

Under-graduate medical education in rural settings

Executive Summary

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1.0 Introduction

This study was premised on both the increasing demand for undergraduate medical placements in rural areas, due to increasing student numbers, and the international evidence that supports the importance of rural exposure during undergraduate training on recruitment and retention of rural GPs. This study was funded by Cardiff University and takes a 360 degree view of under-graduate medical education in Powys, the most rural county in Wales.

Research questions:

1. What is the current provision of under-graduate medical education in Powys?
2. What is the potential capacity for rural elements of under-graduate education?
3. What are the barriers to developing rural elements of the under-graduate curriculum for medical students?
4. What are the opportunities for developing rural elements of the under-graduate curriculum for medical students?

2.0 Methodology

The study took place over 6 months and included three main stages:

1. A comprehensive literature review
2. Analysis of student evaluation data
3. Primary data collection through:
 - a. Focus groups with students
 - b. Telephone interviews with professionals involved in undergraduate medical education in Powys.

3.0 Literature review findings

Five data bases were searched for original empirical and review articles. A combined total of 127 articles were found and after applying inclusion criteria 25 papers were included in this review. Six main themes emerged.

3.1 *Recruitment and retention*

The focus of undergraduate medical rural education internationally is recruitment and retention of rural physicians. There are five key elements in sustaining the flow of doctors to rural areas and these underpin initiatives in the USA and Australia:

- Formation of career aspirations during school years.
- Medical school admission procedures
- Exposure to rural practice
- Curriculum oriented to rural health delivery
- Educational and professional support for practicing rural doctors

3.2 *Skills*

- Rural students do as well as (if not better than) their urban counterparts on standard medical tests and reported experience in clinical skills.

- Rural placements do not have a detrimental impact on skills whether measured through self-reported perceptions of competence, exposure to clinical skills or exam results.

3.3 *The impact of rural exposure on career choice*

- The evidence on the impact of rural exposure on future career choice is mixed. Studies in the USA show strong evidence for early rural experience increasing recruitment to primary care and rural medical practice.
- It is difficult to control for other factors which may affect a rural career choice, eg rural origin. Many students who choose a rural experience are from rural areas.

3.4 *Broader influences on choice of rural/urban practice*

- There is strong evidence that having a rural background is linked with choice of rural practice and this is independently predictive.
- Rural schooling, having a rural partner, rural under-graduate training and rural post-graduate training are all associated with choice of rural practice. These factors are all inter-linked.
- Pull factors to the urban centre may stop students choosing rural practice. These include part-time work commitments; transport difficulties; financial hardship; family commitments and an elite sporting commitment.

3.5 *Length of rural placements*

Longer placements allow students to develop a rural home base, become full participating members of the health care team and socially interact with the rural community .

3.6 *Impact on GPs*

- GPs report increased enjoyment through being involved in rural undergraduate placements.
- Rural and urban GPs report that student attachments improve the quality of clinical practice .
- Finding space to house students is more difficult in rural practice.

3.7 *Conclusions from the literature*

- Several factors are strongly related to a rural career choice including having a rural background (independently predictive); rural partner; rural schooling and rural undergraduate and post-graduate training.
- It is difficult to identify the impact of rural exposure alone on career choice and the evidence is mixed.

4.0 **Student evaluation of rural placements**

Year 5 students submit a brief evaluation of their 6 week 'medicine in the community' module. Students are provided with a list of statements about the placement and asked to provide a score on a Likert Scale

as to their level of agreement. The latest data available which is aggregated for GPs in Powys LHB is compared to the All Wales results for the years 2004-2005.

- Overall students the All Wales sample and the Powys only sample were positive about the majority of statements related to their placement.
- The Powys sub-sample were slightly more positive on the following issues: accommodation; that their placement met the objectives under Ethics, Skills and Professional Development; that they were welcomed at the start of the placement; that they received good feedback from staff; sufficient time to study and that the Community Specialty Teachers and Clinicians helped them learn.
- Whilst still being positive, the Powys only sample were slightly less positive about: being given a clear indication on the objectives of the placement; that their placement gave them the chance to meet the objectives under Knowledge and Understanding; that they had a good overall impression of the module; that they enjoyed it; that it was well organised and they had opportunities to learn; access to IT and that they could access specialty experiences to meet their learning needs.

