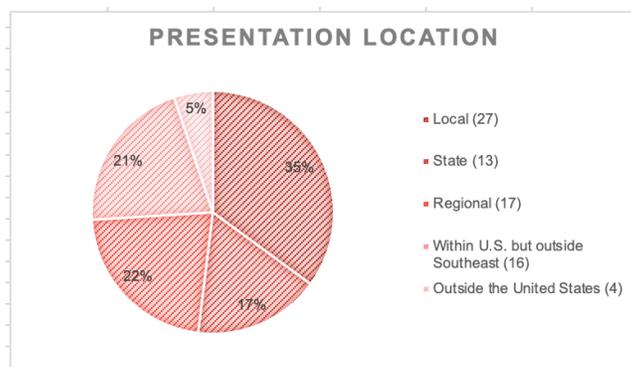


Figure 4. Presentation Location of Scholarly Activities By Medical Students

The students were asked about their reasoning for pursuing research. The most selected answer (n = 46) was “Step 1 now pass/fail means I needed to find other ways to stand out”. Forty different students selected both options, encouragement from others and competitive specialty. Thirty students selected networking, and sixteen selected that they wanted research to be a career staple (Figure 5).

Figure 5. Medical Students Reasoning to Pursue Research Opportunities

When asked if the medical school provided enough opportunities for scholarly activities, 20% selected yes, 38% selected no, and 41% selected maybe. These results were then further separated by class (Figure 6).

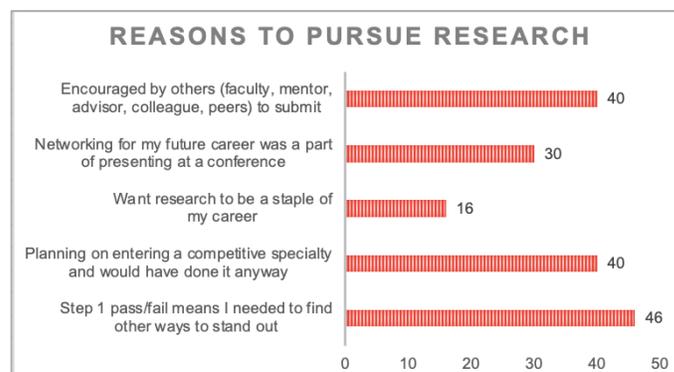


Figure 5. Medical Students Reasoning to Pursue Research Opportunities

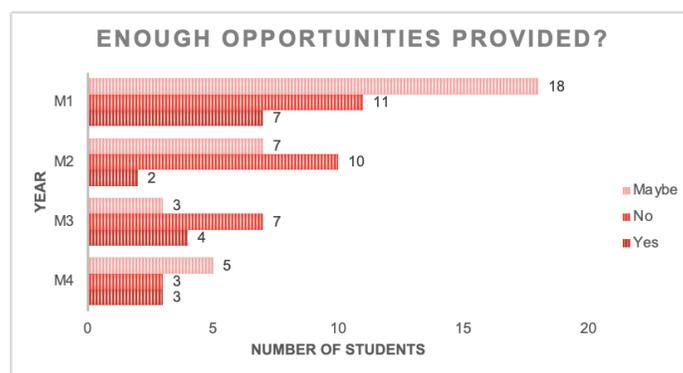


Figure 6. Medical Students Belief on Adequacy of Opportunities Provided Separated by Medical Student Class

Discussion

This study serves as a starting point to describe and better understand the landscape of scholarly activity and perception of such within an RMC. The results show that there is a relatively low production of scholarly activities, with, on average, each student producing 1-2 accepted scholarly activities during their medical school career thus far. It is important to note that most of our responses came from first and second-year medical students. At this point in their medical education, this scholarly activity is most likely connected with the AU/UGA Medical Partnership’s summer MSP program. Students who completed additional scholarly activities found these opportunities in various ways. It is believed that the transition of Step 1 to pass/fail will likely result in an uptick in the number of scholarly activities pursued and completed by medical students. Matched applicants from osteopathic and allopathic schools have more research accolades than their unmatched counterparts⁵. The public NRMP 2022 match results

show that the mean number of abstracts, presentations, and publications for a U.S. MD senior applying to family medicine residency who matches was 4.1, while one applying and matching to orthopedic residency was 16.5. Given that many of our students are interested in primary care pathways, it is possible that the suspected change in trends may not immediately involve RMCs like ours. If a shift does occur, it will likely do so at a slower pace than at the larger academic institution's main campuses. AU/UGA Medical Partnership plans to increase the opportunity for all our students to pursue scholarly activity if they choose. The limitations of this study include the small size of a regional campus, the low response rate overall, and the underrepresentation of upperclassmen.

Limitations

As mentioned above, based on the models defined by the AAMC, the AU/UGA Medical Partnership is a combined model regional campus. Due to its inherent nature of two preclinical years and two clerkship years, the program likely has more faculty and resources for scholarly activity than the two-year regional campuses. It is difficult to say whether there is a significant difference in research opportunities between the two-year and four-year RMCs without doing additional research. It is certainly something that should be investigated further.

