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Succeeding in Your Medical Degree

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Foreword from the Series Editors

The Learning Matters Medical Education Series

Medical education is currently experiencing yet another a period of change typified in the UK with the introduction of the revised *Tomorrow's Doctors* (General Medical Council, 2009) and ongoing work on establishing core curricula for many subject areas. This new series of textbooks has been developed as a direct response to these changes and the impact on undergraduate medical education.

Research indicates that effective medical practitioners combine excellent, up-to-date clinical and scientific knowledge with practical skills and the ability to work with patients, families and other professionals with empathy and understanding, they know when to lead and when to follow and they work collaboratively and professionally to improve health outcomes for individuals and communities. The General Medical Council has defined a series of learning outcomes set out under three headings:

- Doctor as Practitioner
- Doctor as Scholar and Scientist
- Doctor as Professional

The books in this series do not cover practical clinical procedures or knowledge about diseases and conditions, but instead cover the range of non-technical professional skills (plus underpinning knowledge) that students and doctors need to know in order to become effective, safe and competent practitioners.

Aimed specifically at medical students (but also of use for junior doctors, teachers and clinicians), each book relates to specific outcomes of *Tomorrow's Doctors*, providing both knowledge and help to improve the skills necessary to be successful at the non-clinical aspects of training as a doctor. One of the aims of the series is to set medical practice within the wider social, policy and organisational agendas to help produce future doctors who are socially aware and willing and prepared to engage in broader issues relating to healthcare delivery.

Individual books in the series outline the key theoretical approaches and policy agendas relevant to that subject, and go further by demonstrating through case studies and scenarios how these theories can be used in work settings to achieve best practice. Plenty of activities and self-assessment tools throughout the book will help the reader to hone their critical thinking and reflection skills.

Chapters in each of the books follow a standard format. At the beginning a box highlights links to relevant competencies and outcomes from *Tomorrow's Doctors* and other medical curricula if appropriate. This sets the scene and enables the reader to see exactly what will be covered. This is extended by a chapter overview which sets out the key topics and what the student should expect to have learnt by the end of the chapter.

There is at least one case study in each chapter which considers how theory can be used in practice from different perspectives. Activities are included which include practical tasks with learning points, critical thinking research tasks and reflective practice/thinking points. Activities can be carried out by the reader or with others and are designed to raise awareness, consolidate understanding

of theories and ideas and enable the student to improve their practice by using models, approaches and ideas. Each activity is followed by a brief discussion on issues raised. At the end of each chapter a chapter summary provides an aide-memoire of what has been covered.

All chapters are evidence based in that they set out the theories or evidence that underpins practice. In most chapters, one or more 'What's the evidence' boxes provide further information about a particular piece of research or a policy agenda through books, articles, websites or policy papers. A list of additional readings is set out under the 'Going further' section, with all references collated at the end of the book.

The series is edited by Professor Judy McKimm, Dr Kirsty Forrest and Dr Aidan Byrne, all of whom are experienced medical educators and writers. Book and chapter authors are drawn from a wide pool of practising clinicians and educators from the UK and internationally.

Author Biographies

Andrew Bowhay

Andrew is a consultant paediatric anaesthetist with an interest in both undergraduate and postgraduate medical education. Currently one of his educational roles is as an associate postgraduate dean in the Mersey Deanery. Andrew has also been a clinical sub dean for undergraduate medical training at his hospital as well as the clinical strategist for the Centre for Excellence in Teaching and Learning at the University of Liverpool. Andrew has undertaken research on trainees' attitudes to the European Working Time Directive and how well medical schools perform in postgraduate medical examinations. Andrew is also an undergraduate and postgraduate examiner with a particular interest in standard setting.

Gemma Cherry

Gemma is a research assistant within the School of Medicine at the University of Liverpool, where she is studying for a PhD looking at the relationship between emotional intelligence and empathetic communication style in medical students and foundation doctors. She also works part time as a reviewer of clinical evidence at the Liverpool Reviews and Implementation Group (LRIG), which produces systematic reviews of clinical and cost effectiveness of treatments/drugs for the National Institute of Clinical Excellence.

Ray Fewtrell

Ray is currently a research fellow in the School of Medicine at the University of Liverpool. He spent the last 14 years researching the portfolios, critical thinking, reflection and assessment within undergraduate medical students. He supervises medical students on student selected components from years 1 to 3, is co-lead on the professional reflective document, has been a problem-based learning facilitator, admission interviewer, personal tutor and an examiner at OSCEs. He currently sits on the SSC moderating board, clinical team and clinical programme committees.

