Fit for the future? The place of global health in the UK's postgraduate medical training: a review

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DECLARATION

Competing interests
Other than an interest in global health the authors declare that they have no conflict of interest

Funding
None declared

Ethical approval
Not applicable

Guarantor
JH

Contributorship
JAH had the idea for the paper, recruited trainee members of Royal College's International Committees or representatives via Alma Mata, reviewed the Faculty of Public Health's Curriculum with Drs Lee and Mandeville, oversaw

Summary

Objectives That health is now global is increasingly accepted. However, a 'mismatch between present professional competencies and the requirements of an increasingly interdependent world' has been identified. Postgraduate training should take account of the increasingly global nature of health; this paper examines the extent to which they currently do.

Design Trainees across 11 medical specialties reviewed the content of their postgraduate curriculum.

Setting Not relevant.

Partcipants None.

Main outcome measures Competencies were coded as 'UK' (statement only relevant to UK work), 'global' (statement with an explicit reference to aspects of health outside the UK) or generic (relevant both to the UK and international settings).

Results Six of the 11 curricula reviewed contained global health competencies. These covered the global burden or determinants of disease and appropriate policy responses. Only one College required trainees to 'be aware of the World Health Organization', or 'know the local, national and international structures for health care'. These cross-cutting competencies have applicability to all specialties. All 11 curricula contained generic competencies where a global health perspective and/or experience could be advantageous, e.g. caring for migrant or culturally different patients.

Conclusion Trainees in all specialties should achieve a minimum requirement of global health awareness. This can be achieved through a small number of common competencies that are consistent across core curricula. These should lead on from equivalent undergraduate

competencies. Addressing the current gap in the global health content of postgraduate medical curricula will ensure that the UK has health professionals that are trained to meet the health challenges of the future.

Introduction

Understanding that health is a global issue is vital for our future health professionals if they are to deal effectively with the health-care challenges that they will face. The Global Independent Commission on Education of Health Professionals for the 21st Century described a 'mismatch between present professional competencies and the requirements of an increasingly interdependent world',[1] emphasizing the need for evolving postgraduate training to take account of the increasingly global nature of health.

Some may question why UK-trained health professionals working solely within the National Health Service (NHS) need an awareness of global health. A range of reasons detailing how training our health professionals in global health will deliver significant benefits to the NHS are listed in Box 1. Furthermore, as health professionals we have a duty to advocate better health for all, not only for those living within the UK.

Undergraduate training is adapting, with special study modules and intercalated Bachelor of Science degrees in international or global health having been available for more than a decade.[5] The updated General Medical Council guidelines for undergraduate medical training 'Tomorrow's Doctors' include the learning outcome: 'Discuss from a global perspective the determinants of health and disease and variations in health-care delivery and medical practice'[6] and global health learning outcomes for all UK medical students have recently been developed.[7,8] This is welcome progress but, without a similar shift in postgraduate training, is not sufficient.

Indeed Martineau *et al.*'s analysis of the career paths of early graduates of intercalated international health BScs concludes that 'the successful establishment of global health education at an undergraduate level must now be replicated in postgraduate training to follow this generation as they progress'.[9]

There is high-level recognition of the need for and benefits of the NHS adopting a global health approach,[10,13] including a House of Lords debate led by Lord Crisp.[14] Several Royal Colleges have responded with conferences,[15–17] position statements[18] or strategies.[19,20] Despite this, the coverage of global health within UK postgraduate medical curricula has not been systematically assessed. This article presents a review of the current global health content of a cross-section of postgraduate medical curricula in the UK.

