

# The impact of graduate-entry medicine degree programme students' prior academic and professional experience on their medical school journey

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## I. GRADUATE-ENTRY MEDICINE DEGREE PROGRAMMES

Graduate-entry medicine degree programmes exist in many countries. In the UK, graduate-entry medicine degree programmes began in 2000 and accounted for approximately 10% of the annual intake into all undergraduate medicine academic programmes (Garrud, 2011). There had been relatively few studies exploring the impact of prior experience on graduate-entry medical students' medical school journey. Rapport and colleagues (2009) reported prior work and life experience had a significant and positive impact on medical students' degree programme experience. Their prior experiences had helped them understand complex concepts in professionalism, ethics and reflective learning, as well as how to manage patient encounters (Rapport et al., 2009). On the other hand, the authors noted the nature of medical students' previous degree subjects had 'virtually negligible effects' on their current degree programme experience (Rapport et al., 2009). Gallagher and Hoare (2016) explored the transition experience of New Zealand medical students that were health professionals. The authors reported these medical students retained a number of generic core skills (e.g. patient communication, professionalism, teamwork, familiarity with the health care environment) from their previous health profession role and were able to apply these skills to their medicine degree programme (Gallagher and Hoare, 2016).

## II. MY EXPERIENCE

I recently conducted an interview based study to explore the experience of twenty-one University of Warwick graduate-entry medicine degree programme students, which helped me understand the impact of medical students' prior academic and professional experience on their medical school journey.

In my study, volunteers were asked to describe their academic and professional experience prior to their graduate-entry medicine degree programme. Audio recordings of their semi-structured interviews were transcribed verbatim. The transcripts were analysed using thematic analysis (Braun and Clarke, 2006).

The study findings showed all study participants had completed a university degree programme prior to admission into their graduate-entry medicine degree programme. Their highest tertiary qualifications were a bachelor's degree (18 of 21; 85%), master's degree (two of 21; 10%) or PhD (one of 21; 5%). The nature of their previous degree programme subject could be broadly divided into two groups. One group consisted of 18 of 21 (85%) medical students with a previous degree subject related to natural sciences (i.e. chemistry, biology, biochemistry, genetics and biomedical science) or health (i.e. pharmacology, radiography and clinical technology). Another group consisted of three of 21 (15%) medical students with a previous degree in other

subjects (i.e. geography, engineering and information technology). Thirteen of 21 (62 per cent) medical students had prior full-time employment experience, of which 10 had worked in health related settings (i.e. worked as allied healthcare professionals or first responder in emergency rescue services) and 3 had worked in other settings (i.e. sports coaching, engineering and business consultancy). Eight of 21 (38 per cent) medical students did not have full time work experience prior to admission into their graduate-entry medicine degree programme. Analysis of transcripts from interviews revealed four broad themes.

*1) Theme: Development of transferable generic skills*

Medical students generally perceived their prior life experience and transferable skills set (such as team working, communication skills and time management skills) had increased their preparedness towards student life in a graduate-entry medicine degree programme.

*2) Theme: Development of transferrable subject specific skills*

Some medical students in possession of a university degree in a natural science or health subjects reported they were able to directly transfer or apply some of the concepts and knowledge they previously learnt into their graduate-entry medicine degree programme. Some medical students used to be health professionals with prior direct patient care experience and they were already able to perform clinical procedures that were directly relevant to the learning outcome of their medical school curriculum.

*3) Theme: Impact on professional socialisation and identity*

One medical student with a university degree subject unrelated to natural science or health identified himself and his peers in similar personal circumstances as 'non-science' graduates towards the start of his graduate-entry medicine degree programme. He perceived there was an unequal playing field between medical students from 'non-science' and 'science' degree background in terms of their baseline scientific knowledge. He found the first year medical curriculum had assumed too much prior scientific knowledge from 'non-science' students who may not always understand the basic scientific concepts the medical school faculty assumed they had already learnt. Thus, he had to undertake additional study of secondary school learning materials to build up his baseline medical science knowledge. Medical students from non-science and non-health profession background may perceive they were at a relative knowledge base and self-confidence disadvantage as compared to their peers that had been health professionals. Medical students that

were health professionals generally did not find patient contact a challenging experience. However, the quality of their patient encounters during the early stages of their graduate-entry medicine degree programme could differ significantly from their prior experience as health professionals. One medical student described during medical school teaching sessions, doctors taught medical students about individual body systems using patients as models. This approach was seen as impersonal and differed significantly from the holistic approach to patient care she had delivered when she worked as a health professional.

*4) Theme: Impact on collaborative learning*

There was a strong emphasis on group work and collaborative learning in the first year of their graduate-entry medicine degree programme. The diversity of medical students in the medical school, especially with those from health profession background, could be very helpful when medical students learn together as they could draw on the strengths and prior knowledge of their peers to support and supplement their own learning.

### III. MY REFLECTIONS

The entry requirement into United Kingdom graduate-entry medicine degree programmes varied between medical schools. Some medical schools accepted graduates from any degree subject while others only accepted graduates with a science or relevant health-related degree subject. Despite the small study sample, medical students participated in this study were found to have originated from a diverse range of demographic, education and employment background, which included three medical students with non-science and non-health related first degrees. In keeping with the findings by Rapport and colleagues (2009), my study findings also found the prior experience of medical students conferred them with generic transferrable skillset that increased their preparedness for student life in medical school. For example, prior educational experiences could be associated with increased skills confidence related to working in groups, using a computer, write assignments, participate in class and asking for help (Byrne et al., 2012). Adding to the study findings by Rapport and colleagues (2009), and Gallagher and Hoare (2016), my study findings suggested that some of medical students' prior education and employment experience could be directly relevant to the learning outcomes of their medical school curriculum.

Some medical students from non-science or non-health profession background were concerned about their baseline knowledge and confidence difference to their peers that were health professionals. Potential solutions to address their concern could involve the provision of

targeted learning guidance and academic support prior to or at the early stages of their degree programme. Medical students that were health professionals could also benefit from receiving learning guidance about the quality of their patient encounter in medical school was likely to be significantly different from their previous experience as a health professional.

This study has its limitations. This is a single centre study with a small sample size and it only explored the impact of academic and professional experience on their medical school journey. Social desirability bias and recall bias may affect the responses study participants provide. Future research could explore the impact of carer experience of students with dependents on their medical school journey.

#### Note on Contributors

Simon Tso is currently studying towards a doctoral (MD) degree at the University of Warwick, United Kingdom. He is a Fellow of the Higher Education Academy and a dermatology registrar training at the Department of Dermatology, University Hospitals Coventry and Warwickshire NHS Trust, Coventry, United Kingdom.

#### Ethical Approval

This study was a part of a larger study investigating the experience of graduate-entry medicine degree programme students, which has received ethical approval from a local research ethics committee.

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#### Declaration of Interest

The author has no conflicts of interest, including no financial, consultant, institutional and other relationships that might lead to bias.

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