

Educational bridges between Ireland and Malaysia: Initial student responses to the Penang Medical College project

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Abstract

Background: Penang Medical College is a joint Ireland–Malaysia project in which Malaysian students spend their initial 3 years in Ireland and complete their clinical training in Penang and receive Irish qualifications and registration. The educational foundations for such a program, particularly in general practice/primary care, are complex.

Objectives: To explore the experiences of current students undertaking clinical training at Penang.

Methods: All students were invited to complete an anonymous, confidential questionnaire dealing with foundation course availability and participation, the perceived value of such courses and suggestions for change.

Results: Two thirds of all students responded. Attendance at foundation courses varied greatly as did the perceived value of such courses for clinical training. Early patient contact and communications skills courses scored most highly. More ‘hands-on’ clinical skills training was requested. No student raised ethical, legal or economic issues although these areas include very significant differences between the countries.

Discussion: Educational bridges which link the learning and healthcare environments in which students work are crucial in this novel undergraduate setting. Conventional educational structures have value for students but access and relevance can be improved. Students are highly conscious of the differences between these environments but prize familiar themes such as clinical skills training over less tangible areas such as ethical or social structures.

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Key words: clinical training, educational bridge, Ireland, Malaysia, students.

Introduction

International medical education is an increasingly active component of medical education, with a variety of strategies in use. These include:

- exercises on core competencies and curriculum development^{1–4}
- manpower and mobility planning⁵
- topic/disease exchanges^{6,7}
- cooperative arrangements⁸

- new technologies⁹
- strategic perspectives^{10–12}

Irish medicine has a long history of involvement in the education of doctors from other countries of the training of its own postgraduates in the USA, UK, Canada and Australia and of providing healthcare to disadvantaged countries. During the 1990s, a number of joint ventures were established to link Irish medical schools with planned programs of medical education, particularly in Malaysia.

Irish medical schools have for many years offered Malaysian students the opportunity to receive undergraduate medical education in Ireland. In the mid-1990s a proposal was made to build on this association by providing the initial years of undergraduate education for students in Ireland and the clinical years in

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Penang. Penang Medical College (PMC) is the clinical school jointly operated by University College Dublin (UCD) and Royal College of Surgeons in Ireland (RCSI) to fulfil this goal.

The clinical school at PMC is a joint venture between UCD, the RCSI and the government of Penang. The state of Penang mainly consists of a small island on the west coast of Malaysia, with a population of approximately two million people, with an extraordinary ethnic and cultural diversity; for instance more than 20 languages are commonly spoken in Penang.

Medical education standards and procedures at PMC are under the supervision of the Medical Council in Ireland and graduates receive the same degree from the National University of Ireland (NUI) as their Irish or Malaysian counterparts who complete all of their medical education in Ireland. Graduates are also entitled to full registration with the Medical Council. A newly built medical school houses PMC and is staffed by Irish and Malaysian academics.

Planning and implementation of the curriculum was initially under the supervision of an academic committee made up of UCD and RCSI staff. With the appointment of senior academic staff in Penang, academic issues are now dealt with jointly by the PMC departments in collaboration with nominated parent departments in Dublin, working on a 3-year cycle.

The first intake of students to PMC occurred in mid-1998 and the first cohort graduated in 2001.

The 2002 graduate class also includes a number of students who received their initial education in a UK medical school but then transferred to PMC; these students all completed a minimum of 6 months education in Ireland and 3 years at PMC. These students had been enrolled in a similar venture to PMC involving a UK and Malaysian college which ceased operations during the early part of their education.

In the mid-1990s, a Malaysian and a UK medical school initiated a similar project to PMC. Students were recruited and spent 2–3 years in the UK school. However, when the time came for them to transfer to the local Malaysian medical school for clinical training, the project encountered problems which could not be resolved. Penang Medical College was asked to offer places to students from this class and did so for 25 students. Each was required to spend a further period of at least 6 months in Dublin in addition to their UK years. They then transferred to PMC and were integrated into their class of peers.