Methods

An informal network of trainees and recently qualified general gractitioners (GPs) holding positions on the International Committees of a number of Colleges was established. Where

Box 1
Reasons why UK-based health-care workers would benefit from an awareness in global health

- Immigration has contributed to an increasingly ethnically diverse UK population[2] hence in day to day clinical practice it is important for most UK doctors to be familiar with the diverse cultural and clinical needs of their patients,[3] e.g. understanding the urological, gynaecological and psychological consequences for women who have undergone female genital mutilation in childhood
- Current UK health-care reforms propose handing clinicians more responsibility for managing NHS resources yet there is little formal opportunity for them to learn about or experience alternative ways of delivering health care. An understanding of the faults and virtues of different health systems could better inform their decision-making
- There are increasing risks posed by the mobility of infectious diseases and new pandemics, e.g. severe acute respiratory syndrome and swine flu. A greater awareness of current global infectious trends will help us prepare for and deal with UK spread
- Fully understanding the prevalence and incidence of certain diseases in the UK, for example tuberculosis or HIV, implicitly requires understanding the global burden of disease
- The emergent epidemic of non-communicable diseases is closely linked to socioeconomic and sociopolitical influences through, for example, the role of transnational corporations and societal inequities. Understanding this epidemic in its global context enables us to develop an intersectoral and multidisciplinary response to tackle these drivers.
- Inequality and disease can contribute to political instability which, even if overseas, can indirectly affect UK security; therefore it is in the interest of all countries to deal with these problems at the root cause[4]

the review of all curricula, coordinated the inputs for the first draft of the paper, led the writing of the final paper and has given final approval of the version to be published. All other authors reviewed their respective curriculum, contributed to discussions around the idea for the paper and to the writing of the first draft of the paper, provided comments on subsequent versions and have given final approval of the version to be published.

Acknowledgements

We would like to acknowledge the contributions of specialty registrars who contributed to the review of their curriculum but who were not involved in writing the paper: Dr T Killeen (RCS); Dr N Hezelgrave (RCOG); Dr Sarah Kate Alldred (RCOG); Dr Oliver Jefferis (RCPCH); Dr Clare Hollister (RCGP); Dr Qasim Ihsan (RCGP); Dr K Mandeville (FPH) and Dr A Lee

(FPH). Particular recognition is given to Drs Mandeville and Lee who were involved in the initial work on the FPH curriculum, the methodology of which was used in this paper, and Dr Lee who initiated the formation of the informal group of trainees on the International Committees of Colleges.

Reviewer
John Yudkin

Colleges do not have an International Committee or do not have a trainee representative on their International Committee, trainees nominated by the College or affiliated to the UK-based global health postgraduate organization Alma Mata[21] were recruited to informally represent the College in which they are training. The Colleges and curricula reviewed are shown in Table 1. Unsuccessful efforts were made to include the Royal College of Anaesthetists and the Royal College of Radiologists.

The global health content of the curricula described in Table 1 was established by examining the competencies within them. For several curricula this was done by more than one person and discussed to achieve consensus. The competencies were coded as 'UK' (statement only relevant to UK work, often referring to UK institutions or structures), 'global' (statement with an explicit reference to aspects of health outside the UK such as the global burden of disease or organizations involved in international health-care issues) or generic (relevant both to the UK and international settings). This built on work previously conducted and published on the Faculty of Public Health's (FPH) curriculum; the results presented here for the FPH curriculum are from this previous work.[22]

Results

Six of the 11 curricula reviewed contained global health competencies, as shown in Table 2.

The six curricula that contained global health competencies had competencies on the global burden of disease or global determinants of disease and appropriate policy responses. The global health competencies identified are shown in Table 3. Two curricula were almost identical in common competencies (The College of Emergency Medicine [CEM] and The Royal College of Physicians – General Internal Medicine [RCP-GIM]).

