Rural and Remote Health
MEDLINE listed ARHEN FRAME
ISSN 1445-6354
The International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy

PROJECT REPORT

A rural undergraduate campus in England: virtue from opportunity and necessity

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Submitted: *18 June 2011;* **Revised:** *2 October 2011;* **Published:** *14 November 2011*

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***Rural and Remote Health* 11: 1841. (Online) 2011**

Available: http://www.rrh.org.au

ABSTRACT

The implementation of new curriculum at Keele University Medical School, UK has made heavy use of general practice as a locus for learning. This has necessitated a substantial expansion in the School's teaching network. The School's hinterland includes a large rural area with a number of excellent general practices and associated community hospitals that, to date, have been unable to teach undergraduates because of their inaccessibility. This article describes how the School and its partners articulated a vision to establish a rural campus with an associated rural accommodation hub, and the challenges involved in establishing and sustaining the campus.

Key words: medical education, rural clinical placements, undergraduate, United Kingdom.

Introduction

Keele is a new medical school, founded in 2002. It is implementing an innovative curriculum which emphasises learning in community settings. By 2012 each Keele graduate will have spent a minimum of 110 days in general practice placements during their 3rd, 4th and final years (Fig 1). This has necessitated expansion of the general practice teaching network. The existence of several remote rural practices with the potential to be excellent teaching practices, as well as the School's interest in the health and wellbeing of rural communities, led to efforts being made to overcome barriers to their involvement.

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Year 3: One 4-week full-time block with one cluster teaching session per week.
Year 4: Five separate weeks spread throughout the year.
Year 5: One 15-week full time 'student assistantship' with one cluster teaching session per week.

Figure 1: Contribution of general practices to years 3 to 5.

Ludlow is a market town situated in south Shropshire (Fig 2), the third most rural district in England. The surrounding area includes parts of north Herefordshire, west Worcestershire, and mid-Wales, which are all similarly rural, with no settlements of more than 10 000 people (which is the definition of rurality used in England and Wales)[1]. Although England is the most populous and urban country in the UK, over 19% of the population, equating to some 10 million people, live in such settlements. They need effective and accessible health care which may differ in emphasis and delivery from that in urban areas[2] (Fig 2).

This article reports how learning from international research and good practice in rural medical education helped develop a UK version of rural medical education. Described in particular are the:

- challenges and opportunities of rurality for medical education in general, and the Keele 2007 curriculum
- challenges to establishing a rural campus and how they were addressed
- challenges associated with achieving success and the plans to address them
- planned evaluation of the rural campus.

Rurality

The definition of rurality is problematic. It is neither possible nor sensible to equate rurality in the UK with that in Australia, Canada and the USA, because the distances are dramatically different and populations differently distributed. A rural setting for medical education in Australia, Canada and the USA may serve a population of 300 000 (similar to that of a district general hospital in the UK), situated in a locality which would not be categorised as rural in the UK but may be 200–1000 km from the next such facility. Internationally, there is no consistency in how rurality is defined but there is a group of common themes in rural health and education (Fig 3)[2]. There are different models of rural medical schools; Keele is a 'de facto rural school' with a catchment area containing a 'substantial rural population'; however, its role is not specifically defined as rural[3].

Challenges and opportunities

Outcomes for students do not appear to be compromised by moves away from urban and secondary-care, medical school education. Oswald et al demonstrated that a small cohort of English students were not disadvantaged by community based clinical education[5], and Worley et al demonstrated a superior outcome for community education for a large cohort of students in Australia[6]. There is now substantial international experience of community-based initiatives that have been shown to provide at least equivalent learning experiences and outcomes[7]. Pearson and McKinley discussed the educational benefits of learning in primary care settings, describing GPs as 'the last true generalists', dealing with 90% of patient encounters spanning the spectrum of illnesses, from the earliest presentation to terminal care[8].

Accordingly, general practices will make a major contribution to the new Keele curriculum by providing students with multiple opportunities to consult with patients, to take a progressively greater role in patient care, and to have repeated opportunities for workplace-based assessment of their consultation skills. A key goal is that every student will have consulted with 650 patients in general practices between years 3 and 5. Additionally, all year 5 students will be involved in enduring community projects, helping to embed the rural campus in the local community and forming the basis of socially accountable medical education, as discussed by Strasser and Neusy[9].

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Shropshire

- English county
- Population: 454 900
- County town: Shrewsbury
- Major industry: Agriculture and tourism

Ludlow

- Market town
- Population 10 000

Figure 2: The Shropshire Context.

