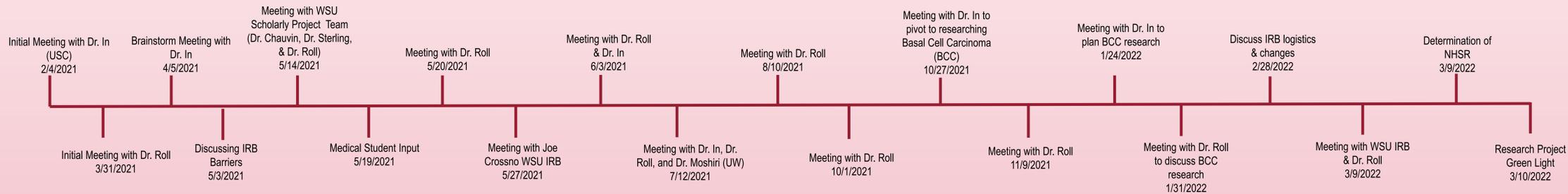


Barriers to Research Facing Health Professional Students During the COVID-19 Pandemic

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17 meetings to get a research project off the ground

Introduction

Given the demand on health professional students to complete research, it has become a standard requirement among both curricular and extracurricular activities.

For medical students specifically, the number of research experiences are growing from year to year and is strongly correlated to matching into residency programs.

We draw on our experience as medical students conducting research into melanoma of unknown primary to describe challenges faced and propose solutions so that future students will encounter fewer obstacles to their success. xx

Knowledge-Based Barriers

- Research mentorship
- Background research knowledge of research concepts
- Lack of time for both students and providers

Health professional students are faced with profound responsibilities when entering graduate schools. Students are at a serious disadvantage if they enter without experience in academic research, statistical analysis, or the logistics within a research timeline. Many students are expected to get involved with research but do not possess a solid background on where to begin or have a curricula providing a foundation. With no formal training in how to approach and navigate research projects, students and researchers are subjected to delays and significant time requirements in order to get research projects started.

In addition, limited access to faculty and researchers who could help health professional students gain a foundation in research concepts further prevents students from accessing research projects.

Given the rigorous academic demands of health professional students and extracurriculars, there is limited time for students to devote to research, despite it playing a crucial role in their professional development.

Political Barriers

- Faculty at other institutions not being able to support students from other institutions

While there are many healthcare students eager to participate in research, there are circumstances in which collaborating with other institutions is beneficial for professional development. However, faculty and researchers are often unable to work with students from other institutions. It gives the impression that competition has more weight than collaboration.

Logistical Barriers cont.

While always prominent, the COVID-19 pandemic has exemplified logistical barriers. Healthcare academics and in-person experiences have been arguably hit the hardest. Many students were unable to participate in in-person research or networking events due to COVID-19 health restrictions. Therefore, participating in research through virtual means became the prominent platform.

Accessing this type of data requires appropriate credentials, IRB approval, and access to patient information. In our case, we did not have an academic hospital that we could readily access data from. Therefore, if we wanted to study relevant clinical outcomes, it would require collaboration with another institution that was willing to provide de-identified information. This puts a profound time commitment on the clinician providing the data that is unreasonable and unrealistic, especially in the midst of a global pandemic.

Additionally, this type of research would require a cross-institutional IRB. IRB contracts must be approved before any research can begin. Obtaining this IRB can take months if a prior contract between institutions has not been previously established.

Logistical Barriers

- Access to data and inability of students to do chart review studies
- Cross-institutional IRB approval and collaboration given students timeline
- Lack of in-person research and clinical opportunities during the COVID-19 pandemic
- Lack of research networking due to the COVID-19 pandemic

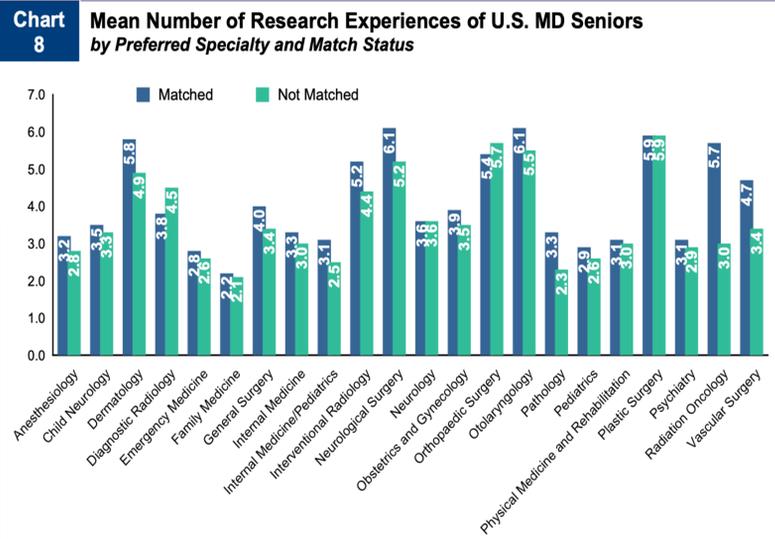


Figure 1: National Resident Matching Program Report, 2020

Proposed Solutions

Knowledge- Based Barriers

- Add research background to the curriculum and allot time for health professional students to participate in research.
- Create interest groups supported by research mentors who can help students navigate the nuances of joining research

Political Barriers

- Create a collaborative contract with other health professional institutions in order to allow for cross-institutional research projects and IRB's.

Logistical Barriers

- Create a consolidated database for students and researchers to access for ongoing or upcoming research projects
- Create a database that allows for students to access de-identified data

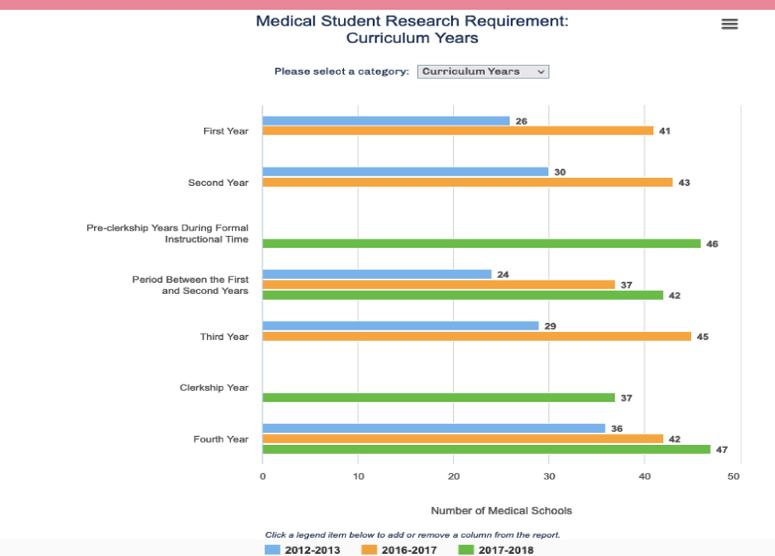


Figure 2: Medical Student Research Requirement at US Medical Schools, 2022

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1. National Resident Matching Program. Main residency match data and reports. Accessed March 17, 2022. <https://www.nrmp.org/main-residency-match-data/>.
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