Although the aim of this paper was to review the core specialty curricula, the surgical and psychiatric subspecialty curricula were also reviewed. (The subspecialty curricula reviewed were: Neurosurgery; Trauma and Orthopaedics; General Surgery intermediate and advanced training; Urology; Paediatric Surgery; Plastics Surgery; Otolaryngology; Oral and Maxillofacial Surgery; Cardiothoracic Surgery; General Psychiatry (ST4+); Old Age Psychiatry; and Liaison Psychiatry.) The detailed results of these are not presented for simplicity but of those reviewed only the Trauma and Orthopaedics curriculum contained

Table 1
Colleges and curricula reviewed

College	*Curriculum*
The Faculty of Public Health (FPH)	August 2010
The Royal College of General Practitioners (RCGP)	July 2011 Core Curriculum and Interpretive Statements
The Royal College of Psychiatry (RCPsych)	Core Psychiatry Curriculum (ST1–3) February 2010
The College of Emergency Medicine (CEM)	August 2010 Core Specialty Training ACCS CT1&2 (knowledge, skills, behaviour and emergency department context)
The Royal College of Ophthalmologists (RCOphth)	2011 Core learning outcomes
The Royal College of Obstetricians and Gynaecologists (RCOG)	Core Curriculum August 2010
The Royal College of Paediatrics and Child Health (RCPCH)	September 2010 General Competencies
The Royal College of Physicians (RCP)	Generic Curriculum (GC) 2007 General Internal Medicine (GIM) August 2009 (knowledge, skills and behaviour excluding medical presentations)
The Royal College of Surgeons (RCS)	2010 Core Surgical Training Curriculum
The Royal College of Pathologists (RCPath)	Medical Microbiology & Virology, May 2010 (knowledge, skills and behaviour excluding Specialty Specific Competencies)

Table 2
Results of coding of postgraduate medical and surgical curricula

	Global	*Generic*	*UK*	*Total*
FPH	0	107	14	121
RCGP	0	1763	98	1861
RCPsych	0	261	18	279
CEM	3	640	42	685
RCOphth	2	176	4	182
RCOG	2	231	25	258
RCPCH	6	392	6	404
RCP (GC)	0	293	19	312
RCP (GIM)	3	405	33	441
RCS	0	387	2	389
RCPath (MMV)	2	482	22	506

FPH, The Faculty of Public Health; RCGP, The Royal College of General Practitioners; RCPsych, The Royal College of Psychiatry; CEM, The College of Emergency Medicine; RCOphth, The Royal College of Ophthalmologists; RCOG, The Royal College of Obstetricians and Gynaecologists; RCPCH, The Royal College of Paediatrics and Child Health; RCP-GC, The Royal College of Physicians – Generic Curriculum; RCP-GIM, The Royal College of Physicians-General Internal Medicine; RCS, The Royal College of Surgeons; RCPath, The Royal College of Pathologists

any global health competencies. These were very similar to the global health competencies in the CEM and RCP-GIM. Table 3 compares Collegiate competencies with the proposed undergraduate global health competencies.[7]

From Table 3 we can see that The Royal College of Paediatrics and Child Health (RCPCH) was the only College to require all trainees to 'be aware of (understand the work of) the World Health Organization (WHO)', or 'know the local, national and international structures for health care'. These cross-cutting competencies have applicability to all specialties. Table 3 also demonstrates that there are a number of global health topics that are not covered by any of the postgraduate curricula such as health inequalities or the mobility of and inequalities in the global health workforce. The latter is of importance not only because of concerns around staffing health facilities in low- and middle-income countries but also because many of those undertaking postgraduate training in the UK will have qualified elsewhere, and large numbers of UK doctors work overseas at some time raising issues about the regulation and registration of physicians.

All 11 curricula contained numerous generic competencies where a global health perspective and/or international experience could be advantageous. These mostly related to caring for migrant or culturally different patients (e.g. maintaining an awareness of and having respect for 'socio-cultural contexts' in the assessment and management of patients, or communicating with patients whose first language is not English). There was brief reference in The Royal College of General Practitioners (RCGP) curriculum to EU law, international conventions, international patient or professional organizations and to the prevalence of conditions in the UK in comparison to other European countries, however having knowledge of these was not an explicit learning outcome. Achievement of some competencies, such as RCPCH's awareness 'of child health exploitation issues including child prostitution, child labour and children in combat … and the effects of armed conflict on child health' or The Royal College of Pathologists' (RCPath's) 'impact on health of armed conflict, natural disasters and other social upheavals', would clearly benefit from a global perspective or international experience. Arguably all specialties, not just paediatrics, would benefit from an understanding of the role of the World Health Organization (WHO), and from an awareness of the global burden of disease.

