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REVIEW ARTICLE

Beyond the Hospital Wards: Moving Clinical Teaching toward Ambulatory Care Venues

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ABSTRACT

As the style of healthcare delivery and patient expectations of medical care changes, there is a move toward more patient care and investigation being supplied beyond hospital wards in outpatient and other ambulatory care venues. Arguments are now being made that more undergraduate teaching should be provided in these venues where clinical problems more appropriate for student learning can be seen. But where can such venues be found, how can student learning be supported in these situations and who can help in student teaching beyond the traditional hospital wards?

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INTRODUCTION

'I keep six honest serving-men
(They taught me all I knew);
Their names are What and Why and When
and How and Where and Who.'

—Rudyard Kipling

The celebrated poet Rudyard Kipling was born in Mumbai in December 1865. This well-known quotation supplies us with pertinent questions to ask regarding any topic we may wish to study. If we were to use them in the context of teaching in ambulatory care venues, we could ask the following:[1]

- Why should we teach in ambulatory care settings?
- What can be taught and learned in ambulatory care settings?
- When should we teach students in ambulatory care settings?
- Where are other venues for ambulatory care teaching?
- How can we help students to learn in ambulatory care settings?
- Who can teach students in ambulatory care settings?

Ambulatory care in this context refers to any circumstance or place where patients receive healthcare services without being admitted as inpatients. Answers to the first three of these questions are well discussed in the literature.

Why should We teach in Ambulatory Care Settings?

Teaching in hospital wards today is often problematic for the clinician. Three compelling reasons can be put forward to argue that we should now be looking to deliver more undergraduate teaching in ambulatory care settings: in-patients are often acutely unwell or in the midst of active management; the duration of hospital stay is shorter than it used to be; the demands of patient-care do not stop to accommodate student teaching. It has been estimated that currently 95% of doctor-patient encounters occur in ambulatory care settings and that patients seen in ambulatory or community settings are more likely to represent the common clinical problems which students need to encounter in undergraduate medical education. Consequently, bed-side teaching may be less appropriate for the learning needs of students than it was a generation ago.[2,3] Finally, there may be directives from licensing or professional bodies. In UK, the General Medical Council has stated that clinical education 'must provide experience in a variety of environments including hospitals, general practices and community medical services'.[4]

What can be taught and learned in Ambulatory Care Settings?

In-patients usually provide students with opportunities to gain competence in history taking, to become proficient in conducting physical examinations, to observe clinical investigations and treatment and so to learn clinical reasoning and decision making skills. However, in-patient encounters are less likely to present students with the opportunity to explore patients' experiences of illness, develop a patient-centred approach to clinical practice, develop professional attitudes or to integrate clinical, basic, and behavioral and social sciences with core clinical problems.[5]

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Stearns and Glasser[6] viewed ambulatory care venues as an ideal model for clinical teaching. Sprake et al[7] suggested that 'multiple exposure to the same clinical problem allows learners to build more complex and transferable knowledge', and could 'encourage learners to take increasing responsibility for their own learning both during and after the event'. Finally, Irby[8] considered that ambulatory care settings provided unique learning opportunities for students to: (1) meet patients with chronic illness, (2) observe the progression of disease through continuity of care, (3) practice health-promotion and disease prevention strategies, (4) develop communication and negotiating skills and (5) deal with the social, financial and ethical aspects of medical care.

When should We teach Students in Ambulatory Care Settings?

Clinical exposure in the early years motivates student learning in their chosen profession and helps them to orientate to the importance of community-based patient-care.[9] Structured, supervised clinical teaching is good for helping mid-course students to make the transition from simulation-based learning to real clinical problems in wards or clinics.[10] Clinical attachments in community-care venues have been shown to be of use to senior students as they develop self-learn skills through apprenticeship style situations.[11]

Turning to the next three questions, we find ones which for us, as curriculum developers or leaders of faculty and teaching departments, are perhaps more challenging:

- Where are there venues for ambulatory care teaching?
- How can we help students to learn in ambulatory care settings?
- Who can teach students in ambulatory care settings?

Where are other Venues for Ambulatory Care Teaching?

