



The Importance of Student Involvement in Research

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Cite as: Mazzoleni, A., Zhang, Z., Fareed, F. F. I., Erhabor, J., Smith, B. G., & Bath, M. F. The Importance of Student Involvement in Research. *Impact Surgery*, 1(6), 208–209. <https://doi.org/10.62463/surgery.112>

Medical students have long been involved within pioneering medical research, reaching as far back to the development of heparin in 1916 by Jay Mclean or the discovery of insulin by Charles Best working with Frederick Banting in 1921 [1]. Research involvement allows students to develop both critical thinking skills and an improved understanding of clinical medicine, most importantly equipping them with the tools needed for evidence-based practice as doctors [2].

The need for undergraduate research is referenced by many many governing healthcare bodies, as progression to become well-rounded and capable doctors. In the United Kingdom (UK), the General Medical Council states that medical graduates need to be able to “evaluate evidence critically” and to use research skills to better understand and influence their practice [3], whilst in many European countries, the title of “Doctor” is not conferred until a final research dissertation has been completed [4]. Yet, despite the clear benefits of engagement in research, in modern practice, suitable opportunities for medical student involvement in research can often be challenging to identify.

Research internships are one such way to provide appropriate opportunities to students, who can spend time working on projects and gaining exposure under the guidance of established supervisors and research groups. Research internships not only allow students to develop their research skills, but also provide the opportunity to explore a topic of interest and even to create international relationships [5]. Local, regional, and international organisations and committees are further examples that contribute to strengthening students’ interests in collaboration and project participation, ensuring such links and relationships can develop.

An early example of such collaborative student-led research groups was the STARSurg (Student Audit and

Research in Surgery) group. Established over 10 years ago, this academic surgical collaborative has since conducted numerous multicentre surgical research studies, orchestrated through a wide network of student representatives from medical schools across the UK and the Republic of Ireland. This has since spawned further international groups across Europe and beyond, and the group's work has provided high-quality data across multiple surgical spheres, with practice changing results [6].

The International Student Surgical Network (InciSioN) is a further example of student-led research and advocacy, being a global non-profit organisation focused on global surgical care advocacy and education. The InciSioN UK branch has particularly been working to promote collaborative research, supporting students in data collection, management, statistical analysis, and manuscript authorship [7]. The most recent example of collaborative research promoted by InciSioN UK is the “Global Outcomes After Laparotomy for Trauma (GOAL-Trauma) Study”, an observational study evaluating the global variation in patients undergoing trauma laparotomy (www.goaltrauma.org). Incision UK has not only ensured engagement from medical students from across the country but has been pivotal in engaging with other research groups from across the world. With students now involved from over 100 hospitals across 40 countries, Incision UK has been able to support the development and progression of research skills on a global scale.

Medical students particularly benefit from this model of observational multicentre research. Students can be involved at different stages of the process, including project dissemination, patient recruitment, data analysis, and synthesis. Students also may have more time than many clinical doctors to assist with the data collection



and can utilise their connections through their rotating hospital placements. The enhanced efficiency of data collection and the large sample size may increase the generalisability of results and the opportunity for the research findings to be used to drive meaningful changes in clinical practice, with students being at the forefront of meaningful research contributions [8].

In this way, a mutually beneficial relationship is created between medical students, their respective institutions, and international bodies. This is especially important in a climate where research funding is often not equal across regions. Involving students in similar research processes can provide a more financially viable option to both institutions and medics, improving access and equity in global health and global surgery research [9, 10].

Medical students offer the potential for improved engagement in academia, unlocking opportunities to conduct valuable research efforts in low-resource and underserved areas. In turn, the training and involvement of students in such works empowers them to become future academic leaders and continually improve care provision on a global scale.

Conflicts of interest: none declared.

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