Discussion

This detailed review of 11 core postgraduate medical curricula indicates a lack of consistency in the inclusion of competencies relevant to global health in UK postgraduate medical education and training.

Strengths and weaknesses

There are a number of strengths and limitations to our study. First, all those reviewing the curricula have an interest in global health. This facilitated a shared understanding of what was meant by a global health competency and arguably helped with consistency across curriculum reviews.

Table 3
Global health competencies described in the curricula reviewed

*Undergraduate (General Medical Council)**	*Current postgraduate (Collegiate)*	*College*
Global burden of disease		
1 Discuss communicable and non-communicable disease at the global level	Know the epidemiology, pathology and natural history of common infections of the fetus, newborn and children in Britain and important worldwide infections, e.g. TB, HIV, Hepatitis B, malaria, Polio	RCPCH
	Be aware of the national and international situation regarding the distribution of disease, the factors that determine health and disease, and major population health responses	RCPath
	Outline the major causes of global morbidity and mortality and effective, affordable interventions to reduce these	CEM & RCP (GIM) & RCS (T&O)
2 Discuss the impact of international travel and migration on the diseases seen in the UK		
3 Discuss the causes and control of global epidemics		
Socioeconomic and environmental determinants of health		
4 Demonstrate awareness of the non-clinical determinants of health, including social, political, economic, environmental, and gender disparities	Demonstrate knowledge of the determinants of health worldwide and strategies to influence policy relating to health issues including the impact of the developed world strategies on developing countries	CEM & RCP (GIM)
	Demonstrate knowledge of the determinants of health worldwide and strategies to influence policy relating to health issues	RCS (T&O)
	Have an awareness of the determinants of health worldwide and strategies to influence policy relating to health issues including the impact of more economically developed countries' strategies on less economically developed countries	RCOG
	Their knowledge must include the influence of economic and political considerations (on a local and global scale) on individual and community health and how these may be influenced	RCOphth
5 Examine how health can be distributed unequally within and between populations in relation to socially defined measures		
6 Describe how the environment and health interact at the global level	Be aware of the implications of sustainable development in low-income countries	RCPCH
Health systems		
7 Discuss the essential components of a health system, using the WHO model	Know the local, national and international structures for health care	RCPCH
8 Recognize that health systems are structured and function differently across the globe	Be aware of the impact of the European Union on child health and health-care systems	RCPCH
9 Recognize that the NHS has an international workforce and explain the impact of this within the UK and overseas		

(Continued)

Table 3
Continued

*Undergraduate (General Medical Council)**	*Current postgraduate (Collegiate)*	*College*
10 Examine the causes and scale of inequalities in health workforce distribution		
Global health governance		
11 Demonstrate awareness of the complexity of global health governance, including the roles of international organizations, the commercial sector and civil society		
12 Discuss the role of WHO as the international representative body of national governments for health	Be aware (understand the work of) of the World Health Organization and UNICEF	RCPCH
13 Discuss how health-related research is conducted and governed globally		
Human rights and ethics		
14 Respect the rights and equal value of all people without discrimination and provide compassionate care for all		
15 Examine how international legal frameworks impact on health-care delivery in the UK	Know the principles of the UN Convention on the Rights of the Child, apply these in their own practice and work for the protection of these rights	RCPCH
16 Discuss and critique the concept of a right to health		
17 Describe the particular health needs of vulnerable groups and migrants		
18 Discuss the role of doctors as advocates for their patients, including the importance of prioritizing health needs over other concerns and adhering to codes of professional conduct		
Cultural diversity and health		
19 Demonstrate understanding that culture is important and may influence behaviour, while acknowledging the dangers of assuming that those from a particular social group will behave in a certain way	We counted these as generic rather than global health competencies, however all postgraduate curricula have competencies covering these competencies	All
20 Communicate effectively with people from different ethnic, religious and social backgrounds, where necessary using external help		
21 Work effectively with colleagues from different ethnic, religious and social backgrounds		