Jayne Garner

Jayne is currently working as a research associate in the Department for Health Services Research at the University of Liverpool. She obtained a degree in sociology and a master's degree in social research methods from the University of Northumbria. She worked in local government for eight years in policy development, consultation and community engagement before joining the University of Liverpool in 2007 to study for a PhD in medical education. Jayne has also been a problem-based learning convener, an examiner at OSCEs and a personal tutor.

Michael Money Penny

Michael Money Penny read biochemistry at the University of Bath and Medicine at the University of Dundee. He is a specialist registrar in anaesthesia and an honorary lecturer at the University of Liverpool. His research interests concentrate on medical education, simulation and the impact of human factors on patient safety. Dr Money Penny is currently evaluating a tool for assessing team work and leadership skills.

Helen O'Sullivan

Helen O'Sullivan is the director of the Centre for Excellence in Excellence Based Learning and Teaching in the Faculty of Health and Life Sciences, University of Liverpool where she works across the Faculty on areas such as curriculum development and learning and teaching. As the director of the School of Medicine's CETL for four years, she led research and teaching in developing professionalism in medical undergraduates. She is particularly interested in investigating methods for assessing attitudes and behaviour and in the role emotional intelligence plays in professionalism and medical leadership.

Dan Robinson

Dan currently manages the e-learning provision for the School of Medicine at the University of Liverpool and is also a member of the Centre for Excellence in Evidence-Based Learning and Teaching. Having 13 years' experience in the field, he now provides a strategic direction and recently took the leading role in writing the first 'Technology Enhanced Learning' strategy for the school. Dan is now in the implementation stages of this strategy and is heavily involved in a project to develop a management framework to underpin future e-learning developments. He is also involved in e-assessment at university level and is a member of the Association for Learning Technologists.

Christine Waddelove

Christine is currently employed as a senior careers adviser at the University of Liverpool developing and delivering career planning and guidance programmes for undergraduate medical students. She also teaches medical students on student selected components from years 1 to 3 where students complete an SSC on a 'careers' related area. She is also involved in offering careers advice and guidance to medical students on an individual basis as well as organising careers events. She works closely with a number of other external organisations including the Association of Graduate Careers Advisory Service (AGCAS), the Institute of Careers Guidance (ICG), UKFPO and Mersey Deanery. She hopes in her work to inspire students to explore their career aspirations and consider their wider career management skills and interests while at medical school.

Simon Watmough

Simon is currently a research fellow in medical education at the University of Liverpool. He has spent the last ten years researching the content and influence of undergraduate medical curricula from the perspective of students, junior doctors and senior doctors. He has researched the impact of *Tomorrow's Doctors* on UK medical education and has a PhD in medical education. He also teaches medical students on student selected components from years 1 to 4, has been a problem-based learning convener, an examiner at objective structured clinical examinations (OSCEs) and sits on the special study module moderating board.

At the time of writing all authors of this book were members of the Centre of Excellence for Developing Professionalism, School of Medicine, University of Liverpool.

Introduction

This book will examine some of the key themes in undergraduate medical education today that run across undergraduate curricula in the UK. Medical students across different institutions will assume they will learn about the clinical sciences, such as anatomy, physiology and pathology and disease processes, but there is more to medical education than just learning the science relevant to becoming a doctor today. Learning about sciences is covered in many other textbooks so this book will focus on the themes inherent across all undergraduate courses outside the sciences which students may not be aware of, but are just as important for becoming a good doctor.

We will be referring throughout to *Tomorrow's Doctors* (GMC, 2009a), a revised and updated version of a document first published in 1993 by the General Medical Council (GMC). This includes the latest guidelines on undergraduate medical education to which all medical schools in the UK must adhere. The first version of *Tomorrow's Doctors* (GMC, 1993) had a marked impact on medical education in the UK, as Chapters 1 and 2 will make clear.

In this book we give a brief history of medical education in the UK, why *Tomorrow's Doctors* was written and the evidence behind it. We outline some of the key themes from these recommendations, and examine the implications both for the content of medical curricula and for students embarking on a medical degree and their careers after graduation. *Tomorrow's Doctors* refers to and incorporates elements of other GMC publications such as *The New Doctor* and *Good Medical Practice*, and these are cited throughout the book where relevant.

Our book is aimed primarily as a guide for medical students. However, it will also be useful for all medical educators, both clinical and non-clinical and for students considering undertaking a medical degree. It shows why medical curricula in the UK look the way they do today and discusses some of the most important themes in medical education. This book also suggests ways to get the best out of your undergraduate medical education and the relevance of this education after graduation when students become doctors. It gives key references as a base to explore the literature, shows what the current evidence is surrounding each of the themes in the book, provides activities to follow which will make the reader think about each theme and includes case studies that illuminate each theme of the book.