Although the curriculum and educational structures reflect those of the parent medical schools, the unique opportunities and challenges of providing a distinct clinical training course create differences. For example, Dublin based students complete a maximum of 4 week attachments in general practice, while in Penang students receive 8 weeks of attachments, separated into

three blocks. The Medical Council has recently highlighted the need for a greater emphasis on general practice/primary care, public health medicine and integrated curricular development in Irish medical schools.¹³

During years one to three, PMC students receive the same courses as their counterparts in Dublin and then travel to Penang to complete their courses. The relevance, scope and content of the foundation years must therefore meet the needs of both those students who complete their courses in Ireland and those who move to the very different healthcare setting of Penang. The 'bridging' role of the foundation years is therefore crucial in providing students with the concepts, knowledge and skills needed to work in both environments.

The present paper explores the perceptions of PMC students regarding the extent to which these courses prepare them for their clinical training in Malaysia. All 3 years at PMC were surveyed; all students had completed at least one block of primary care/general practice teaching at PMC.

Primary care in Penang

An early lesson for Irish academics in Malaysia was the extent to which the differences between cultures and health care systems was most obvious in the delivery and teaching of primary care.

Penang has one large general hospital (>1000 beds) with walk-in outpatients and Accident and Emergency departments. There are also many private (walk-in) hospitals. Large polyclinics in the community provide free primary care and are staffed by a single Senior House Officer with nursing and ancillary staff. General practitioners also work in the community, operating on a fee-per-item of service basis. Although a referral system exists, patients are free to choose any doctor, nurse or hospital and little coordination exists between these elements.

Domiciliary midwifery is well developed and nurse led. Palliative care is provided by voluntary groups, as are many primary care services. The island is currently served by less than five psychiatrists.

Appendix 1 compares some key indices of health status in Ireland, Malaysia, the UK, Singapore and the USA.

Methods

All students in each of the three clinical years at PMC ($n = 135$) were invited to complete an anonymous, confidential questionnaire. The questionnaire initially covered ethnic origin, class year and European medical school. It then asked about students' experience of a wide range of courses in the early years of their medical education. Students were asked to comment, using

a five point scoring system (1 very useful, 5 no use at all) on the value of these courses as preparation for clinical courses and as preparation for primary care courses. Students were asked to identify perceived similarities and differences between Irish/UK primary care systems and those in Malaysia.

Qualitative data was examined for consistent themes by individual authors. Consistent themes were identified and are illustrated in the text. Quantitative data was analyzed using Statistical Packages for the Social Sciences version 8.0.

The terms 'School 1, School 2 and School 3' are used to refer to the two Irish and one UK medical schools involved.

Results

Student backgrounds

The response rate was 91/135 (67.4%). Table 1 summarizes respondents by year and indicates a representative response rate.

By ethnic origin, 54% are Chinese, 24% are Malay, 14% are Indian and 5% other; 2% did not respond. Overall, 36% of students had spent their initial years in School 1, 41% in School 2 and 22% in School 3. A total of 55% had spent less than 3 years in schools in Europe, 35% had spent 3 years and 8% had spent more than 3 years.

Table 1 Respondents by year

Year	Total number	Responders
3	44	29
4	24	18
5	67	44

χ^2 test 0.002, $p = 0.96$

Table 2 Courses in the early years (% of 91 respondents)

Course	Available	Attended	Useful clinical preparation? [†]	Useful primary care preparation? [†]
First aid	86	78	46	43
Early patient contact	77	77	42	55
Clinical skills	78	78	47	31
Clinical skills lab	47	46	19	21
Communications skills	81	81	55	46
Information technology	75	69	25	22
Behavioral sciences	56	56	21	20
Hospital attachments	79	79	43	36
Public health medicine attachments	20	19	8	9
General practitioner attachments	22	22	6	6
Other relevant	2	2	–	–

[†]These were the proportions indicating very useful or useful.

In two schools, Malay students made up one third of the PMC student body while the third school had almost no Malay students.