- Rural health status lower
- More accidents (rural industry)
- Greater reluctance to seek help
- Greater sense of community
- Rural economic reform
- Less access to higher education
- Less access to professional support
- Rural health workforce problems

Figure 3 : International rural health and education themes[2].

Internationally, development of rural medical schools was in part driven by a need to increase recruitment to rural practices; however, the primary imperative at Keele has been practice recruitment and engagement. First, it was wished that students be offered the opportunity to learn in rural practices with their tradition of providing some services and models of care which urban practices no longer provide (eg minor injuries management, community hospital beds and first-response services). Second, ambitions for the amount of learning in general practices required making these rural practices accessible to the students by removing the need to travel to distant practices every day; for example, a placement 50 km from the accommodation hub would require a student to travel 7500 km during their 15 week assistantship.

A south Shropshire Rural Campus

Capacity and proposal

In 2008, the School of Medicine commissioned a scoping exercise for a rural teaching and accommodation centre from the Institute of Rural Health (IRH)[10]. The study identified 15 practices and three community hospitals which could be involved. The reactions of students and healthcare professionals to the idea of more rural teaching were also explored and this identified the crucial importance of local, shared accommodation[10,11] in avoiding lengthy travel times and social isolation. The IRH recommended the establishment of a 'Rural Campus', which they described as 'an environment for learning and a capacity for caring in a rural setting' with the aim of delivering[10]:

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> *...the core learning objectives of the under-graduate medical curriculum through a structured and supported learning programme in a rural setting.*

Challenges

The challenges involved commitments from the practices, arranging and managing accommodation and securing the necessary finance.

The practices: Firm commitments were required from sufficient practices to ensure that a prolonged placement within a rural campus model would be feasible. The working target was for 12 simultaneous student placements.

The accommodation: A partner was needed to work with the School to supply and manage the student accommodation.

The finance: Finance needed to be secured for capital development costs and to ensure students would not incur additional accommodation costs.

These three challenges were independent but also interdependent: practices could not be expected to make a firm commitment and start preparing for teaching unless they were confident students would be placed with them. This, in turn, depended on accommodation and finance; organisations willing to work in partnership with Keele to provide accommodation would require assurances of finance before investing their resources in the project, and securing finance was dependent on sustainable practice capacity to take students on placement. This was also the case with practices and accommodation.

Three parallel work streams

The three challenges drove three parallel work streams related to practice recruitment, accommodation and finance.

Practice recruitment: The practice recruitment strategy was to scope potential capacity by means of the IRH report[10], to build good relationships through repeated visits to potential teaching practices by the locality based clinical academic staff, and to build on the aspirations of practices that wanted to teach but felt excluded because of their relative isolation.

Suitability as a teaching practice was assessed during visits by the lecturer in medical education responsible for the area. Suitability was dependent on the attributes and probity of the potential tutors; the practice premises, in particular the availability of a room in which students could consult with patients; the ratio of list size to doctor numbers; and the number of other learners in the practice.

The local health economy's service development plans, which incorporated facilities for undergraduate education, were also actively supported. Existing teaching practices were encouraged to share their experiences with the strong local medical community, fostering the development of inter-practice collaboration and a collective enthusiasm for the proposed Rural Campus.

Accommodation: With the assistance of the University's fundraising officer, the Ludlow Conference Centre was identified as a potential partner with which to develop an accommodation hub. The hub would enable students to learn in the identified practices and their associated community hospitals while minimising student travel, and also enable informal peer and social support. The hub would provide a focus for a GP teachers' support group and a location for more formal faculty development.

Finance: The West Midlands Deanery, which manages the National Health Service's funding for all health education in the region, agreed in principle to using the Primary Care Premises Development Fund to finance an accommodation hub in early 2010.

Teaching practices in the UK are remunerated for teaching undergraduate medical students through the Service Increment for Teaching Mechanisms (SIFT)[4]. This is a national framework but its implementation varies locally. Keele currently compensates practices for a 20-25% reduction in the tutor's service load for each student placed in the practice.

Progress

To date (October 2011), 14 practices have been identified within a 26 km radius of Ludlow. Of these, six are already teaching, one has declined involvement at this stage but has

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expressed an interest in participation in the future, and the rest will have their first students in December 2011. By extending the radius this far, two additional community hospitals (in Leominster and Tenbury Wells) have been included, giving a total of five.