Traditional Ambulatory Care Teaching Venues

Unlike hospital wards, the outpatient department (OPD) can provide a wider spectrum of common clinical problems more representatives of student learning needs. However, in some countries the OPD has become a more difficult area for student teaching as healthcare professionals seek to provide high quality care in an environment being run to a strongly business-management model. Large numbers of patients are expected and appointments are tightly timetabled. Basic clinical teaching is frequently opportunistic and the experience is less likely to be as valuable for student learning as previously, in fact it may be overwhelming for students unfamiliar with learning in the work-place. 'It is sad that this area where teaching is of the greatest importance is also the one where the needs of the patient and the needs of the student conflict most'.[12]

To make better use of this busy resource for more profitable undergraduate teaching, strategies are needed to help balance the learning needs of students with the healthcare needs of the large number of patients attending. In addition strategies and tools are required which can provide students with a more structured approach to learning. Teaching in routine outpatient clinics can be improved by prior consideration of student needs, provision of dedicated teaching space, the recruitment of additional teaching staff and by the use of structured logbooks. OPD experiences can be improved by using various teaching models for managing the students attending.[13]

For Junior Students

- Grandstand—all students attending can observe the clinician-patient consultation but are not usually able to interact with the patient in this crowded situation.
- Breakout—students observe the whole consultation with a patient and then take turns to see patients independently in another room as they leave.
- Supervising—students interview selected patients independently before being visited by the clinician who reviews their performance.
- Report back—students see patients independently before presenting the case to the clinician in the main consulting room.

For More Senior Students

- Apprenticeships model—monthly electives in a community-based specialty clinic gave students insight, among other things, into when to choose appropriate 'high-tech' investigations.[14]
- Parallel consultation model—gave students independent consulting time while working in parallel with their clinical tutor.[11]
- 'Wave scheduling' of outpatients—allows the clinician to continue to see several patients while the students see another patient independently before being visited by the clinician.[15]

Additional Ambulatory Care Teaching Venues

If traditional outpatient venues are too busy for student-teaching, then we should seek additional venues elsewhere where relevant clinical conditions can be seen but where teaching opportunities have not previously been developed. These may include screening clinics, such as

pre- and postnatal clinics, preoperative assessment, clinics and child development clinics and their supporting activities.[16] Visits to other healthcare professionals, such as therapists, dieticians and orthotists can be explored as well as attendance at clinics for multiprofessional care, such as diabetes and prosthetics.

Other opportunities for learning in ambulatory care can be found in clinical investigation units for endoscopy or cardiology, the radiology department and the day surgery unit.[17]

In the Clinical Investigations Suite

Daycare facilities for vascular assessment or endoscopy procedures may be available to provide students with learning opportunities with ambulatory patients. Structured logbooks for students to record the patients and conditions seen or work books where they answer related patient-management problems may be used.

In the Radiology Department

Students may observe technical procedures and experience patient safety issues as well as learning about investigations and the interpretation of images.

In the Day Surgery Unit

Students can follow the patient journey from interaction with the multidisciplinary team in preoperative assessment and preparation, with anesthetists and surgeons during the operative procedure itself, and through postoperative care and the planning of discharge and community care.[18-20]

The operating theatre may appear as a potentially hostile environment to students due to the physical environment, the emotional impact of surgery and social relations with operating theatre staff.[21] It is necessary for surgical departments to provide structured learning modules which support students in these clinical attachments.[22]

Wherever you identify a suitable additional venue for ambulatory care teaching the provision of a structured, comprehensive approach to teaching and learning is most important. The following tips might be helpful:

- Identify available spaces and resources
- Approach enthusiastic colleagues working there
- Create a structured program for teaching and learning
- Timetable appropriate number of students to the sessions
- Provide staff development opportunities and listen to feedback
- Give ownership of the program to the providers.[1]

Innovative Ambulatory Care Teaching Venues

Purpose-made, innovative, ambulatory care teaching facilities may also be developed. Examples include a dedicated teaching clinic where students see 'selected' new patients or simulated patients[23] or a simulated outpatient clinic where 'bank' patients are invited to a student-centred environment.

The ambulatory care teaching centre (ACTC) in Dundee provides dedicated space and uses a 'bank' of nonacute, system-sensitive patients and a variety of clinical tutors. Students apply clinical skills learned in simulation centres to interact with these patients with stable clinical signs.[24] In a system-based program, the sessions are based on selected clinical volunteers and invited tutors. The program is coordinated by an administrator. Building up a bank of volunteer patients to support the clinical teaching program is crucially important. These 'ex-patients' have real clinical histories and may have physical findings but are not acutely unwell or requiring hospital treatment. A patient bank coordinator is required to recruit, train and register these volunteers according to their original body system diagnosis and then to invite them to appropriate teaching sessions in the system-specific ACTC session.