Conclusions

As changes to medical education continue, the importance and emphasis on scholarly activities at the medical student level are likely to increase. The RMC infrastructure of scholarly activity, including access and support from mentors, is paramount for student success⁶. We can demonstrate strengths and needs by documenting the landscape of scholarly activity at AU/UGA Medical Partnership. This may help us identify untapped opportunities for scholarship within our RMC. It is important to emphasize that this paper highlights motivation for all types of scholarly research, not just larger-scale basic science clinical trials. By reframing the definition of "research" and "research mentor," we are more likely to encourage regional campuses students, faculty, and their community physicians to be involved in scholarly activity through community-based projects and simple case reports. For example, AU/UGA Medical

Partnership students recently paired with faculty and faculty-recruited community-based clinicians to develop a process for case report identification. The results of this effort can lead to robust programming to formalize these opportunities in the future. A coordinated student opportunity program focused on scholarly activity through case reports could complement our current MSP summer research program and offer additional opportunities. A proposed title for this next endeavor might be "Case Report Opportunities Program" (CROP). This next phase would partner with the current Student Interest Groups (SIGs) to provide scholarly activities by matching patient cases with students and clinicians, resulting in increased abstracts, posters, and presentations of case reports. This would complement our current research initiatives and offer additional opportunities to increase chances for scholarly activities at RMCs.

References

1. Hueston, W. J., & Treat, R. (2020). Medical Education with 3-Year Regional Campuses: Do They Attract a Different Type of Applicant?. *WMJ*, 119(1), 22-25.
2. Cheifetz, C. E., McOwen, K. S., Gagne, P., & Wong, J. L. (2014). Regional medical campuses: a new classification system. *Academic Medicine*, 89(8), 1140-1143.
3. Brokaw, J. J., Mandzuk, C. A., Wade, M. E., Deal, D. W., Johnson, M. T., White, G. W., & Zollinger, T. W. (2009). The influence of regional basic science campuses on medical students' choice of specialty and practice location: a historical cohort study. *BMC Medical Education*, 9, 1-12.
4. Raborn, L. N., & Janis, J. E. (2022). Current views on the new United States Medical Licensing Examination Step 1 pass/fail format: a review of the literature. *Journal of Surgical Research*, 274, 31-45.
5. Matthews, C. N., Estrada, D. C., George-Weinstein, M., Claeson, K. M., & Roberts, M. B. (2019). Evaluating the influence of research on match success for osteopathic and allopathic applicants to residency programs. *Journal of Osteopathic Medicine*, 119(9), 588-596.
6. Chang Y, Ramnanan CJ. (2015). A literature review on medical students and scholarly

research: experiences, attitudes, and outcomes. Acad Med. 90(8):1162-73. doi 10.1097/ACM.0000000000000702. PMID: 25853690.

5. Please enter the number of scholarly activities which were SUBMITTED for oral (including virtual) conference presentations you have worked on SINCE starting medical school.

6. Please enter the number of scholarly activities which were ACCEPTED for oral (including virtual) conference presentations you have worked on SINCE starting medical school.

7. Please enter the number of scholarly activities which were SUBMITTED for journal publication you have worked on SINCE starting medical school.

8. Please enter the number of scholarly activities which were ACCEPTED for journal publication you have worked on SINCE starting medical school.

9. If you completed any of the above since starting medical school, how did you find your research opportunities?

Check all that apply.

- Continued research from before entering medical school
- Continued research through MSP program
- New mentor found through MCG (including faculty connections)
- New mentor found elsewhere
- Research opportunities found through upper classman (M3/M4)
- Research opportunities found through clinical rotations
- Research opportunities found through CPH/hospital CS
- N/A

10. And if you have continued research in medical school how much time do you spend weekly on projects?
Mark only one oval.
- 1-4 hours
 - 5-9 hours
 - 10-14 hours
 - 15+ hours
 - Have not continued

11. Where did you present your research? *

Check all that apply.

- Local Conference
- State Conference
- Regional Conference
- Within the United States, but outside the South East region
- Outside of the United States
- N/A

12. How much funding did you receive from the AU/UGA Medical Partnership MSP program? If you did not participate please put N/A.

13. How much funding did you receive for travel, publication, and presentation from MCG? Please enter dollar amount.

Supplement 1

Medical Student Scholarly Activities MCG

The point of this form is to understand current opportunities and funding for our students in regard to abstract, posters, and other scholarly presentations and publications.

* Indicates required question

1. UGA ID *

2. Please select your current year in medical school. *

Mark only one oval.

- M1
- M2
- M3
- M4

3. Please enter the number of scholarly activities which were SUBMITTED for poster presentations you have worked on SINCE starting medical school.

4. Please enter the number of scholarly activities which were ACCEPTED for poster presentation you have worked on SINCE starting medical school.

14. How much funding did you receive for travel, publication, and presentation from OUTSIDE of MCG? Please enter dollar amount.

15. How much funding did you provide personally for travel, publication, and presentation? Please enter dollar amount.

16. Please select the specialties you are currently interested in (choose up to three). *

Check all that apply.

- Anesthesiology
- Emergency Medicine
- Family Medicine
- Dermatology
- Radiation Oncology
- PM & R
- Urology
- Internal Medicine
- Neurology
- OB/GYN
- Ophthalmology
- General Surgery
- Neurosurgery
- Plastic Surgery
- Pathology
- Psychiatry
- Pediatrics
- Radiology
- ENT
- Orthopedics

17. Which of the following (select all) that contributed to your decision to pursue the scholarly activities listed above?

Check all that apply.

- Step 1 pass/fail means I needed to find other ways to stand out
- Planning on entering a competitive specialty and would have done it anyway
- Want research to be a staple of my career
- Networking for my future career was a part of presenting at a conference
- Encouraged by others (factually, mentor, advisor, colleague, peers) to submit
- N/A

18. Do you feel like AU/UGA Partnership and MCG provide enough opportunities for research? *

Mark only one oval.

- Yes
- No
- Maybe