

Getting Undergraduate Medical Students Involved in Research

Dear Editor,

Research is increasingly becoming a mandatory component for medical specialty training. In addition, publishing research as a medical student is seen as beneficial when applying for further training. This is exemplified in the United Kingdom where final year medical students are given two additional points for PubMed indexed publications which go towards foundation (junior) doctor applications. However, there is a paucity of published evidence regarding the teaching of skills needed to undertake research during undergraduate medical education. Furthermore, opportunities for students to get involved in research differ greatly depending on geographical and financial factors.

Strategies for allowing student involvement in research are increasing in number. Incentives allow students to get involved in cutting-edge research, often with financial support (such as a weekly stipend) or the chance to get published. These schemes have obvious benefits for the students involved. However, researchers also benefit from the extra personnel able to help conduct experiments and write manuscripts. An example of such a strategy is an undergraduate student scholarship and fellowship funded by the spinal surgery department at the Royal Devon and Exeter hospital.^[1] Student scholars and fellows learn by taking part in novel research and have the luxury of tutorials pertaining to relevant skills such as academic writing. These skills are then tested in action immediately as each student is charged with a research project. The idea behind this scheme is that research and writing cannot easily be taught in the classroom using theory alone. Practical examples are needed. And taking this one step further, actually getting students to use accumulated knowledge to start, fail and subsequently learn from experience, is valuable. This concept of experiential learning is not new. In 350BC, Aristotle wrote about learning from experience, stating that in *Nicomachean Ethics* “for the things we have to learn before we can do them, we learn by doing them”.^[2] The process of conducting, writing, editing, drafting and submitting is complex. However, the journey through each of these steps is a learning experience in itself.

A study undertaken at Stanford University School of Medicine in 1995 showed that 90% of one graduating class had been

involved in research, with 75% publishing a minimum of one paper.^[3] This study found that 75% of students remarked that their initial experience of research had inspired them to undertake future projects. This highlights the importance of aiding students passionate enough to get involved in research during medical school. However, statistics such as these point to the level of research undertaken by students at graduate medical schools such as Stanford – often with a plethora of student-focused research programs in place. It is imperative to aspire to similar numbers for equally passionate undergraduate students worldwide.

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