RCOphth, The Royal College of Ophthalmologists; RCPCH, The Royal College of Paediatrics and Child Health; CEM, The College of Emergency Medicine; RCP, The Royal College of Physicians; GIM, general internal medicine; RCS, The Royal College of Surgeons; T&O, Trauma and Orthopaedics; RCPath, The Royal College of Pathologists; RCOG, The Royal College of Obstetricians and Gynaecologists
*Extrapolated global health competencies based on General Medical Council 'Tomorrow's Doctors' competencies[7]

However, reviewers without a global health interest may have reached different conclusions. Secondly, the process of assignation of a competency to a category, though guided by the agreed definitions, is ultimately a subjective decision. While in some cases several people reviewed curricula, and in the FPH curriculum review good inter-rater reliability was achieved,[22] this was not possible for all curricula. To reduce inconsistency all assignations to the global health category were reviewed by JH and discussed with reviewers. As demonstrated in Table 3, the global health competencies identified were very similar across the curricula indicating that this process was fairly successful. Finally, there were some discrepancies between the curricula in terms of exactly what 'a competency' was. Pragmatic decisions were taken where necessary and for this reason there are a number of caveats to the total number of competencies presented for each curriculum. These decisions were taken to increase the comparability of results between the curricula.

Meaning of the study: possible mechanisms and implications for clinicians or policy-makers

There is a strong case and increasing consensus on the need for a common minimum requirement of global health awareness that trainees of all specialties must attain. This can be achieved through a small number of common core competencies in global health, easily realizable without overseas experience, which are consistent across core curricula. These could cover issues such as the global burden of disease, global determinants of health, the role of international organizations in health, sustainable development and the potential structures of health-care systems.

These competencies do not need to be developed from scratch; those already introduced by Colleges and described in Table 3 can be used as a starting point. Such competencies can be framed to naturally follow on from those being introduced into undergraduate medical training.[7] With common core competencies in place, Colleges can develop additional competencies relevant to their specialty at their own discretion. Levels of knowledge and understanding of global health issues will fit with standard levels of competence in curricula, though ensuring that they are covered by appropriate assessments will require a specific mandate from Colleges.

To seize this opportunity a forum for Colleges to collaborate will be required. This could either be through current structures, such as the Academy of Medical Royal Colleges, or could be a separate venture organized by, for example, the General Medical Council or an enthusiastic College. With competencies in place their utility in facilitating better care within the NHS can be robustly assessed.

For trainees who want to take their enthusiasm for global health further there should be easily accessible further training in global health that complements ongoing specialty training. A tiered structure to this effect has previously been proposed.[23]

Unanswered questions and future research

This study looked at the content of curricula linked to global health learning, however even where explicitly mentioned, tools to ensure adequate delivery of teaching and assessment of these competencies may be inadequate. For example knowledge of these competencies is not be routinely tested in either postgraduate exams or workplace-based assessments. Future areas of research may include exploring mechanisms to maximize the delivery and assessment of global health competencies, how the integration of these into training may impact the quality of care delivered in the UK, and the contribution of UK doctors to the broader global health agenda.

Conclusion

Global health transcends traditional barriers between specialties as much as it does geographical boundaries, and the development of a set of core global health competencies is both judicious and timely. This article reflects a growing awareness across specialty trainees that coverage of global health in their curricula is inadequate. Addressing this gap will ensure that the UK has health professionals that are trained to meet the health challenges the UK faces in the future.

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