

An Experience in Early Introduction of Clinical Teaching in a Clinical Skills Laboratory

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ABSTRACT

Clinical skills acquisition is a major focus of education for health professionals, extending from undergraduate to postgraduate and continuing to professional education.

This paper describes the experience of the Ahfad Medical School (AMS) in teaching clinical skills for undergraduate students. The skills teaching at AMS is introduced at an early phase of the curriculum. All types of skills are included, with some emphasis on skills of physical examination and history taking. There are 55 2-hour sessions of skills teaching at AMS: 9 in the introductory module, 4 in the endocrinology module, 6 in the reproductive module, 3 in the haematology module, 5 in the cardiovascular system module, 5 in the respiratory system module, 5 in the renal system module, 4 in the digestive system module, 6 in the musculoskeletal system module, 6 in the nervous system module and 2 in the skin module. The skills examination marks constitutes up to 10% of the total module's marks. Apart from summative evaluation, monitoring of students' progress can be done by logbooks or records of achievement to ensure the core skills learned and level of competence.

INTRODUCTION

The clinical skills centre is a multidisciplinary educational facility with teaching and learning resources that provides structured clinical skills training in varied formats and circumstances, to a specified level of competence prior to, or coordinated with direct patient contact.⁽¹⁾ Clinical skills centres usually contain a range of models, manikins, and diagnostic and therapeutic equipment, as well as spaces suitable for workshops, videotaping and small group learning. Clinical skills are broadly divided into manual skills such as drawing a blood sample, and communication skills such as taking a history or educating a patient. Some problems have led to decline in standards of bedside clinical teaching (and thus students' and doctors' deficits in clinical skills), and made a trend toward training in skills centres a necessity. There are several reasons for this decline. Profound advances in diagnostic technologies have shortened stay of hospital patients (the potential materials for bedside teaching). The bulk of patients' care has shifted away from hospitals to primary care units, private clinics and tertiary or specialized

hospitals, where students' teaching programmes are not welcome. Due to the increasing clinical, administrative and research duties of senior doctors and teachers the frequency of bedside rounds is decreasing, and the time spent at rounds has got much shorter than in the golden era of bedside teaching (up to early 1970s).⁽²⁾ With the increasing awareness of their rights (consumerism), patients' consent to being part of medical education is no longer to be taken for granted, both in primary and secondary care.⁽³⁾ Due to these factors the traditional bedside teaching has become deficient in providing comprehensive training in clinical skills.⁽⁴⁾ A skill laboratory is defined as "a facility in which students and qualified staff learn clinical, communication, and information technology skills to a specified level of competence prior to or coordinated with direct patient contact".⁽¹⁾

Historically, since the recommendation of the British General Medical Council (GMC) in its document *Tomorrow's doctors* to introduce the teaching of clinical skills at an early stage of medical curriculae, many schools, all over the world, have adopted this

recommendation with positive outcomes.⁽⁵⁾ There are many advantages of training in skills centres. It allows structured clinical teaching, independent of real patients with the opportunity to initially practice clinical techniques on simulators, in a safe environment, without affecting the quality of patients' in anyway. Skills centres can help to ensure that all students have the necessary learning opportunities and appropriate assessment before approaching real patients, with immediate feedback and chances of rehearsal and consolidation of learning materials. A skills centre is relevant and effective for multiprofessional/interprofessional learning as it enables students from different professional backgrounds to learn about one another in a context that is not profession specific.⁽⁶⁾

AHFAD'S EXPERIENCE IN CLINICAL SKILLS TEACHING

The Ahfad University for women (AUW) was established in 1966 as a university college, with programmes on Psychology and Home Sciences. The Ahfad Medical School (AMS) was established in 1990. It adopts a 6-year curriculum based on modules (integrated basic and clinical sciences). It uses problem-based learning (PBL) throughout the modules as the major approach for delivery of the core curriculum. The school also adheres to a student-centered approach with emphasis on self-learning to develop in the students' the ability and willingness to pursue their own learning after graduation. The curriculum of AMS consists of three phases:

Phase 1: a preparatory semester (with emphasis on natural sciences).

Phase 2 (modules): an integrated study of all body systems (basic, paraclinical sciences, and relevant clinical skills), lasts up to the fourth year. It includes the following modules:

musculoskeletal system, respiratory system, cardiovascular system, gastrointestinal system, genitourinary system, nervous system and skin.

