

Why should we be interested in research?

B. De Souza

*Honorary senior clinical lecturer in plastic surgery, Imperial College
Adjunct professor, Department of Surgery, St George's University International
Medical School, Grenada
bds@dr.com*

We all choose to do medicine for different reasons, but there is a common theme of caring for patients and wanting to help cure and treat diseases.

The medical course is intense, with a lot to take in, especially in the preclinical years, when you learn the basic sciences and, in particular, anatomy. Before transitioning to the clinical years, students can take a year out to carry out research in a clinical subject and work towards a Bachelor of Science. Others might go straight into the final three years of a clinical curriculum. There are always opportunities to carry out research during both your preclinical and clinical years, which I hope you will grab eagerly – and at Manchester Medical School you are supported in this by your faculty and your society.

Cultivating research interests early on in medical school prepares you to develop analytical and critical thinking skills. This will help you to understand disease, and teach you how to read and interpret the scientific literature and keep up to date with advances in medicine.

Medicine will always remain an art, and a typical example of this is when a patient walks into the hospital with abdominal pain and there is no single test that can provide an instant diagnosis of the possible surgical condition; rather, the diagnostic skill of the surgeon, together with appropriate investigations and experience, aid the diagnosis. And, sometimes, there are surprises as to the cause of the abdominal pain. Research, on the other hand, allows us to practise medicine to a scientific degree. It allows us to develop techniques and tools that help our patients, and establishes the guidelines that direct physician decision-making.

Research carried out as a medical student helps you to develop self-discipline, commitment and time-management skills, to complete a project in a short space of time. You will also develop skills in teamworking; communication; IT; and evaluating, interpreting and appraising evidence;

and you will gain an understanding of statistics and scientific writing – all of which will be useful to your future career. The research community in medicine is global, and with modern technology this means that you can collaborate and share your research experiences and results for the advancement of medicine.

Modern-day patients will reasonably expect that every doctor will be able to weigh evidence and use this to inform both diagnosis and discussions about treatment plans with them and with their carers. To achieve this, during their training doctors need to develop skills in the application of the principles of the natural and social sciences, and this training needs to start in medical school.

Doctors need to be able to find, appraise and apply evidence to inform decisions, linked to an understanding of contexts, risks, limitations and uncertainties. This therefore implies a need to engage with research at several different levels: as teachers, as partners in considering and identifying research questions, and, for some, as researchers undertaking regular scientific endeavours as part of service delivery. Doctors are thus clinicians who can expect to be engaged in research and teaching at various levels throughout their careers.

Research, then, is there for all doctors, who should examine ideas and concepts carefully to see if they offer potential new treatments, new ways of interacting with patients or a more developed understanding of disease processes.

The use of propranolol for haemangiomas was a serendipitous discovery made by a French paediatric dermatologist, Christine Labrèze, in 2008.⁽¹⁾ She was treating a hospitalised patient, who was taking corticosteroids. The doctors were using propranolol for cardiac myopathy that had developed in the patient. Up until that point, systemic corticosteroids were the mainstay of treatment for complicated haemangiomas, in combination with surgery in some cases. Because the infant was in the hospital and seen frequently, they noticed that the haemangioma was much improved and wondered if the propranolol was the reason. Based on that, the doctors treated other patients to confirm the observation, and realised that they were onto something. They continued the treatment and accrued a larger series of patients, and were able to show that this was an efficacious treatment.

Propranolol is effective at shrinking haemangiomas that have already grown to a certain size, whereas corticosteroids cause haemangiomas to decrease in size only about a third of the time. Systematic reviews and meta-analyses have demonstrated that upwards of 97% of patients respond to propranolol. In the vast majority of cases, there is actual shrinkage and lightening – improvement of the haemangioma even if it has reached its specific growth stage.

This is a wonderful example of clinical observation and research that

has revolutionised the treatment of a medical condition. So, I would urge you as medical students to seek to cultivate an interest in research to make you an astute clinician of tomorrow, and know you have the support of your faculty and medical school!

References

- 1 Labrèze C, De La Roque E, Hubiche T, Boralevi F, Thambo J, Taïeb A. Propranolol for severe haemangiomas of infancy. *N Engl J Med*. 2008; 358(24):2649–51.