Twelve tips for setting up an ACTC have been described as follows:[25]

- *Design:* (1) Allow development time, (2) integrate curriculum needs and identify organizational constraints, (3) identify interested parties and their strategic role as a committee, (4) find suitable accommodation, (5) secure a budget and (6) acquire suitable resources and equipment.
- *Implementation:* (7) recruit and train enthusiastic staff, (8) evolve an implementation function for the steering group, (9) buildup a bank of patients and (10) implement a teaching plan.
- *Evaluation:* (11) develop a multifaceted evaluation process and (12) develop a research and development function for the steering group.

An ACTC administrator is required to:

- Oversee the day-to-day running of the facility.
- Produce a summary of patients' clinical history and management.
- Resource additional teaching material required to complement the program and support integrated learning.

Integrated Ambulatory Medicine Program

The University of Dunedin (NZ) uses a simulated outpatient clinic adjacent to the clinical skills center. Patients are invited from the outpatient department to augment students' clinical skills training and ward-based attachments.[26] In both these uncrowded environments, teaching staff valued the uninterrupted teaching time provided and the uniform student exposure to structured-learning experiences.

Students valued the learner-friendly environment, the ability to transfer the clinical and diagnostic skills acquired to other clinical settings, and the benefit of focused teaching with real patients. Patients appreciated the opportunity to contribute to the training of future doctors.

Community-based Medical Education Venues

Finally, this trajectory toward teaching in ambulatory care venues merges into community-based medical education and leads us to consider the role this has to offer for student teaching beyond the hospital wards. In the national press in the UK Simon Stevens[27] the chief executive of the NHS in England, has recently proposed that cottage hospitals are important for providing patient care in the community and that there is no need for the mass centralization of inpatient care in tertiary teaching hospitals. The opportunity to deliver community-based patient care should now lead us to develop quality undergraduate teaching beyond the hospital wards.

A community-based setting in undergraduate education allows students to experience a more personal relationship with patients, to recognise the importance of treating people instead of 'a disease' and how the social environment has a significant impact on health and healthcare.[28] Prolonged attachments for senior students in a community-based program found that students had increased patient contact, increased time in clinical settings, increased time spent being supervised and were better prepared for their forthcoming FY1 year as a junior doctor.[11,14,17] Worley [11] also reported that undergraduate medical education can safely be delivered in ambulatory and community settings without compromising academic standards.

How can We help Students to learn in Ambulatory Care Settings?

The key to making the most of ambulatory care teaching venues is to use a structured approach to learning. Strategies and tools are required to facilitate student learning in each of these ambulatory care teaching venues.

Educational strategies may include: (1) outcome-based education,[29] (2) integrated learning,[30] (3) inter-professional learning,[31] (4) task-based learning,[32] (5) learning contracts,[33] (6) microskills for students[34] and (7) learner-center approach.[35]

Useful tools for learning include: (1) structured logbooks,[36,37] (2) study guide,[38,26] (3) patient journey record books[20] and (4) focused discussion.[39]

Who can teach Students in Ambulatory Care Settings?

Who can help?

Not all of the teaching/supervision in the ambulatory care teaching program, especially in the ACTC, needs to be done by a content expert or specialist clinician.

- *Teaching fellows*—senior trainees involved in medical education studies as part of their high specialist training.
- *Other healthcare professionals*—these colleagues may be able to illustrate aspects of patient care relevant to the clinical problem from their own perspective.
- *Peer-assisted learning scheme (PALS)*—senior students assist junior students in physical examination procedures and history taking sessions with clinical volunteers.[40]
- *Clinical tutor*—general practitioners, clinician colleagues or retired members of staff from any discipline should be able to help students practice clinical history taking and examination.
- *Patients*—with appropriate briefing and consent,[41] patients from a variety of sources may be able to contribute to the programme.[42]

Staff development resources should be available for all involved in clinical teaching. Ashley et al[43] provide a good list of tips for staff to use to support students in an ambulatory care venues, and the 'Getting started' series of booklets[44] is a good resource for staff development to help a junior doctor perform confidently in a clinical teaching role.

CONCLUSION

As approaches to patient care shift beyond the hospital wards toward ambulatory care venues and the community, then student teaching should move toward developing new resources in these settings. Perhaps now is the time for us to look at the clinical teaching opportunities available to our students and ask if some changes of venue should be made. The onus on us to take up this challenge. In the words of the Bengali poet and Nobel laureate for literature, Rabindranath Tagore (1913), 'You cannot cross the sea merely by standing and staring at the water'.

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