Phase 3: in the last two years, clinical phase, (clerkship periods in medicine, surgery, paediatrics, obstetrics and gynaecology and minor subspecialties).

Since the academic year 1994 -1995 the Clinical Skills laboratory (CSL) of AMS has existed as the cooperation with Maastricht University in Netherlands. Teaching of clinical skills starts in phase

2 of the curriculum. It begins in the Introductory module, where the students learn simple skills such as measuring temperature, anthropometric measurements, giving injections and wound dressing). Then the students learn skills that are relevant to the next modules at their study time. For example, abdominal examination, nasogastric tube insertion or per rectum examination in the module of digestive system, or vaginal examination, use of speculum or application of mechanical contraceptive devices in the reproduction module. There are 55 2-hour sessions of skills teaching at AMS: 9 in introductory module, 4 in endocrinology module, 6 in reproductive module, 3 in haematology module, 5 in cardiovascular system module, 5 in respiratory system module, 5 in renal system module, 4 in digestive system module, 6 in musculoskeletal system module, 6 in nervous system module, 2 in skin module. Types of skills taught in the CSL of AMS include skills of physical examination as the main body of training (taking up to 50% of activities), then communication skills (in particular history-taking), and then procedural skills. For example, skills in the respiratory system module include history taking, physical examination, aspiration of pleural effusion and tracheostomy. The whole process of students' training is performed by part-time teachers, who are usually recently graduated doctors, who have short periods of training. The Skills laboratory is administered by a coordinator, assisted by a secretary.

The class is divided in groups of 8-10 students in each session. The number of groups is determined by the total number of the whole class, but the skills laboratory of AMS can accommodate up to ten groups of such a size at one time. A handout is delivered to students at the start of each module describing the types of skills that will be learned, a theoretical background and description of procedures. At the same time a skills protocol is delivered to teachers describing the aims, time, maximum number of students, materials and preparations for all skills of each module. The protocol states clearly what the student should know or can practice exactly at the end of each session. The teacher is responsible for demonstrating the skills on the students or the models. By the end of the session, each student is asked to perform the skill separately to make sure of the level of mastery of performance. Apart from the teaching sessions of different modules, the Centre is open for self-learning for the students in their free time, learning at their own pace (without the

pressure of a nearing examination). Then they are able to develop their own way of self-learning.

By the end of the module each student is examined by the laboratory staff on two skills, one from those taught in the module and the other from a previous module (thus the students are motivated to continuously revise and practice all skills been taught). The skills examination marks constitutes up to 10% of the total module's marks. Apart from summative evaluation, monitoring of students' progress can be done by logbooks or records of achievement to ensure the core skills learned and level of competence.

COMMENTS

The CSL of AMS is organized in a way that serves the philosophy and objectives of the School's curriculum. It ensures the interaction between theory and practice from an early phase of medical curriculum. The teaching in the CSL is designed to ensure gradual increase of complexity of skills, and of practicing situations. There is also a gradual increase in integration of different skills and knowledge towards problem solving in doctor-patient encounters in the clinical phase of the curriculum. An important feature of skills teaching at AMS is its early introduction in the curriculum (in the first year). In one study the majority of first year students agreed or strongly agreed that it was good to introduce clinical skills in the early years of the curriculum. They reflected that the skill learning course enhanced their learning interest and made them feel like doctors.⁷ They also regard early skills training as a good preparation for later 'clinical' and clerkship years, and as a way of lessening pressure in these years.⁷ The CSL is reasonably equipped (compared with other similar centres in Sudan) and annually updated for any deficiency or introduction of new models. The problem-based education adopted by AMS was found to be associated with students' good performance in interpersonal skills and practical skills such as physical examination.⁽⁸⁾

The CSL of AMS maintains the original aim of skills centres which is to learn clinical and communication skills for junior undergraduate students, and not to replace traditional bedside teaching (as the students receive such teaching in the last two years of the curriculum). The Ahfad experience in skills teaching can offer a good solution for the medical schools with the traditional curriculae, where the

fourth year students, under the academic load of subjects such as pathology, microbiology and pharmacology do not attend introductory bedside clinical teaching.

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