

## » The New Undergraduate Medical Course at the Medical School at the University of Liverpool, United Kingdom<sup>1</sup>

*L'education nous faisait ce que nous sommes*  
Helvetius 1758

**Zusammenfassung:** Dieser Artikel beschreibt Planung und Entwicklung des neuen Medizinstudienganges an der Medizinischen Fakultät der Universität Liverpool, England. Die Innovation besteht in problemorientiertem Kleingruppenunterricht, umfangreichem Training klinischer Fertigkeiten und ausgedehntem Einsatz außeruniversitärer Einrichtungen. Die Folge der Unterrichtsinhalte entspricht den Lebensaltersstufen und gewährleistet sowohl horizontale als auch vertikale Stoffverarbeitung. Spezielle Lernblöcke, ein Zentrum für Fertigkeitentraining und Förderung von Kommunikationsfähigkeit unterstützen einsichtiges und berufsbezogenes Lernen. Die Prüfungen wurden durch vermehrt lernbegleitendes Prüfen grundlegend verändert, um den Studierenden regelmäßig ihren Lernfortschritt zurückmelden zu können. Studierende und Lehrende schätzen die Anwendung dieser neuen Unterrichtsmethoden sehr hoch ein und der Studiengang hat beste Bewertungen in den neuen nationalen Qualitätssicherungsprogrammen erhalten.

**Summary:** This article describes the design and development of the new undergraduate medical course at the medical school at the University of Liverpool, UK. The course is founded on small problem-based learning groups, extensive clinical skills teaching and wide use of community resources. The chronological life cycle underpins the academic development of the course and ensures both vertical and horizontal integration of learning. Special study modules, a new clinical skills resource centre and emphasis on communication skills help students learn in a meaningful and relevant ways. Assessment has been radically altered to introduce greater use of formative methods giving students regular feedback on their learning progress. Students and staff rate the use of these innovative learning methods very highly, and the course has gained full marks in recent national quality assurance programmes.

**Key words:** Small problem-based learning groups – Clinical skills teaching – Clinical skills resource centre – Formative assessment – Quality assurance of undergraduate medical education

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### Introduction

October 1996 saw the introduction of a completely new five-year undergraduate medical course at the medical school in Liverpool. The new course is completely different to the older, traditional, course and is one of the most innovative in the United Kingdom [1]. It was designed on the principle that learning to become a doctor should be based on learning relevant clinical facts and skills in a way that is not only effective but also stimulating and enjoyable. The old course, like most other traditional medical courses, placed a heavy emphasis on learning facts and left the introduction of clinical experience until a solid base of basic science had been acquired through attending lectures, practicals, and anatomical dissections. Clinical experience was mainly gained through attachments to specialist firms in large teaching hospitals with little exposure to the wider community.

In the new course lectures have largely been replaced by small problem-based group work, clinical experience starts on day 1 of the first semester, and many of the old practicals and dissection classes have been replaced by more modern teaching methods.

Students work in groups of seven meeting three times each fortnight with a specially trained tutor to analyse a clinical problem. They identify what they already know and what they don't know about the problem, decide on what they need to find out in order to solve the problem as far as they can in the time, and for their stage in the course and use the time between tutorials to find the information they need. The students use the library, the Internet and other computer based learning resources, a daily lecture session, practical demonstrations, and their clinical and communication skills sessions to piece together the evidence they need to work on the problem [2]. A new problem is presented each fortnight and the learning cycle starts again. During the first year students deal with problems ranging from Traveller's Diarrhoea (to introduce basic elements of cell physiology and the anatomy of the gastro intestinal tract) to Heart Attack and Stroke. Other modules focus on psychosocial aspects of medical practice using, for ex-

ample, Alcohol as a trigger. The module cases continue to act as triggers for learning throughout years two and three as the course becomes even more clinically oriented.

In each of the fortnightly modules the student group is expected to work on each of the four underlying themes of the course. These themes of „*structure and function in health and disease*“, „*individuals, groups and society*“, the „*population perspective*“, and „*personal and professional growth*“, are the unifying elements in the curriculum that tie together all of the various aspects of a medical course so that students can effectively integrate what they are learning rather than learn facts in isolation [3,4].

A major highlight of the new course is the extensive use made of the clinical skills resource centre [5]. This is a purpose-designed conversion of one of the Nightingale wards in the former Royal Infirmary. The Infirmary is a listed building with many interesting architectural features and is being gradually refurbished by the University as a site for academic activities. The skills centre uses a combination of work benches, clinical examination facilities, clinical and anatomical models and computer-aided learning to provide a stimulating and very enjoyable introduction to clinical examination skills for first year students. Students in all the later years of the course also use the centre to learn new skills and to revise those that might have become rusty over the years. An extensive range of skills is learned including basic life support and examination of all the major body systems and the students give a very impressive demonstration of their abilities each year in the clinical examinations.

Learning about communication skills is another feature of the first years of the new course with students attending fortnightly group sessions from the first semester. Students learn about history taking and the basic features of clinical communication through practical experience and the use of video recording. Perhaps the most significant change to the way in which students learn in Liverpool is in the extensive use of special study modules. Through the whole five year course students have a total of forty eight weeks dedicated to these blocks of time when they can study a subject of their own choice in depth. Most of the modules last four weeks, although some are longer. All modules are based on a framework that encourages scientific enquiry through the use of literature searches, the design of a piece of research and the presentation of the results.

Another major change that the new course brings is in much greater use of the community as a site for learning. Up to thirty percent of clinical experience in the course is based in community and general practice attachments and is co-ordinated through a special Community Studies Unit. Students learn to apply their clinical and history-taking skills in the setting of general practice, and gain first hand experience of how health care is organised and delivered. Years 2–4 of the new course are based on the chronological life cycle and all students have a „family attachment“ at the beginning of year 2. Early clinical experience in paediatrics and obstetrics complements the theoretical part of the course that continues to strengthen learning of the basic and pathological sciences.

Students are encouraged to take increasing responsibility for their own learning as the course develops and use a clinical logbook to keep track of their experiences.

Examinations have been reduced in their frequency and a wider range of testing methods is used to ensure that students are progressing satisfactorily through the course.

Plans for the final year of the course, scheduled to start in the September 2000, include a strong emphasis on shadowing junior doctors and on consideration of the principles of clinical governance.

The new course at Liverpool is a very significant advance from the older ways of teaching and is gaining wide recognition as a satisfying and challenging way of learning about becoming a doctor. Students adapt to the small group work very quickly and are able to develop their individual strengths and interests throughout the course. Teaching staff are much closer to the students than in the previous course, and feedback from clinical teachers in both the community and hospital settings is extremely positive, especially about the enthusiasm students show for learning – and about their clinical skills.

#### Literatur

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