The Ludlow Conference Centre will provide 11 student study bedrooms with attendant catering and social facilities which will enable the placement of 33 year-3 and 22 final-year students, in three and two rotations of 11 students, respectively, each year. This means that over 40% of each graduation cohort will have worked and learnt in the rural campus. It is aimed that the accommodation will take in its first students on 5 December 2011.

Challenges to success

Three related challenges to success were identified: curriculum adherence, student support and sustainability.

Curriculum adherence: The curriculum that the students will follow during in the rural campus will be no different from that followed by all Keele students. The focus of the primary care placements is to consolidate the generic clinical skills of medical students , rather than teaching them to be GPs. One half day per week in the final year will be spent in small groups with others from neighbouring practices and many of these sessions will have a rural focus. There is no requirement for didactic teaching in the practices, the emphasis is on developing clinical skills by consulting with large numbers of patients, with support and feedback from the GP tutors. This is primarily a challenge for practice-teacher development and quality control. All core practice development activities will be delivered locally but will be open to any practice in the teaching network. Some 'optional' practice development will be delivered at the rural campus as well as at existing urban sites to encourage networking among practices.

Student support: Students placed in the rural campus must not be allowed to perceive that they are remote from the School and the support provided for other students. This will require a multifaceted effort utilising enhanced peer support, increased support provided by practices and enhanced contact with liaison academic staff. The students will also have telephone access to the existing support provision in Shrewsbury.

Sustainability: A major investment will have been made in the rural campus. What will then be required is an effort to ensure the practices can not only sustain their commitment to teaching, but also continue to deliver consistently good quality teaching. This will be addressed through close on-going support and monitoring of student outcomes.

Evaluation

In addition to the usual evaluations required for course development and accreditation purposes, this offers an opportunity to contribute to the medical education literature about the implementation and outcomes of a rural medical education intervention in a relatively small, contained environment in a nation not previously engaged in rural medical education. Questions that should be addressed include:

- How well are students, teachers and the broader rural community engaged?
- What is the impact on the delivery of health care from adding an academic perspective to previously isolated rural practices and communities?
- Do students attached to the rural campus perform differently in assessment outcomes and career choice or location?

Although this is a modest development by international comparison, it may be possible to measure such differences. This evaluation approach requires careful description and measurement of the current situation to act as a baseline.

Discussion

All the pieces are now in place and the rural campus is being actively built. Although small, it will make a contribution to the education of over 40% of students. The success to date is attributed to the symbiosis between a vibrant local health

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economy and the Medical School, which has enabled collaboration and the building of relationships.

It is anticipated that the benefits of this development will accrue with time. Practices in south Shropshire cross both civil and medical boundaries which, together with relative geographical isolation, can marginalise practices and their staff. By giving isolated practices an opportunity to become involved in undergraduate medical education locally, such marginalisation will be reduced. Opportunities will also be provided for career development and progression without the need to travel long distances. This will support rural recruitment and retention, as well as increasing the satisfaction of professionals with their careers.

As more students spend time immersed in rural practice, it is possible that there will be greater understanding of the medical and social issues faced by patients, healthcare professionals and the commissioners of health care in rural communities. These issues include problems with access to services for the small but intense pockets of social deprivation which can be concealed within rural communities, or for those living large distances from centralised services who require, for example, chemotherapy or dialysis. The students, being the professionals and commissioners of the future may, by having this increased awareness, become effective advocates for the provision of appropriate health care for people living in rural settings.

Hays suggested that while medical schools all have an obligation to produce safe, competent graduates, by changing the focus of their courses they are able to 'brand' their graduates in a particular way[12]. At Keele the aim is to 'graduate excellent clinicians', not necessarily to produce rural doctors, GPs or any other kind of medical practitioner. There are neither selection pathways for rural background students nor substantial investment in dedicated 'rural clinical schools' – both key strategies in the success of some international developments[13]. However, successful international rural initiatives have been instructive in the development of a rural focus to the curriculum in a UK setting, which can help to prepare tomorrow's doctors in all specialties to care for a wide variety of patients, including the one-fifth of England's population who live in rural settings.

It is hoped that the importance of the context of illness and health is emphasised in whatever setting the future doctor works and lives. John Berger wrote of rural general practice in the 1960s[14]:

> *Landscapes can be deceptive. Sometimes a landscape seems to be less a setting for the life of its inhabitants than a curtain behind which their struggles, achievements and accidents take place.*

It is also hoped that learning in the rural campus will give graduates the experience and confidence to look behind this curtain and gain a better understanding of the lives of their patients.

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