

PROJECT REPORT

Global health education for medical undergraduates

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A B S T R A C T

Context: The Rural Undergraduate Support and Coordination (RUSC) program has stimulated teaching in remote indigenous health, primary health care and international health for Australian students prior to their placements. Medical students have traditionally taken electives in the developing world, although these electives are of variable use to the communities hosting them and to the students. Calls for development of a curriculum in international or global health have resulted in some attempts to define a curriculum. An International Health (IH) course at the University of Adelaide Medical School, South Australia, has evolved since 1999.

Issues: The IH course has functioned both as an introduction to the social determinants of health and as a pre-departure course for student electives. The sequence progresses from general information to disease specific information and service provision for refugees and returning travellers. Experienced presenters deliver the content; student assessment is via a group development program proposal.

Lessons learnt: The current course aligns with international thinking on 3 structural themes for global health: the burden of global disease, travellers' medicine and immigrant/refugee health. Student opinion expressed in qualitative evaluation has been largely positive and consistent with the debate about whether this content should be a core unit or an elective part of the curriculum. From 2011 the course will be known as 'Global Health' and ongoing content development is expected.

Key words: Australia, global health, medical education, primary health care, rural health, world health.



Context

Beginnings

The Rural Undergraduate Support and Coordination (RUSC) program (1997-2011) developed rural clinical placements for Australian medical students to provide an inspiration for future rural work. In the late 1990s the University of Adelaide, South Australia, had a large enrolment of Malaysian students sponsored by their government and bonded to return to their national health service. The challenges for these Malaysian graduates of working in tropical rural settings prompted the introduction of an International Health (IH) course, which included 'tropical medicine'. An initial course was developed in 1998 by RUSC academics Drs Owen Lewis and Jonathan Newbury, in the then Department of General Practice. Course content included disease-specific topics, public health, Indigenous health worker training and consideration of philosophical and religious issues.

The IH course was first delivered as a 2 week option in the 6th year mid-year break in 1999. It contained a series of short lectures and problem-based learning sessions with a short-answer examination on the final day. The IH course has evolved since 1999 and continues to be delivered every year.

Developing world electives

The University of Adelaide, like many other medical schools, has encouraged senior students to undertake international electives. The emerging risk of HIV in South Africa first prompted pre-departure planning¹. A North American evaluation of developing world elective experience revealed positive and negative effects:

- limited usefulness to the community of short-term placements

- lack of education goals compared with other parts of the students' curriculum
- a failure to address community needs
- unexpected ethical dilemmas emerging
- the emergence of the disparaging term 'medical tourism'².

Such effects may harm the student and their host community and precipitated the need for pre-departure courses² to mitigate negative effects and facilitate self-reflection after the experience.

Curriculum

The need for a systematic approach to a global health curriculum was acknowledged both in Australia³ and debated in the medical literature^{4,5}. Understanding the breadth of global health included an awareness of recent changes, for example the migration of medical workforce and the threat of pandemic influenza A H1N1⁴ led to development of standard curriculum frameworks⁶ and persistent calls for global health to be incorporated in all medical curricula^{5,7}. Despite this impetus, medical schools vary widely in what is offered as IH curriculum and, indeed, even accepting IH as a necessary part of their medical curriculum⁴.

University of Adelaide course

Initial evaluation of the University of Adelaide course content and the number of students enrolled demonstrated the perceived value of the course and ensured its place in the MBBS curriculum. When Dr Lewis returned to Nepal in 2003, Dr Gillian Laven joined as course coordinator and IH was expanded to 3 weeks, offered to 4th, 5th and 6th year medical students and repeated twice a year. The name of the course was changed to International Primary Health Care (IPHC) to reflect the focus on primary health care, including preventive care and the prevalence of 'chronic conditions of the industrialised world' in the developing world^{7,8}.



Issues

Course content

The aim of IPHC is to provide students with a greater understanding of the social determinants of health. These include health issues related to poverty, powerlessness, lack of access to resources and health education – concepts that are equally relevant in Australian rural and remote locations and the developing world. The IPHC course is provided as a 'pre-departure training course'² for students intending to work in Indigenous communities in Australia and internationally. However, there is value in all students understanding these concepts, even if their career will be in urban locations, providing peripatetic service to remote communities or refugee populations, or to returning travellers⁷.

The course seminars are designed to be interactive rather than traditionally didactic, to provide knowledge about developing world health issues, and strategies for relieving the health burden experienced by individuals and communities. Where possible the structure is progressive:

- from foundation seminars in the first week (eg Global Review of Major Causes of Health & Illness, and Child Health)
- followed by disease principles (eg TB, HIV and Malaria) in the second week
- to final week application of knowledge gained (eg Royal Flying Doctor Service, Refugee Health, Travel Medicine and Vicarious Trauma).

Australian community examples include Indigenous communities throughout urban and rural Australia and immigrant and refugee communities. In the period 2008-2009, 171 000 migrants entered Australia under the skilled and family streams of Australia's migration program, a further 670 000 arrived for specific work, business, entertainment, sporting, holiday or study on temporary visas.

A smaller number (13 507) entered on humanitarian grounds⁹.

The use of presenters who are currently practising in IH makes the course relevant and authoritative. However, the logical sequence and flow of the seminars is often difficult to maintain due to the inclusion of presenters whose work takes them to rural areas in Australia and internationally.

Currently this progressive learning IPHC course covers the 3 competency domains recommended by the American Society for Tropical Medicine and Hygiene Committee on Medical Education⁷:

1. Burden of global disease
2. Travellers medicine
3. Immigrant health.

Importantly, the course has a total of 40 contact hours over 3 weeks, which exceeds the Society's recommended student exposure to global health⁷.

