Community-based teaching: the challenges

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SUMMARY

The amount of undergraduate medical education delivered in general practice is expanding rapidly, both in the United Kingdom and internationally. There are a number of challenges facing general practice as well as medical schools, health authorities and primary care groups, which must be met for this development to be sustainable. These include: impact on service general practice; resources; difficulties with integrating basic sciences with clinical teaching; recruitment, training and maintenance of GP tutors; quality control; impact on academic departments of primary care; and the importance of rigorous evaluation of educational initiatives. Possible solutions are discussed, such as development of university linked practices and the move toward a culture of 'evidence-based education', where all medical education is scrutinized for effectiveness.

Keywords: undergraduate medical education; community-based teaching; GP tutors; teaching practices.

Introduction

The onrush of beneficial change which now flows in medical education has never been stronger ... the world scene is now set for decisive, effective action.[1]

The international move towards modernizing undergraduate medical education, including a substantial increase in teaching in the community, is gathering speed.[1-3] Until recently, community-based teaching in the United Kingdom (UK) focused on teaching the discipline of general practice, but several schools (e.g. Birmingham, Sheffield, Southampton, Liverpool, and Newcastle) are planning to or are already delivering a significant proportion of their curricula in the community.[4] The Cambridge Community-Based Clinical Course placed a small proportion of students in one general practice for 15 months of a 27-month clinical curriculum.[5] In London, students are learning clinical methods in internal medicine, otolaryngology, dermatology, obstetrics and gynaecology, and paediatrics in general practice as part of the Community-Based Medical Education in North Thames (Ce-MENT) project.[6]

It is not inevitable that the shortage of available patients in traditional teaching hospitals and the recommendations of the General Medical Council[7] will lead to more teaching in the community. An alternative is a substantial increase in the use of district general hospitals. Although community-based teaching has many potential advantages (Box 1), many important challenges (Box 2) must be met for a sustained increase to be achievable. World-wide, educators are encountering similar problems,[3,8,9] and many of our proposed solutions are applicable internationally.

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Submitted: 11 May 1998; final acceptance: 7 December 1998.

© *British Journal of General Practice,* 1999, **49,** 395-398.

The challenges

1. Numbers of teaching practices

Increased learning in the community requires additional teaching practices.[10] There have been fears that the recent increase in general practice workload resulting from the 1990 GP Contract and the shift of care from hospital to community may have a negative effect on general practitioners' (GPs') willingness to take on additional tasks, including undergraduate teaching.[11] However, only a small proportion of the circa 35 000 GPs in the UK need to be involved to meet the needs of 4500 students annually.[12] Gray and Fine found considerable enthusiasm for teaching undergraduates among south London GPs, if the practical issues could be satisfactorily addressed. The most important of these was the need for adequate resources, so that an increase in time spent on teaching can be matched by a decrease in time spent on other tasks.[13] At the Royal Free University College Medical School (RFUCMS), where this requirement is met, the supply of potential teaching practices has exceeded the demand in the past few years. Several GP tutors feel a particular pride in being at the forefront of this innovation in medical education.[14]

2. Resources

...Time and space are significant problems.[13]

Good teaching requires the resources to provide protected time. This principle has been widely accepted, with the diversion of Service Increment For Teaching (SIFT) funds toward general practice, usually via academic departments of primary care. SIFT is not a payment for teaching; it is intended to meet National Health Service (NHS) re-provision costs.[15] If a GP takes a morning to teach, she/he must meet the cost of another clinician to see the patients. Costs also include the expense of maintaining premises for educational purposes, providing books, journals, information technology and appropriate teaching equipment, and the staff costs of administering the programme. Students incur travel expenses[14] and need to be accommodated when on distant attachments.

Many teaching hospital trusts rely on SIFT for survival: for a London medical school with 200 clinical students in each of three clinical years, SIFT amounts to approximately £25 million per annum. Given that there is no new SIFT money, if student learning (and hence funding) is diverted elsewhere, then there is a fall in the equivalent teaching hospital budget — albeit a relatively small proportion of the total budget. This is a very real dilemma, as destabilization of a local hospital trust is against everyone's interest, including the GP recipients of diverted SIFT. Financial imperatives, rather than educational principles may drive decisions on where students are taught. Resolution of the potential conflict between trusts and departments of primary care over resources requires goodwill; dialogue between representatives of schools, trusts and primary care; and phased change, giving trusts time to adjust.

Dialogue is also vital for educational reasons. In most specialties, some learning objectives are best achieved in hospital, others in the community. Hospital-based teachers must be involved in the debate about the movement of student learning away from traditional settings, and changes in the curriculum need planning to enhance, rather than diminish, collaboration between primary and secondary care.

Advantages to students:

- large number of patients,
- undifferentiated symptoms assist development of diagnostic skills,
- clinical experience reflecting morbidity of local population,
- exposure to long-term management of chronic illnesses,
- understanding of psychosocial issues in medicine,
- increases awareness of the health needs of a population,
- low student–teacher ratios facilitate a tutorial relationship and student-centred teaching.

