Early Mentoring of Medical Students and Junior Doctors on a Path to Academic Cardiothoracic Surgery

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Background. In 2005 the Department of Cardiothoracic Surgery at The Royal Children’s Hospital started an early academic mentoring program for medical students and junior doctors with the aim of fostering an interest in academic surgery.

Methods. Between 2005 and 2015, 37 medical students and junior doctors participated in research in the Department of Cardiothoracic Surgery at The Royal Children’s Hospital. Each was given an initial project on which to obtain ethics approval, perform a literature review, data collection, statistical analysis, and prepare a manuscript for publication. A search of the names of these former students and doctors was conducted on PubMed to identify publications.

Results. A total of 113 journal articles were published in peer-reviewed journals with an average impact factor of 4.1 (range, 1.1 to 19.9). Thirty (30 of 37, 81%) published at least one article. A mean of 4.3 journal articles was published per student or junior doctor (range, 0 to 29). Eleven (11 of 37, 30%) received scholarships for their research. Nine (9 of 37, 24%) have completed or are enrolled in higher research degrees with a cardiothoracic surgery focus. Of these 9, 2 have completed doctoral degrees while in cardiothoracic surgery training. Five will complete their cardiothoracic surgery training with a doctoral degree and the other 2 are pursuing training in cardiology.

Conclusions. A successful early academic mentoring program in a busy cardiothoracic surgery unit is feasible. Mentoring of motivated individuals in academic surgery benefits not only their medical career, but also helps maintain high academic output of the unit.

Material and Methods

Between 2005 and 2015, 37 medical students and junior doctors participated in a structured research program (Fig 1) of the Department of Cardiothoracic Surgery at The Royal Children’s Hospital. In Australia, the pathway to become a cardiothoracic surgeon typically involves 6 to 7 years of study in university to obtain a medical degree, followed by 1 year of internship. After 1 to 3 years after graduation from medical school, one typically applies to the Royal Australasian College of Surgeons (RACS) for specialist training in cardiothoracic surgery. Therefore, most trainees are in their late twenties by the time they start specialist training. The length of the RACS cardiothoracic surgery training program is 6 years (Fig 2A).

The medical students of the University of Melbourne came for full-time research placement for 1 year from the advanced medical science program. From 2014, the program was transformed into the scholarly selective program of 6 months of full-time research preceded by 6 months of part-time research (Fig 2B). Seventeen students (46%, 17 of...
37) were female, and 32 (32 of 37, 86%) began as medical students completing research terms as part of their medical degree. After completion of either program, the student was further selected by surgeons for doctoral candidature (Fig 2B), mentored beyond graduation from medical school, and prepared for entry into cardiothoracic surgery training. Junior doctors were those who graduated from medical school, but had not yet obtained specialist qualifications. Each medical student or junior doctor was given an initial project on which to obtain ethics approval, perform a literature review, data collection, statistical analysis, and prepare a manuscript for publication. These projects were retrospective outcomes-based reviews of patients with a particular congenital heart disease. Students were posted full time to the unit with opportunity for dedicated daily meetings with surgical supervisors and clinical observation in and outside the operating theater. Medical students also received a weekly 1 hour of formal teaching by a consultant cardiothoracic surgeon on the entire curriculum of congenital cardiothoracic surgery. Junior doctors in the research program were working full time and typically met with surgical supervisors on a weekly basis. At these meetings with supervisors, the participants were educated in the collection of data, creation of a database, and statistical analysis. In addition to support from their supervisor, participants also had access to support from statisticians through the Clinical Epidemiology and Biostatistics Unit of the Murdoch Children’s Research Institute. A search of the names of these former students and doctors was conducted on PubMed to identify publications.

**Results**

**Journal Publications**

A total of 113 journal articles were published in peer-reviewed journals with an average impact factor of 4.1
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
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