

Introducing the Student Advisory Board

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Research is integral to modern medicine. ¹ As policy makers and funders demand an ever more efficient health care sector, so we must foster an effective research culture.² However, in recent years there has been a significant decline in the number of researchers, to the point where there is under investment in medical research and a shortage of qualified researchers.^{3,4} Consequently, future advances in medicine may be limited.³ Unfortunately, not only are the current numbers of researchers dwindling, the proportion of medical students interested in pursuing research careers has declined.^{4,5} We propose there is an urgent need to promote an interest in research among undergraduate students.

Becoming involved in research for the first time is both daunting and challenging. The enormity of the task could be likened to eating an elephant – at first glance it would seem to be an impossible feat. But ask someone who has been there before, “How DO you eat an elephant?” they will invariably answer, “One piece at a time”. In research terms, breaking the task into pieces, putting them in the right order and being able to digest each one are all challenging issues – not to mention having to find your “elephant” (research topic) in the first place.

Research undertaken at a student level offers a multitude of benefits to the student. For a start there is evidence that involving students in research increases the likelihood of these students pursuing careers in research or becoming involved in research at a postgraduate level. The resulting outputs enhance the students employment

prospects.^{4,6-10} Secondly, and more importantly, participation in research encourages students to develop critical reading skills and improve the quality of submissions to peer-reviewed journals, as well as enhancing students' grasp of research methodologies the principles of robust ethically sound research.¹¹⁻¹⁴ Additionally, participation in research builds the students' ability to learn independently, and has been shown to improve students' the practice of evidence-based medicine.^{11,12,15} Research can benefit students as a means of networking with colleagues which may ultimately be a critical factor in the pursuit of a desired career path.^{15,16} Furthermore the literature suggests that the principles of scientific research are not taught comprehensively in medical schools and that involvement of students in research may help increase the number of clinicians with a deeper understanding of those principles.^{11,14}

Most research is performed in a team environment, and teams can benefit from student involvement. Student researchers can often provide a new perspective, innovative ideas, technological skills, networks to a potential workforce of eager research assistants and many hours of voluntary work on the project, thus benefitting the whole team.^{17,18} From personal experience, even asking the questions that more experienced researchers often take for granted (i.e. the "dumb" questions) can help to focus the group on details that might improve the design of the project. And let's not forget, student researchers have contributed greatly to medicine over time - such as having played significant roles in the discovery of both insulin and heparin.^{21,22}

For a lucky few students and early career researchers, there are some excellent supervisors and support programs available to help master important concepts, refine study design and write effective proposals. Unfortunately, this is not a universal experience. There are a list of possible factors that conspire against the student researcher, including: shortage of time with competing demands during busy courses; difficulty in accessing the best supervisors or teams to develop project ideas; lack of confidence to deploy unfamiliar research methodologies and lack of access to resources; difficulties navigating ethics approvals and the lack of experience in negotiating with editors of peer-reviewed journals. Finally, the budding researcher must contend with relative poverty as remuneration is almost universally better as a practicing clinician.^{17,21,22.}

When an enthusiastic individual with a worthy idea encounters this array of roadblocks it is little wonder that the elephant seems too large. In fact, most do what any sensible person would do when they meet an elephant in the wild - they run for their lives. If we

are to encourage student involvement in research and to properly support early career researchers, then we must help them to overcome these barriers.

The need for policy and resource shifts to assist with this aim have been recognised and success has been achieved in some areas, but the issue continues to be a challenge for a large range of students in the health sciences.^{1, 2, 17,21} Therefore, we welcome the AMJ's decision to establish a Student Advisory Board (SAB). The ultimate goal of the SAB is to encourage student research and publication, in the hope of fostering postgraduate research and supporting the creation of a reflective workforce, capable of life long learning and participating in designing health care solutions for the decades to come.

The AMJ SAB will seek to support online forums to connect students who share similar research interests and link students who can collaborate on projects or papers so they may pool their limited resources to work together despite membership spread across every continent. Students can assist by sharing information about research opportunities and opportunities to present to peers at a burgeoning number of conferences. Perhaps most importantly, we will provide a focal point for students to submit their research for peer-reviewed publication.

We aim to publish early findings of student projects and help to “match make” between expert supervisors and eager students (basically a nerdy online dating service), so students can gain insights and expert review of their work that may improve not only the quality of their projects, but also their skills as researchers and writers. Additionally, we will provide opportunities for students to review articles submitted for publication. This will not only ensure that published articles are relevant and accessible to all readers of the AMJ, it will enable students to improve their critical reading skills. Editorials written by members of the student advisory board will be published regularly to air the ‘student voice’, to inform readers of the student perspective on research, and to connect with the student readership.

There is no doubt that for many starting out in research, it really is a jungle out there – but if approached carefully and with an experienced guide, meeting an elephant for the first time can be both an exciting prospect and an enjoyable experience!

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