5.0 Results from the focus groups

Focus groups were undertaken with 2 groups of Year 5 students at Cardiff University undertaking the 'Medicine in the Community' Module. One group had recently completed a 6 week placement in urban and semi-urban general practice. The other group was coming to the end of their 6 week placement in rural general practice. A thematic analysis of the data was undertaken.

- There was little difference between urban and rural placements in impact on skills and knowledge. Students in all settings appreciated the one-to-one aspect of teaching in general practice.
- There were strong 'pull' factors for students wishing to remain near Cardiff (their main academic base) for their placement in the community. This was largely for practical reasons such as being able to stay in their rented house, transport and access to social networks.
- Unless a student already has a link to a rural location, being removed from their social network in Cardiff raises considerable anxiety. If the placement is not going well students are isolated. There is also a perception that being in a rural setting will be detrimental to their goal of passing exams.
- Rural students were also concerned about the financial burden (although travel expenses are reimbursed).
- Students can feel isolated in rural settings and find integrating into the community challenging.
- Accommodation emerged as a big issue for the rural group and was seen as a way of tackling isolation.

6.0 Results from the interviews with professionals

Interviews were conducted with 19 individuals including GP Tutors, Consultants, Professions Allied to Medicine and members of staff in the School of Medicine.

- All the interviewees felt positive about the undergraduate placements in Powys. It is deemed to be a positive learning experience for them as professionals and an opportunity to encourage the future workforce.
- The main challenge is the impact on time in that teaching slows down clinics and surgeries. Transport can also be a problem if a student in a rural setting is without a car.
- Professionals perceived many 'pull factors' for students to experience a rural placement, for example they see the wider context of general practice in a rural setting; they become aware of the

self-reliance needed by rural health professionals and there is also very high quality teaching in rural settings, with individual attention.

- Professionals identified isolation as a major 'push factors' for students.
- Three themes emerged in relation to developing under-graduate attachments in rural areas: shared accommodation for students; exposing students to the idea of a rural placement earlier in their undergraduate education; and improving the infrastructure in particular library and IT access

7.0 Discussion

This study provides evidence that overall, placements in general practice (both in rural and urban settings) are a positive learning experience, in particular in relation to the one-to-one learning environment. The role of the GP tutor is pivotal in this positive experience.

The literature demonstrates that rural placements are as good as urban placements in relation to exam marks and clinical skills. This has not been objectively measured in this study but the qualitative data from this study shows that rural placements in Powys are perceived to be as good as those in urban areas.

Whilst all students enjoyed the learning experience, the practicality of being in a rural setting at a distance from Cardiff can be challenging and off-putting. Isolation is the largest concern amongst students, who, unless already have a connection with the area can feel remote from their friends and social network.

Students perceive a greater risk attached to going to a rural area on placement. The risk is related to the fear of not being happy on placement but also being isolated from their support networks.

In rural areas the practicality of being at a distance from the main academic base can be challenging and off-putting. Further work needs to focus on minimising the 'culture shock' for students going on a rural placement through tackling practical issues such as accommodation, isolation and reliable access to the Internet.

8.0 Recommendations

Based on the evidence from this research study the following recommendations can be made for developing undergraduate medical education in rural areas.

- 1) Highlight the positive learning experience for health professionals in the recruitment of GP practices and other health professionals.
- 2) Increase the numbers of students attending the 'rural' weekend at Gregynog.
- 3) Consider offering a 'revision' weekend for final year students at Gregynog Hall exposing them to a 'rural' location.
- 4) Work with students to develop a short film which details a rural placement experience. This could be viewed in small groups followed by a discussion chaired by a rural GP. Alternatively this could be viewed by individuals on-line. This would highlight the positive aspects of a rural placement and also increase awareness of what to expect from a rural placement.
- 5) Shared accommodation in a central location for a group of students with internet access should be made available.
- 6) Students on placement in rural areas should be given opportunities to come together at intervals during their placements for group tutorials.
- 7) Consideration should be given to future delivery of different elements of the curriculum in rural areas through making links with GPs with Special Interests, remote hospitals such as Witybush and Bronllys and rural primary care.

