Equal Opportunities? Examining Global Health teaching at UK medical schools

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Abstract

Introduction
In an increasingly international and interdependent world, the need for global health teaching is becoming more recognized, both for current and prospective medical students. In this study, we looked to assess available information about global health teaching provision at UK medical schools in the context of the new GMC guidance.

Methods
We collected data about global health teaching in medical schools using three methodologies: 1. Information advertised on medical school websites; 2. Emailing medical school admissions offices; 3. Circulating a survey to medical students through Students for Global Health (then Medsin). We then assessed each university in 5 domains: Student-selected components, intercalated degrees, clearly defined teaching provision within the curriculum, extracurricular activity and dedicated institutes of global health.

Results
The most common provision was extracurricular activities, the least a dedicated Institute of Global Health. Over half of all UK medical schools offered a Student Selected Component (SSC) option or Masters degree in global health. Only 11 of 33 UK medical schools had specific evidence of global health teaching within the core curriculum. When compared to previous literature regarding professional guidelines, global health teaching provision and information regarding it falls short of the required standards.

Conclusions
Information about global health teaching, both on the curriculum and extra-curricula, at UK medical schools is not universally available for prospective medical students. Although increased teaching within the core curriculum at every medical school may be impractical due to time restrictions, a global health SSC should be available to all students to provide the opportunity of further in-depth study for those who wish to further their knowledge and skills.
in the area.

**Keywords:** Global health; medical education; international health; teaching; medical school curriculae

### Introduction

Demographic and epidemiological shifts mean that, in an increasingly international and interdependent world, UK medical students now need to be prepared to practice in a wide variety of health settings. The need to inform students about the factors influencing the health and well-being of patient populations is becoming increasingly recognised (Brewer *et al.*, 2009).

*The Lancet* report on *Health Professionals for a New Century* calls for global health education which will create a workforce that is sensitive to an increasingly diverse patient population, and who are competent to deal with the transnational flow of diseases, risks, technologies, and career opportunities (Frenk *et al.*, 2010).

The GMC's 2018 'Outcomes for Graduates' (GMC, 2018) recommended that newly qualified doctors must have knowledge and skills in the following areas:

- Population health
- Improvement and development of health
- Equity and sustainable healthcare
- Health service policy and economics
- Clinical guidelines
- Ecological, environmental and occupational hazards in ill-health and their mitigation

Further recommendations include that global health should be taught for a minimum of 30 hours during a medical degree (Houpt *et al.*, 2007).

Further global health topics that could be covered in the core curriculum were identified as:

- Travellers' and immigrant health (Houpt *et al.*, 2007)
- Health and sustainable development (Rowson *et al.*, 2012)
- Health in relation to climate change (Hastings *et al.*, 2014)

A survey of 500 medical students from 75 countries, conducted by the International Federation of Medical Student Associations, found that 94% believed global health education was important, yet only 33% felt that their teaching on global health was sufficient (Göpfert *et al.*, 2014). A study of Swedish medical schools in 2015 found that most Swedish medical students had not received any global health education, and in their final year, many reported a lack knowledge in key areas surrounding global health (Ehn *et al.*, 2015).

Subsequent studies utilised an internet search and information gathered from student representatives, course coordinators and lecturers, identifying gaps in the provision of global health teaching (Kaffes *et al.*, 2016). A similar study carried out in the United States highlighted the need for a standardised curriculum in global health education in U.S. medical schools (Khan *et al.*, 2013). Here in the UK, a 2010 study found that of 17 medical schools surveyed only 4 included global health within their core curriculum (Dotchin *et al.*, 2010).

A review of Canadian medical schools (Izadnegahdar *et al.*, 2008) uses information gathered from public websites alongside questionnaires distributed to both medical schools and global health student representatives to assess student global health practices and opportunities.

Our study will use similar methodology to assess what information is available to prospective medical students about
global health teaching at UK medical schools, and discuss how this meets the recommendations of the literature described above.

**Methods**

**Data collection**

We used three methods of data collection that would be available to prospective medical students looking to assess global health teaching provision at UK medical schools.

**Method 1:**

On the 25th February 2017, EC collected data from the information available regarding global health teaching provisions on the website of each of the 33 medical schools in the United Kingdom.

The methods of data collection included:

1) Searching for the terms 'global health', 'international health', 'curriculum', 'modules' and 'intercalated degrees' on the website's search function. This would reveal any information about activities, learning outcomes or modules specific to global health for which information were available on the website.

2) Reviewing the medical school's syllabus or curriculum that was published on the website, to assess for the presence of global health learning outcomes, or opportunities to further global health interests (for example, in a student-selected component (SSC)).

**Method 2:**

Between 27/2/17 and 2/5/17 JC emailed all UK medical school undergraduate admissions offices asking for the following information:

"What do you offer for global health:

- In the core curriculum?
- Optional components?
- Opportunities for intercalation?"

