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Undergraduate teaching in geriatric medicine: mapping the British Geriatrics Society undergraduate curriculum to *Tomorrow's Doctors 2009*

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ABSTRACT

Introduction: in 2008, the British Geriatrics Society (BGS) developed the Recommended Undergraduate Curriculum in Geriatric Medicine. This was subsequently mapped to the second edition of *Tomorrows' Doctors* (TD2, 2003). Following the publication of the third edition of *Tomorrow's Doctors* in 2009 (TD3), the mapping exercise was repeated to verify the extent to which the updated General Medical Council recommendations supported teaching in ageing and geriatric medicine.

Method: we analysed TD3 and identified 48 aspects of its general guidance that were relevant to the teaching of medicine for older people. We then mapped these to the 2009 BGS curriculum.

Results: the BGS curriculum was supported in full by TD3. However, learning outcomes relating to the interpretation and conduct of research in TD3 had no corresponding outcomes in the BGS curriculum.

Conclusion: the BGS curriculum for medical undergraduates continues to provide a specific and complete list of learning objectives, all of which could help to operationalise the general statements made in TD3 with relation to ageing and geriatric medicine. Learning outcomes in research in frail older patients have been added following this mapping exercise.

[undergraduate medical education](#), [curriculum](#), [geriatrics](#), [medical education](#), [older people](#)

INTRODUCTION

Medical graduates of the future should be knowledgeable and skilled in the care of older people, as the number of people older than age 60 worldwide will increase from 605 million today to 1.2 billion by 2025 [1]. The over 65s comprise 18% of attendances at Emergency Departments [2] and two-thirds of acute hospital admissions in England and Wales [3], whilst the highest consultation rates in general practice are for those aged between 85 and 89 years [4]. With very few exceptions, doctors in all specialties require core knowledge and skills that will enable them to work with frail older patients. It is not, however, guaranteed that all UK doctors will undergo post-graduate training in geriatric medicine [5]. This places considerable importance on good undergraduate training in the specialty.

Over the last decade there has been international concern that the teaching of geriatrics may be in decline. Research has shown that support for geriatrics in national undergraduate curricula is the key to effective delivery of teaching in the specialty [1]. In the United Kingdom, the generic national curriculum for undergraduate teaching is *Tomorrow's Doctors* (TD), a document published by the General Medical Council (GMC), which guides medical undergraduate education [6]. TD provides generic outcomes and standards but does not specifically mention individual specialties. In the United Kingdom, there are 31 academic institutions teaching medical undergraduates [7], and without such detailed guidance, there is scope for each school to interpret TD differently and, potentially, for the teaching of geriatric medicine to be overlooked or under-represented.

In 2008, we set out to understand the current UK situation by evaluating the evidence supporting undergraduate curricula in ageing, and by comparing this to the guidance issued in TD. Available English language curricula from across the world including Australia, New Zealand and the United States were reviewed through a workshop led by the British Council of Ageing. The workshop was attended by representatives of the national societies for geriatric medicine, biological and social gerontology, and academics with an interest in gerontechnology. This process led to an expert-judge content validated curriculum in geriatric medicine which was mapped to the 2003 version of TD [8] and subsequently accepted as the British Geriatrics Society's Recommended Curriculum for Medical Undergraduates [9], providing national guidance to medical schools for the teaching of the topic.

The third version of *Tomorrow's Doctors* (TD3) was published in 2009 [10], and differed significantly in format and scope from previous GMC guidance. As medical schools can be

reasonably expected to teach those aspects of ageing and geriatric medicine that are supported by the GMC curriculum, we set out to evaluate the extent to which the 2009 British Geriatrics Society (BGS) curriculum was supported by the newer GMC recommendations.

METHOD

The analysis was undertaken by a team comprising both non-specialists and specialists in geriatric medicine. The non-specialists comprised two doctors undergoing training in general practice (C.F.P., J.F.P.), two undergraduate medical students (H.M., N.B.) and a nurse educator (J.M.). The specialists comprised two academic consultant geriatricians with an interest in undergraduate medical education (A.G.B., A.L.G.).

TD3 comprises three sections, which were reviewed in full by the researchers, working separately and independently as non-specialist and specialist teams. Learning outcomes which were felt to be relevant to geriatric medicine were listed. A synthesis was then undertaken by the specialist researchers, with any additions or deletions discussed with the broader group until consensus was achieved. As part of this process, a rationale for inclusion of each outcome from TD3 was developed and iterated until all researchers agreed that it represented fair justification for stating that the outcome was relevant to ageing and geriatric medicine.

A mapping process was then undertaken by the specialist researchers to evaluate the extent to which outcomes specified in the 2009 BGS curriculum were supported by TD3. The results of this process were then circulated to the broader group with any disputes resolved by consensus.

RESULTS

We identified 48 aspects of TD3's guidance that were relevant to the teaching of medicine for older people. Examples of these are listed in Table 1 with their corresponding learning outcomes in the BGS Recommended Curriculum (see [Supplementary data are available in Age and Ageing online, Table S1](#) for the mapping of all 48 aspects of TD3's guidance). Only 4 TD3 outcomes (12a–d), which refer to the importance of the application of research in practice (12a critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientific

literature, 12b formulate simple relevant research questions in biomedical science, psychosocial science or population science and design appropriate studies or experiments to address the questions, 12c apply findings from the literature to answer questions raised by specific clinical problems and 12d understand the ethical and governance issues involved in medical research), did not have corresponding learning outcomes in the BGS curriculum.