Courses – availability and value

Students were first asked to identify courses available in their medical school and also those courses which they attended. Table 2 summarizes the responses to these questions. Table 2 also indicates the views of students on the usefulness of courses as preparation for either clinical medicine in general or primary care in particular. For example, although 77% of students had access to Early Patient Contact Courses and all attended, only 55% found the course useful preparation for later courses in primary care.

Table 3 indicates the responses to the question on satisfaction with the duration of the course.

Table 3 Duration of the courses (% of 91 respondents)

Course	Available	Too short
First aid	86	19
Early patient contact	77	18
Clinical skills	78	30
Clinical skills lab	47	13
Communications skills	81	23
Information technology	75	3
Behavioral sciences	56	4
Hospital attachments	79	23
Public health medicine attachments	20	3
General practitioner attachments	22	6
Other relevant	2	–

Most students found most courses of sufficient length or too long; 30% of students felt that clinical skills courses were too short.

In Tables 2 and 3 the figures indicate the proportions of all respondents and not just those who participated in specific courses.

More than half the students had access to and attended courses in first aid, early patient contact, clinical skills, communications skills, information technology, behavioral sciences and hospital attachments. Public health medicine, general practice and clinical skills laboratories were available to only a minority of students. Early patient contact and communications skills were the only courses which more than half the respondents reported as being useful for later clinical or primary care courses.

Respondents identified a range of more than 50 similarities and 50 differences between Ireland and Malaysia in terms of general practice/primary care. Commonly cited similarities included being the first point of contact, having a referral system to hospital and being widely available to the public. Differences included the requirement for qualifications in Ireland, 'doctor hopping' in Malaysia and much more dispensing and a more hands-on approach in Malaysia.

'Ireland has a systematic, organized good relationship and feedback between GP and referral centres – Malaysia has a lack of continuity of management'

'Patients levels of health awareness are different'

'Primary care is still the first line of contact largely in both countries and is affordable/free in some aspects'

'Less regulation of practices in Malaysia'

'Doctor hopping is rampant in Malaysia'

Students offered 45 distinct suggestions to improve their preparation for primary care teaching at PMC. The most common themes related to increased clinical skills teaching, integrating all general practice/primary care teaching into a single block, improving course materials and providing more clinical attachments during the early years of the course in Ireland.

'Practice communication skills!'

'Have at least one GP attachment in Ireland and one in Malaysia'

'Students should be more exposed to clinical medicine'

'PMC students are usually an urbanized lot – perhaps we need to spend more time at community level . . .'

'More field trips please'

'More GP oriented lectures are needed to give a full idea of GP setting'

'Get better actors' (for video consultation analysis)

'Synchronize both universities curriculums'

'More communication skills, need to enforce about holistic approach and not just disease oriented problem'

Approximately 60% of students commented on difficulties in access to appropriate texts or other sources of materials.

Although each of the courses was available at each medical school, Table 4 illustrates the variability in attendance. For instance only 6% of students at School 3 undertook a first aid course and only 48% of students at School 1 attended hospital clinical sessions.

A small number of students mentioned access to study skills courses as an option which they had accessed and valued.

Discussion

The PMC initiative is based on the delivery of an adapted European model of undergraduate medical education on two continents, in itself a complex logistical, educational and legal task. A significant innovation in the program is to satisfy the medical regulatory authorities in both Malaysia and Ireland that the program satisfies the requirements for conferral of the NUI degree, without any distinction being drawn between UCD, RCSI or PMC students.

The task is further complicated by the involvement of multiple European schools. Although each meets the European Union norms for harmonized medical education, even two schools as closely aligned as UCD

Table 4 Attendance at courses by school (%)

Course	School 1	School 2	School 3	Total	Rank
Hospital	48	97	100	79	1
Clinical skills	79	86	67	78	2
Early patient contact	45	92	94	74	3
First aid	97	89	6	64	4
Information technology	91	49	72	59	5

and RCSI differ substantially in their structures and methods.

The establishment of educational bridges between the different portions of the courses therefore begins a central task. The present paper evaluates student perceptions of how well some of these bridges function. Foundation courses are aimed at establishing the context and structures needed to complete not just the early years of medical school but the whole program.