**Method 3:**

Between 6/4/17 and 2/5/17 EC circulated a survey to all 33 UK ‘Students for Global Health’ (formerly Medsin) branches via email and social media. Students for Global Health is a national organisation providing teaching, training and learning opportunities across UK medical schools.

The survey prompted respondents to describe the global health teaching provision at their medical school, and asked them to mark which learning recommendations were clearly covered in their core curriculum. It also asked whether they felt global health teaching was adequate at their medical school.

We established a cut-off point for data collection of Thursday 4th May 2017.

**Assessing global health teaching provision**

The following global health teaching provisions were quoted by university websites, students or staff:

- Teaching within the core curriculum
  - Partial
  - Complete
- A student-selected component
Further study options, for example:
  - A Bachelor’s degree
  - A Master’s degree

The presence of ‘extracurricular activities’, including a ‘Medsin’ branch

A dedicated Institute of Global Health

Each provision was assessed at each UK university using the above methods. For global health teaching within the core curriculum, ‘complete’ was defined as a full module or teaching strand dedicated to global health while ‘partial’ was defined as a mixed global/public health strand, with lectures and learning outcomes spread out across the course.

SSCs were defined as any study period of four weeks or more within the medical course, whereby students could take the option of improving their global health knowledge in a supported teaching environment. The elective was not counted as part of this criterion, as it is universally available.

Further study options were defined as any ‘global health’ or ‘international health’ degrees, or MRes, MSc, BSc degrees with supported global health special interest research or study as the principal project. ‘International Health Management’ or ‘International Health Business’ degrees under the university’s associated business schools were not included.

Extracurricular activities included global health special interest groups, charitable organisations and academic societies, as well as special educational talks and activities organised by the university.

A dedicated Institute of Global Health was defined as a university-led institute with specific interests, research and funding. Public health institutes were not included.

**Results/Analysis**

Method 1 returned results for all 33 UK medical schools. Method 2 returned only 9 university responses, with 5 complete answers. Method 3 returned 28 student responses, representing 21 of the 33 UK medical schools. When there was more than one respondent from the same university, the results were reconciled and placed in Table 1.

**Table 1: To show number of universities offering each teaching provision**

| Teaching Provision          | Number of universities |
|-----------------------------|------------------------|
| Within the core curriculum  | Complete Partial       |
|                            | 9 2                    |
| SSC                        | 8                      |
| Intercalation              | Bachelor’s Master’s    |
|                            | 13 18                  |
| Extracurricular activities  | 32                     |

From Table 1 we can see that the university with the most clearly described global health teaching provision was Southampton University, who provided evidence of a complete teaching module within the core curriculum and opportunities for further study through an intercalated Masters degree and an SSC. They also provided a wealth of extracurricular activities and had a dedicated Institute of Global Health. King’s College London also performed well; their Global Health Institute offers a range of optional global health education opportunities in the form of an SSC and Bachelors and Masters degrees. The university that provided the least global health teaching had none of these provisions described by any of the methods of data collection.

Figure 1 shows the frequency of each provision at UK medical schools, as advertised to current and prospective
students.

Our data gathering methods suggested that over half of UK universities offered:

- Extracurricular activities
- An SSC option
- A Master’s degree

**Figure 1: The most common global health teaching provisions reported at UK medical schools**

| Provision                          | Percentage |
|-----------------------------------|------------|
| Institute of Global Health        | 8          |
| Mandatory teaching                | 11         |
| Bachelor’s degree                 | 13         |
| Master’s degree                   | 18         |
| Student-selected component        | 21         |
| Extracurricular activities        | 32         |

**Discussion**

There is broad variability in readily accessible information about global health teaching provision across UK medical schools. It has been recommended that global health should be taught for a minimum of 30 hours during a medical degree (Houpt *et al.*, 2007), a target our results suggest some universities are failing to meet. In order to fully comply with GMC guidelines, medical schools should have global health teaching within the core curriculum. However, our study returns only 11 of 33 UK medical schools to have evidence of clearly defined mandatory global health teaching, with no information as to how many modules or teaching hours are dedicated to it.

The literature suggests that the most effective way to deliver teaching would be to fully integrate global health within the core curriculum (Eaton *et al.*, 2011). One identified barrier to this was an already overcrowded medical school curriculum. One study (Frenk *et al.*, 2010) suggested that global health teaching could be integrated into pre-existing compulsory modules, such as public health or infectious diseases.
The delivery of the sessions was also identified as a barrier to adequate global health teaching; one study found that group sessions were the most popular and effective method of teaching amongst medical students, despite 98% reporting that their existing global health teaching was delivered in lectures (Göpfert et al., 2015). Although small group teaching brings its own challenges with regards to facilitation of the sessions, more effective learning may relieve the time pressure felt by an overcrowded curriculum.