Book structure

Chapter 1 looks at the role of the GMC in UK medical education and how this has developed historically. There is also a discussion about the other influences on undergraduate medical education, such as the Quality Assurance Agency and EU

directives. It looks at historical recommendations on medical education and how a stage was reached in 1993 when the GMC felt it had to issue radical recommendations on UK undergraduate medical education and how the 2009 *Tomorrow's Doctors* will affect UK students over the next few years.

Chapter 2 summarises the original *Tomorrow's Doctors* and the most recent revision and highlights how it has changed since 1993. It also outlines some of the research projects that have evaluated the document and the evidence that has informed the latest version.

Chapter 3 outlines what medical professionalism is, why it has recently come to prominence in UK medical education and why the GMC places such an emphasis on it in its latest documents. It also examines why it is important for doctors to be professional and how you can develop professionalism from an early stage.

Chapter 4 explains why doctors need leadership training and how leadership will be an important part of your working life. The chapter will discuss whether all doctors need to be managers and leaders and what opportunities there are to develop leadership skills as undergraduates.

Chapter 5 explains the different types of assessment that you are likely to undergo, including knowledge-based, practical and continuous assessment and the theory behind them and how pass marks are established. It also explores ways you can improve your performances through feedback and understanding exams.

Chapter 6 addresses the important issue of communication skills and, specifically, factors associated with effective communication in medicine. It also provides a summary of the core components of communication skills teaching programmes in undergraduate medical education. Finally, it examines the value of various teaching methods, such as role play, feedback and video analysis, in the acquisition of effective communication skills.

Chapter 7 explores why simulation is being used today in medical education. It discusses the strengths and weaknesses of the different types of simulation used and how embracing simulation can help students to be successful at medical school and to become good doctors.

Chapter 8 shows how important student selected components (SSCs) are to developing the skills that all doctors will need once they graduate. It also shows that they can be interesting and fun and offers advice on how to get the most out of an elective period.

Chapter 9 demonstrates how peer feedback (including peer review, peer appraisal and peer assessment) is a key challenge for students but can be invaluable in gaining advice about how to improve performance and gain the generic skills needed to be a doctor.

Chapter 10 takes you through what to expect from and how to get the most out of what many see as the most important part of medical education – clinical placements. It outlines the different ways students learn in both the community and in hospital specialities and how they develop communication skills, history and examination and practical skills on clinical placements.

Chapter 11 discusses why medical careers are such a big topic in medical education today. It gives practical advice on how to make the most of undergraduate

education to prepare for postgraduate decision making and how to develop strategies to make students more employable after graduation.

Chapter 12 shows how effective management of information is important in many aspects of health practice from recording patient contact, communicating and managing personal and professional development, to helping students succeed at medical school and then as a junior doctor. It shows how to develop information technology (IT) skills and how these skills can help the student to become a reflective practitioner.

Chapter 13 is the concluding chapter in which we summarise the book and speculate about the way medical education may evolve in future years.

We hope that you find this book stimulating and enjoyable and we encourage you to take advantage of the wide range of activities and case studies that each chapter offers, helping you to understand theory and more importantly relating it to your practice.

chapter 1

The Role of the General Medical Council in UK Medical Education

Simon Watmough

Introduction

You will have heard of the General Medical Council (GMC) as you embark on your undergraduate degree in the UK. The GMC is frequently in the news, although this is often regarding disciplinary action against practising doctors, so some of you may think that the GMC is only relevant to qualified doctors. However, all UK undergraduate medical curricula have to conform to the recommendations made by the GMC on undergraduate medical education in their *Tomorrow's Doctors* documents and medical schools have a statutory duty to prepare graduates to work and train as junior doctors in accordance with these GMC guidelines. This chapter will give a brief history of medical education in the UK, examining the role of the GMC in UK medical education and discussing why *Tomorrow's Doctors* was written and the evidence behind it.

The role of the GMC in undergraduate medical education

The GMC is the regulatory body for medicine and medical education in the UK and has a statutory duty set out by law to set standards for medical education and decide who is fit to be a doctor registered with the GMC. No one in the UK can legally practise medicine unless they are on the GMC register. Although medical schools and undergraduate curricula in the UK are diverse and there is no 'common curriculum' by which all medical schools are guided, they are all required to comply with the recommendations issued by the GMC Education Committee.

There has been some kind of regulation in medicine and medical education in Britain for a long time. For example, in 1421 Parliament petitioned Henry V to pass a law determining that a medicine degree from a university was the only qualification granting the right to practise. In 1462 Edward IV gave a charter to the Company of Barbers allowing them to carry out surgery. In 1511 Henry VIII decreed that no person should practise as physician or surgeon within the City of London unless examined and approved by the Bishop of London or a Dean of St Paul's Cathedral.