Table 1.

Examples of learning outcomes in *Tomorrow's Doctors* (TD3) mapped to the BGS curriculum

TD3 learning outcomes	Example BGS learning outcomes
8b. Explain the scientific bases for common disease presentations	3d. Students should be able to describe/define the diagnosis, pathophysiology, management and preventative strategies for specific disease processes: dementia, delirium, depression, continence, osteoporosis, falls, parkinsonism and movement disorders, pressure ulcers, cerebrovascular disease and stroke
9d. Discuss psychological factors that contribute to illness, the course of the disease and the success of treatment	1b–d. Students should be able to give consideration to various myths and stereotypes related to older people, advocate against ageism and recognise that it can affect the optimal care of elderly patients and recognise the heterogeneity of older persons and that each person needs to be viewed as an individual
10b. Discuss sociological concepts of health, illness and disease	9. Students should be able to describe psychosocial theories of ageing
11c. Describe measurement methods relevant to the improvement of clinical effectiveness and care	8c. Students should be able to perform a Comprehensive Geriatric Assessment
13e. Assess a patient's capacity to make a particular decision in accordance with legal requirements and the GMC's	7a–b. Students should be able to describe principles of autonomy, mental capacity to make decisions and the concept of 'best interests', and the legislation in each jurisdiction which outlines and protects these

TD3 learning outcomes	Example BGS learning outcomes
guidance	principles
14i. Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare	6c, 10a. Students should be able to describe ethical and legal issues including: safeguarding finances, elder abuse (physical, psychological and financial)
17a. Establish an accurate drug history covering both prescribed and other medication	4a. Students should be able to describe the concept of polypharmacy

CONCLUSION

Our original analysis of TD showed that, despite not mentioning geriatric medicine specifically, its implementation required a considerable amount of teaching relevant to older people. Our analysis of the latest edition shows that the BGS curriculum continues to be supported by TD. However, TD3 now has specific outcomes relating to research, for which there were no corresponding outcomes within the BGS curriculum, which gives national guidance to medical schools.

One of the most consistent findings in research of health services is the gap between evidence and practice [11]. This well-documented gap between what is known from research, and what is actually done in practice, is known as the ‘second translational gap’ or ‘know-do gap’. Geriatric medicine, like every field, has a rapidly increasing evidence base requiring implementation. Teaching undergraduates about research could be one way to help bridge this gap, by equipping the doctors of tomorrow with the tools to more quickly identify, interpret and apply relevant research findings in practice.

The failure to include learning outcomes about research in the BGS curriculum may be an oversight. The challenges of conducting research in frail older patients has been well publicised and yet RCTs continue to be predominantly conducted using exclusion criteria

that make it difficult to extrapolate study results to frail older people [12]. Improving understanding of the challenges both of conducting research in frail older patients and extrapolating more conventional research to this group has been identified as a priority for national research groups focussing on ageing and geriatric medicine [13]. Given the inclusion of learning outcomes related to the interpretation and conduct of research as part of Tomorrow's Doctors, the BGS undergraduate curriculum has been updated to include learning outcomes specific to research in frail older patients.

A potential limitation of the mapping process is that it used an informal consensus approach rather than a formal research design. We did not undertake an expert content validation as part of this current process because the conclusion—that *Tomorrow's Doctors* supports the BGS curriculum and that research-related outcomes should be added—seemed uncontroversial. This is in contrast to the earlier developmental work which we undertook to design the curriculum in the first place, where it was important to establish that the new curriculum had the full support of all relevant stakeholders.

TD3 continues to provide strong justification for medical schools in the United Kingdom to teach about the medical care of older people. Furthermore, the BGS curriculum for medical undergraduates provides a comprehensive list of learning objectives, which help to operationalise the general statements of TD. We conclude that the BGS recommended curriculum continues to be supported by the updated version of TD. We discovered an important deficiency in relation to the learning outcomes relating to research, which have now been incorporated in an updated version. Having established the ongoing relevance of the BGS recommendations, an important question is whether UK medical schools are implementing them. The first Survey of Teaching in Ageing and Geriatric Medicine [14] showed modest concordance between the BGS curriculum and self-reported teaching in UK medical schools, and the second survey [15] showed considerable improvement. The amount of time devoted to teaching of ageing, however, remains small when considered in the context of clinical workloads predominated by frail older patients. Having laid out a curriculum which is supported both by experts and generic national guidance, the challenge is now to teach to it.

Key points

- Generic guidance from the GMC continues to recommend teaching related to frail older people.
- The BGS recommended curriculum for medical undergraduates is supported in full by the GMC guidance.
- Teaching about research considerations specific to older patients is supported by the GMC guidance.
- Recommendations to teach about research considerations specific to older patients have been added to the BGS curriculum.

CONFLICTS OF INTEREST

None declared

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