Advantages to general practice:

- enhanced status,
- may encourage students into career in general practice,
- teaching is revitalizing and may enhance clinical skills of tutors,
- enriched career paths for GPs,
- patients may benefit from regular in-depth review.

Advantages to medical schools:

- overcomes problems of shortage of patients for students to clerk because of reduced average length of hospital admissions and increased use of day surgery and outpatient procedures; schools can maintain or increase student intake,
- enhanced collaboration between hospital specialists and GPs,
- broadens the spectrum of student learning in line with General Medical Council recommendations,
- reflects shift of service delivery within the NHS.

Box 1. Potential advantages of community-based teaching.

Challenges:

- numbers of teaching practices,
- resources,
- perceived weaknesses of GP teaching,
- impact on service delivery (including patients),
- quality control,
- burn out,
- effect on academic departments,
- research and evaluation.

Box 2. Challenges facing community-based teaching:

3. *Perceived deficiencies in general practice-based teaching*

> Nothing seems more challenging than including basic science instruction in the process of moving medical education to the community[16]

There is some concern that a move towards community-based teaching will lower academic standards. Most hospital physicians practise in a culture where research takes precedence over teaching. While general practice has led in training its postgraduate teachers,[17] it has only relatively recently entered the research scene. New curricula stress the integration of basic and clinical sciences: will GPs have sufficient scientific background for this purpose? Hospital specialists usually have a deep understanding of a relatively narrow area facilitating vertical integration of scientific and clinical information. GPs are generalists, experts in early diagnosis, with a relatively superficial but wide knowledge across the whole field of medicine. They integrate horizontally, aiming to combine an understanding of the psychological and social components of illness with the identification of a physical problem.[17] High quality medical care requires both approaches, and it can be argued that many GPs would benefit from refreshing their understanding of the science underpinning practice. Community-based teaching can assist student learning of basic sciences; for example, learning about nutrition linked to community concerns has been well described in Nigeria.[18] Good course design, with clear learning objectives, coupled with a rolling programme of staff development for all — basic scientists, hospital doctors and GPs — will facilitate integrated teaching in all settings.[16,19]

4. *Impact on service general practice*

> Better organization in primary care can reduce burdens on professionals...[20]

As practices adapt to changes in teaching patterns and take on more students (e.g. some London practices take six students at a time for 40 weeks a year), they will need to consider the following three impacts on service general practice.

(i) Clinical and administrative staff. The whole primary care team is affected by the presence of a large number of students. More medical staff are needed to cover service demands and provide protected teaching time. Accordingly, some practices may employ an assistant or clinical lecturer; some may increase the number of partners, leading to a lower list size per partner, and opening alternative career pathways combining clinical with academic work. Discussions will be needed with local medical committees and health authorities, and negotiation at a national level with the medical practices committee, who govern the number of GP principals permitted in any area.

This level of teaching also affects the administrative and support staff involved in organizing student timetables and contacting patients for students to see. This has implications for the health authority and primary care groups: staff budgets for partial reimbursement of practice staff are for provisions of general medical services[21] only, and extra administrative costs will need to be met from SIFT payments. There is also the issue of recompensing attached or aligned community nursing staff, whose original terms of service did not include teaching medical students.

(ii) Space. Students need room to see and examine patients, they need access to library and IT facilities and somewhere to pursue independent study, and space for seminars. Many inner-city practices, often the nearest to medical schools and most accessible for students, will have great difficulty obtaining extra space. The cost of premises for providing general medical services is met by the health authority, according to strict guidelines laid down by the Department of Health.[21] GPs must meet the cost of additional space. A guaranteed teaching income over a number of years, including the revenue costs of teaching accommodation, will be an essential prerequisite to taking on the financial risk of renting or buying space surplus to clinical needs.

(iii) Patients. Patients tend to react favourably to the attendance of students in GP consultations,[22,23] but their response to the ongoing presence of large numbers of students is not yet known. We are also unsure of patients' willingness to attend the surgery regularly for clinical skills teaching, rather than for clinical care. Confidentiality must be considered: many patients are concerned at the prospect of students accessing their records.[24] Will patients view practices heavily engaged in teaching as centres of excellence, like teaching hospitals, with benefits outweighing potential disadvantages, or will they vote with their feet, and register with neighbouring, non-teaching practices? This would render teaching practices financially vulnerable as capitation is the main source of GP income.[21] 'Patient fatigue' may in fact reflect doctors' anxiety that repeatedly asking patients with chronic illnesses to see students will disturb the doctor–patient relationship. This relationship may also be jeopardized if the doctor is

unavailable for a couple of days each week because of teaching commitments. A standardized approach to recruitment of patients, including providing an information pack and the payment of a small honorarium, is currently under study in this medical school.