By the nineteenth century there were many different bodies regulating the medical profession and they all had different standards and interests. Prior to 1858 there were 19 separate licensing bodies in operation throughout the UK and none of them had a national jurisdiction. For example, an Edinburgh practitioner might not be able to practise legally in London or even Glasgow. In the mid-nineteenth century

there were still a large number of charlatans, quacks, teeth pullers and bone setters with little formal training. There was a huge chasm between the ‘charlatans’ and those students who learned medicine, often at a great cost, through the universities or corporations, who inevitably felt cheated out of their educational investment (Stacey, 1992). As a result of this an Act of Parliament was passed in 1858 called The Medical Act, which established a national system of regulating medicine and medical education by creating the General Medical Council. The Act gave the GMC power to hold a register of practitioners and to set the standard for entrance to the profession by controlling the standards of medical education, and the GMC was made directly responsible to the Privy Council.

The GMC began to exercise its powers over medical education soon after the Act was passed. In 1867 the Council decided on the ten medical subjects that should be obligatory in terms of undergraduate teaching and examination: descriptive and general anatomy; physiology; chemistry; material medica; practical pharmacy; medicine; surgery; midwifery and forensic medicine. It was notable that that there was nothing in terms of communication skills, professionalism or practical skills! The first committee was made up of representatives of medical corporations, universities, colleges and six independent members nominated by the Crown. The GMC had the power to ask schools for information about current courses of study and the examinations. They did not have the power to stipulate a compulsory curriculum, just to say ‘sufficient’ or ‘insufficient’ regarding individual courses.

From 1867 to 1993 medical education and the content of undergraduate medical education largely followed similar patterns at universities. The first half of medical degrees involved intensive, didactic lectures in the sciences followed by clinical placements towards the end of the course so there were distinct preclinical and clinical sections. There was little, if any, formal communication or clinical skills training, few opportunities to experience general practice or opportunities to study topics that interested students in-depth. The publication of *Tomorrow’s Doctors*, however, was to bring about a major change in medical education and explains why the content of your medical curriculum looks as it does today.

ACTIVITY 1.1

Take a look at the GMC website and look at their role today. Search the internet for other regulatory bodies that regulate medical education elsewhere in the world. What similarities do you see between them?

Why reform undergraduate medical curricula?

There were a series of international pressures influencing medical education in the UK by the early 1990s. The World Federation for Medical Education (WFME) issued the Edinburgh Declaration of 12 principles for reforming medical education in 1988 (Parsell and Bligh, 1995). Also, many medical schools around the world, but in particular in North America, had radically altered their curricula with seemingly very

few adverse effects (Albanese and Mitchell, 1993). For example, major reform with the introduction of problem-based learning (PBL) took place at McMaster University in Canada in 1962 and spread in the 1970s to other schools further afield, such as the University of Maastricht medical school (The Netherlands) and the University of Newcastle (Australia), so there were already precedents from outside the UK on managing curriculum reform away from traditional curricula.

There was also a growing feeling that too much ‘irrelevant’ knowledge was being taught to undergraduates and that in the preclinical part of the course students were learning biochemistry, anatomy and physiology which they would not need in their work as doctors. Having distinct clinical and preclinical sections to medical curricula seemed to exacerbate this and it was not always clear which was the most relevant knowledge for clinical practice.

Critics had been arguing for many years about the content of medical curricula and the didactic nature of medical education. Richard Davis wrote about the problem of excessive anatomy lectures in the 1750s. William Barrett Marshall, a student in the 1820s, felt the factual burden on students should be reduced and that thinking and reasoning should be encouraged instead. He also suggested that students should learn integrated anatomy teaching, long before it was introduced into UK medical curricula. In 1835 the *London Gazette* wrote that students should learn about public and private hygiene at the expense of pathology (Poynter, 1966). The opening pages of the original *Tomorrow's Doctors* states that well over 100 years ago there were significant concerns that student doctors were not being given enough time for self-education and that there was far too much emphasis on gaining knowledge in medical curricula. The document quotes from Thomas Huxley in 1876:

The burden we place on the medical student is far too heavy, and it takes some doing to keep from breaking his intellectual back. A system of medical education that is actually calculated to obstruct the acquisition of sound knowledge and to heavily favour the crammer and grinder is a disgrace.

By the late twentieth century this was widely seen as being at the expense of learning the skills to work as a junior doctor.

ACTIVITY 1.2

- Why do you think it is important to have a regulator in medical education?
- Do you think medical education would be better or worse without a regulator?
- Do you think that regulation of undergraduate medical education will automatically lead to better doctors?

Medical education from 1945 to *Tomorrow's Doctors*

After the Second World War and the introduction of the National Health Service (NHS) there were a series of Acts of Parliament and recommendations from