Two thirds of the eligible student body responded to the survey instrument. The non-responders might include students with very different experiences or views so caution must be used in interpreting the data. However, we believe that the views and experiences identified here provide valuable learning opportunities for PMC.

Courses in first aid, early patient contact, clinical skills and communications skills were widely available and attended by at least three quarters of students; at least half of those who attended felt that the courses were useful or very useful as preparation for clinical and primary care courses. Interestingly attachments in hospitals, general practice, public health medicine or behavioral sciences were less widely available and considered generally less useful by students.

Few courses were identified as being too short, suggesting that students believe they have obtained as much as is useful from the courses in their current format; reassuringly, only small numbers of students felt the courses were too long.

The finding that only 55% of students found early patient contact (EPC) useful preparation for primary care raises specific questions. Possible reasons include language or cultural problems for Malaysian students at an early stage in their stay in Ireland, content which seems inappropriate or timing problems – EPC courses occur up to 3 years before clinical courses in general practice or primary care. These possibilities suggest the need for the development of more refined ‘bridges’ to address these issues.

Students report real variability in availability of certain courses. An important reason for the variability might lie in the exemption procedures used in the schools. These procedures are illustrated by the finding that more than half the students had completed less than 3 years in a European school and had usually been exempted the foundation year of their course. During the exempted year, courses such as first aid or early patient contact might have been provided but were not duplicated for students joining a later year. While this practice might be an important reflection of the academic ability of individual students it appears to introduce real variations into their foundation education.

Students highlight their contrasting experiences of Irish and Malaysian primary health care. They

clearly appreciate the impact which differently structured health systems have on doctors and patients and are beginning to understand some of the key strengths of general practice. Those of us who teach on these courses must also learn from and about each other’s cultures and healthcare systems. Our aim in these courses is not to recruit or train future general practitioners – if students have this ambition they will be adequately trained as postgraduates. However, if all students – including the future surgeons, cardiologists, psychiatrists and pediatricians of Malaysia and Ireland enter their future hospital careers with a better understanding of how primary care functions, then much will have been achieved.

The real message coming from the present survey appears to be that the current group of foundation clinical courses has value, but that this could be improved. Up to half of those participating in each course felt that it had little obvious value for them as part of their later clinical attachments. Students want more but better clinical preparation, particularly in clinical skills areas. The theme of ‘hands-on’ contact with patients and focused teaching at an early stage in the curriculum emerged frequently. In addition, preparatory materials should be improved. Interestingly, few information technology solutions were suggested to meet any of these needs – distance learning, problem-based cases, or critical analysis strategies were not mentioned by any student as a possible development. Also, health economic, ethical, legal or moral issues were not raised as problems by any student – this could reflect complete satisfaction or complete ignorance!

The reform of undergraduate education is gathering pace among medical schools in Ireland. The development of student-centred and objectives-driven curricula is in progress. The findings of the present survey suggest that students view these developments positively but that more can be achieved. In particular, the role of early clinical courses as bridges between Europe and Penang is meeting important needs but still lacks sufficient clinical contacts.

The published reports on international medical education explores economic and philosophical concerns. For example, the 1997 cost of a medical graduate in Vietnam was \$9527 – more than 14 times the cost of training a nurse locally.¹² A Dutch review of international medical education issues questions whether some current structures are merely promoting medical tourism rather than having a more profound effect.¹¹ The present paper reports on one aspect of a project which will hopefully confer real advantages in social, economic and healthcare terms on both systems involved.

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Appendix 1 Key health status data

	Malaysia	USA	UK	Singapore	Ireland
Life expectancy	71	77	77	80	76
Persons/doctor	2050	500	750	1150	700
Infant mortality rate/1000 live births	20	7	6	4	6
% Gross domestic product – health	<5	15	6	–	6
% Gross domestic product – education	5	5.4	5.5	3	6

World Health Organization/Organization for Economic Co-operation and Development data 2000.^{14,15}