5. *Quality control*

Quality assurance is a vital part of any educational programme, and future funding to medical schools may partly be determined by the current Quality Assurance Agency for Higher Education review of teaching.[25] It is made difficult in general practice by its geographical dispersal and its individualistic nature.[26] There are several elements to quality assurance in teaching, including course design, initial teacher accreditation, an on-going programme of staff development, and detailed student feedback. Tutors should be involved in the setting and monitoring (e.g. by peer observation) of educational standards, thus ensuring that they are able to assess the needs of individual students, effectively use a range of teaching methods, and critically assess their own performance. Quality assurance also depends on a culture of pride in providing and receiving a high standard of teaching within the institution.[27]

6. *Burnout*

At the moment, the pioneers of community-based teaching are full of enthusiasm but, as innovators move on to new areas, teaching may become yet another chore in an overfilled day for those that are left. Practices that have become dependent on teaching income could be reluctant to stop, but no longer have the enthusiasm to deliver. Training several potential teachers within each practice and varying the tutor's role may avoid burnout. The ideal may be a cycle of practice-based teaching of both clinical skills and primary care, followed by departmental teaching and involvement in designing new course materials, followed by a fallow period before returning to practice-based teaching. Payment for the rest period may be cost-effective if it results in sustained enthusiasm among experienced staff.

7. *University departments of primary care*

A varied and expanding programme of community-based teaching presents university departments with a considerable workload in terms of course design and evaluation, teacher training, student assessment, quality control, and administration. This can have a detrimental effect on the other academic activities of the department and on the career paths of those involved, as promotion is still largely based on research activity. However, senior academic managerial support, together with the appropriate resources to accompany the teaching programmes, enables the department to attract new staff who wish to enhance their teaching expertise. The department must ensure that such staff are also involved in research and, if appointed at a junior level, are expected to register for higher degrees. Adequate administrative support is essential to prevent academic staff using time on administrative tasks.

8. *University linked practices*

The solution to many of the problems described above may be facilitated by the development of university linked practices (ULPs). These are practices that contract with a university department of primary care to undertake a substantial amount of undergraduate teaching and/or research in return for ongoing, guaranteed income (Box 3). Close cooperation with health authorities and the local medical committee is needed in view of the service and list size implications.

The academic department undertakes to provide:
- rolling 3–5 year contracts to enable practices to commit to leases for teaching space and additional staff where needed,
- provision of 'teaching the teachers' programmes,
- appropriate academic and administrative support.

The practice undertakes to provide:
- protected teaching time (e.g. two days/week),
- support from the whole primary care team,
- appropriate list size and practice infrastructure to support the teaching activities,
- high quality record keeping and computerization,
- full involvement in 'teaching the teachers' programme,
- strict adherence to quality control guidelines.

Box 3. Contracts for university linked practices.

Practice criteria:
- premises of adequate quality and size,
- well-maintained patient records,
- adequate number and range of employed staff, with evidence of a functioning team,
- support in training from all the partners,
- adequate organization and practice management,
- commitment to preventive care and agreed standards of medical practice,
- presence of appropriate equipment and library facilities.

Trainer criteria:
- attendance at preparatory 'teaching the teachers' courses,
- attendance at on-going staff development courses,
- ability to provide protected teaching time,
- familiarity with a variety of teaching and assessment techniques.

Box 4. Criteria for approving trainers and training practices. (Based on North Thames (East) Region, The GP Registrar Year in General Practice, 8th edition, revised 1997.)

A national system for accreditation of ULPs, similar to that for the appointment of trainers (Box 4), would assist with issues of quality control. Continuous monitoring of teaching, with early intervention where a practice appears to have difficulty in delivering high quality teaching, is essential. Although most community-based teaching will take place in a limited number of ULPs fairly near a medical school, there will always be a need to retain some smaller practices where enthusiastic tutors teach students about the discipline of general practice in a range of different settings.

9. *Research and evaluation*

In addition to routine quality assurance, there is a need for educational research. The current culture within the NHS is to evaluate new technology thoroughly before introducing it into routine use; the same should apply to medical education, which may have considerable impact on health care delivery. We cannot advocate a change from the traditional hospital-based teaching toward teaching in general practice unless we can demonstrate that this benefits students. Although early work does indicate that students enjoy learning in general practice,[14] and do acquire their clinical skills at least as well as in hospital,[28] we need to ask what is the added value of community-based teaching. Could any of the advantages of community-based teaching be gained more cost-effectively in hospital? Many different models of community-based teaching are being introduced; each of these should be fully evaluated with readiness to jettison unsuccessful pilots.

We could consider a levy, similar to the current NHS

research and development levy, on national medical educational funds to enable rigorous evaluation of new educational initiatives, including their impact on clinical practice, so that we can move toward evidence-based education.

Conclusion

The provision of protected teaching time, the integration of basic and clinical science teaching, tutor and patient fatigue, and quality assurance are all important issues in hospital as well as community-based teaching. Innovative curriculum developments provide an opportunity to look at these problems afresh, and work out solutions that will ensure that tomorrow's medical students receive the medical education they require to achieve the ambitions laid out for *Tomorrow's Doctors*.[7]

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