In 2009, oral health was added to the IPHC curriculum because a 2008 examination of the medical curriculum found that medical students were exposed to only 2 hours of oral health. It was determined that graduating MBBS students need to understand the burden of oral disease, to be able to differentiate between deciduous and permanent dentition and between an ulcer and oral carcinoma¹⁰.

Educational assessment

All students participate in a group exercise to design and present a development program proposal (an intervention). The course provides students with an understanding of the complex inter-related problems in a community as they are guided through the process of gathering, sorting and organising information and selecting a focal community problem to address. The groups then develop a strategy to address the focal problem that includes lower level activities that contribute to higher level objectives. The proposals include the logical framework (outlining the program's



strategy), a narrative outline of the program's background, rationale and implementation, and a budget. These development program proposals are prepared in both oral and on-line (Wiki) formats and presented to two academics who provide constructive feedback and assess the proposal according to pre-determined criteria.

Lessons learnt

Course evaluation was designed to understand why students selected the IPHC course. For although the IPHC course was designed to be a pre-vocational course for international students, it has also become a pre-departure course for domestic students, and not always those in their final year.

Medical students at all Australian medical schools are required by RUSC agreements to undertake a minimum of 4 weeks in an Australian rural or remote area. Students are also encouraged and supported to undertake an international placement. Although approximately two-thirds of IPHC students are in their final (6th) year, the remainder of students are spread across 4th and 5th year.

The evaluations have revealed that undertaking IPHC supports students because it:

[provides the] opportunity to learn about diseases specific to 3rd world medicine. To gain an idea of the type of work I could do in the developing world in the future.

...addresses many issues of healthcare that ~~should be covered~~ [sic] are not covered in the standard curriculum. In my opinion, IPHC should be made compulsory in [sic] as a 3-week component in 4th year.

Student statements such as these support 'global health' being a core component in medical education⁴; however, the debate continues on what constitutes appropriate global health training for medical students.

It is acknowledged that some students select IPHC for reasons other than interest or for vocational or placement preparation:

Initially, I chose IPHC because of the predictable hours and doing something different – instead of general practice. Now, it has turned out to be one of the best rotations in my clinical years – I think is essential and should be incorporated into the core curriculum.

At present IPHC or 'global health' is the University of Adelaide option for those who have an 'interest in social justice issues' and those who are 'very passionate about Indigenous & developing world health. Interested in public health'.

And while the majority say it provides 'a greater understanding of public health in different global locations', and is suited to those 'Interested in working in rural/remote/international places', there will always be students who are allocated to it by default. Because without exposure there cannot be change, as educators the course coordinators are satisfied that some students select IPHC simply because 'friends recommended it'.

However some students elect to take IPHC for more informed reasons:

I felt that the public isn't aware of the problems other areas of the world is facing, and the impact they're going to make in a global situation. I want to be the educator to the public and hopefully, be able to make a small difference if possible.

Conclusion

The definition of 'global health' is evolving with more common usage¹¹. Global health includes drawing distinctions from public health, with its roots in tropical and infectious diseases and IH with its emphasis on policy and individual



developing world countries, rather than taking a global perspective¹¹. In 2011 the IPHC course was re-named 'Global Health'. However, it still '...encompasses environmental, political, economic and social dynamics and diseases that affect individuals or communities across countries'⁴. Current presenters (from Africa, Antarctica, Australia, India, Malaysia, Nepal, and Papua New Guinea) continue to provide a multinational focus and emphasise the need for cooperative multidisciplinary solutions (Appendix I). In this way students continue to be prepared whether pre-departure for their international elective, for the care of returning travellers, the health of immigrants and refugees, or simply to gain knowledge about the burden of global disease.

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Appendix I: International Primary Health Care course topics, presenters and their health disciplines

Topic	Presenter	Discipline
Developing an Indigenous nutrition education program	Associate Professor Stuart Andrews	Pharmacy and Medical Sciences
Defence Health in Military Operations Other Than War	Brigadier Robert Atkinson	Orthopaedics
Vicarious Trauma (Doctoring the Doctor)	Dr Jill Benson	General Practice
The Leprosy Mission, Eradicating the Causes and Consequences of Leprosy	Ms Ruth Brogan	Non-government Organisation
Understanding the oral cavity: abnormality vs normality (Pt 1 & 2)	Professor Viv Burgess	Dentistry
Chest Clinic	Dr Simon Cameron Dr Rick Stapledon	Thoracic Medicine
Working in Remote Central Australia	Mr Iain Everett	Nursing
Water & Health Designing a Development Program	Mr Brett Gresham	Engineer
Child Health; Immunisation; Diarrhoea; Emerging Infectious Diseases & Malaria	Dr Bob Kass	Travel Medicine/General Practice
Academic Course Coordinator; Group Project; Critical Appraisal; Cultural Diversity Workshop	Dr Gillian Laven	Health Sciences
Law/Politics	Associate Professor Peter Mayer	Politics
Trekking in Nepal: Case Study	Professor Jonathan Newbury	Rural Health
Mental Health Issues of Refugees & Asylum Seekers	Professor Nicholas Procter	Nursing/Mental Health/Refugees
Global Review of Major Causes of Health & Illness; Patterns of Mortality & Morbidity in the Developing Worlds	Emeritus Professor Anthony Radford	General Practice/Tabor College
Women's Health	Dr Susan Selby	General Practice
Royal Flying Doctor Service	Dr John Setchell	Royal Flying Doctor Service
Antarctic Case Study	Dr John Smith	General Practice/Rural Locum
Global Ageing	Associate Professor Renuka Visvanathan	Geriatric Medicine
STD	Dr Russell Waddell	Sexually Transmitted Diseases
Fever of Unknown Origin; TB	Dr Bruce Wauchope	General Practice
Indigenous Health	Dr Nick Williams	General Practice