One study found that most medical schools offer global health education primarily through optional modules, the importance of which has previously been emphasised in literature (Eaton et al., 2011). Our study found that 21 UK medical schools currently offer a global health SSC, a popular method of providing additional teaching for those with a prior interest in global health (Rowson et al., 2012).

A 2010 study of the SSC provided at Newcastle Medical School showed that such modules are well received by students, with all participants stating that they would recommend the SSC to a fellow student (Dotchin et al., 2010). These findings suggest that if paired with adequate compulsory teaching, the provision of an SSC could be a highly effective and popular method of offering additional, in-depth study of global health without compromising the greater medical school curricula.

However, other studies (Göpfert et al., 2014, Aulakh et al., 2012) highlight the fact that optional modules alone do not have a wide enough reach, as they self-select students with prior interest in the topic.

The strong presence of extracurricular activities available at UK medical schools shown by our study is encouraging, but relies heavily on the students or staff who run them. Extracurricular learning is also less likely to be focussed around the GMC’s ‘Outcomes for Graduates’, and more on personal interest, limiting their usefulness.

It has also been argued that global health teaching could be focused around electives, although this is limited by the fact that not all students complete their electives outside the UK. At Newcastle University, UK, data for 2014 to 2016 showed that 75% of students travelled overseas for their medical elective, and 26% undertook a placement in a low or middle-income setting.

**Limitations**

There are several limitations to our study. Separating teaching into partial and complete is potentially too simplistic; to gain a more detailed picture, one could examine the learning outcomes covered, or number and length of teaching sessions. However, most of these data would not be accessible to prospective medical students, which is what we are looking to assess.

"Complete" was only used for courses on which there was separate global health teaching, yet in many courses global health teaching is dispersed throughout the curriculum which doesn’t mean that it is inferior, and in many ways could potentially be used to highlight the relevance of global health.

The presence of a dedicated institute of global health was uncommon. However, there are public health institutes in which global health research and teaching may be taking place.

Although postgraduate degrees are not directly relevant to the undergraduate medical curriculum it does show evidence of global health interest which is likely to impact on how the undergraduate medical curriculum is taught.

Moreover, degrees in "international health management" or "international health business" at the university were not included as they are not directly health related whereas in fact global health as a whole should include multidisciplinary collaboration.

Additionally, this study does not include other valid indicators of global health education such as the amount or quality of global health research produced. This could be measured in terms of number of researchers, number of research papers, or UK Research Excellence Framework score, but this is well beyond the remit of our current research question.
In relation to the data collection methods, contacting medical school admissions offices was not useful. When we collated information for the ‘Medsin’ survey, for when we received more than one return from a medical school there were no discrepancies.

**Conclusion**

Clear and well-defined mandatory global health teaching could ameliorate the variable engagement and therefore learning opportunities associated with SSCs, intercalated degrees and extracurricular activities. Without it, most medical students would struggle to meet the recommended 30 hours of teaching described in previous literature (Houpt *et al*., 2007), and the learning outcomes described by the literature (GMC, 2018, Frenk *et al*., 2010, Houpt *et al*., 2007, Rowson *et al*., 2012, Hastings *et al*., 2014).

Moreover, SSCs should be available at all UK medical schools, giving every student the option of further in-depth study. This may help standardise the learning outcomes of those students wishing to learn more than the suggested GMC learning outcomes, and focus on the topics recommended by previous literature (Houpt *et al*., 2007, Rowson *et al*., 2012, Hastings *et al*., 2014).

Further research could evaluate the most effective methods of incorporating global health teaching into core curriculae. A more challenging evaluation would be to look at the long-term impact on students in their subsequent careers.

**Take Home Messages**

**Learning points**

1) Medical schools should provide information about mandatory and optional global health teaching on their websites to allow for prospective students to make an educated decision regarding their global health teaching opportunities.

2) The core curriculum should include the learning outcomes outlined in the GMC ‘Outcomes for Graduates’ 2018 at the bare minimum.

3) A global health specific SSC at each medical school should be encouraged, especially focusing on the topics described in the current literature (Frenk *et al*., 2010, Houpt *et al*., 2007, Rowson *et al*., 2012, Hastings *et al*., 2014).

**Notes On Contributors**

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Figure 1. Source: The authors

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**Appendices**

None.

**Declarations**

The author has declared that there are no conflicts of interest.

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**Ethics Statement**

Ethical approval for this study was sought from Ethics Review Board at Newcastle University on 14th February 2017. This research was considered by Ethics Review Board at Newcastle University and found (in accordance with the Health Research Authority) that no further ethics approval was required due to the nature of the study. The research was conducted in accordance with the Declaration of Helsinki. Written information was distributed with the questionnaires and emails regarding how the data would be used. By completing the anonymous questionnaire, implied consent was garnered from study participants.

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