Letters to the Editor

The importance of the computer in medical education.

Sir,

Improving the quality of medical education is an investment for the future. In recent years clinical medicine has witnessed an enormous growth in the body of factual knowledge. Likewise, diagnostic procedures and treatment modalities become more complex, more expensive and more hazardous to patients. When choosing from a wide array of alternative drugs, the physician must understand the indications, contra-indications and possible side-effects of the drugs. They must also avoid prescribing interacting combination of drugs. At the same time growing pressure to control health care cost creates an additional demand on the physician. So today, health care professionals must consider not only the efficacy and risk to the patient but also cost of care when choosing tests for diagnostic work-up and treatment planning. Traditional methods of medical learning can not keep pace with the rapid increase of medical information. The main two disadvantages of the traditional method of medical learning are: 1. Emphasis on memorization of medical facts. Students are evaluated based on their ability to recall these facts. Such students focus their learning on acquiring the information needed to pass the examinations, but they tend to under-estimate the development of problem-solving skills that are crucial to medical practice. 2. The heavy reliance on the lecture method of teaching (simply because it is too expensive to provide a teacher for every student) can make students passive recipients. Medical students and practising physicians need to acquire and maintain the knowledge necessary to function effectively in today's complex and rapidly changing medical environment. Computers, due to their superior memory and information processing capability, can play a powerful role in the management of medical information. The use of computer technology in education is called Computer aided instruction (CAI). The major advantages of using CAI over the traditional method of learning are: *Interactive learning, well written CAI programs put the student in a problem-solving environment. It gives them a wide range of simulated cases whereby the student can theoretically assume full clinical responsibility for the patient. Thus, the student can learn by doing rather than simply by reading or being told. *Immediate student-specific feedback. Interactive CAI programs can evaluate student’s response and can provide immediate feed-back on the correctness of the responses. Some of these programs provide justifications of correct answers and some may explain why a student answer is incorrect. *Privacy. Students can learn without fear of being criticised or penalised for making mistakes. *Individually tailored instruction. Students can learn at their own convenience. Specially designed programs can identify weak areas of knowledge by evaluating student’s responses and offer help accordingly. *Objective testing. CAI programs can test students’ knowledge and problem solving skills objectively and reproducibly. *Entertaining. Computers are entertaining to use, motivating students to continue the interaction.

Medline is one of the most widely used CAI programs in medical schools today. Furthermore, students can use a wide variety of assessments through CAI like: *Dri-and-practice - defined set of questions. *Branching questions - next questions depend on previous answers. *Feedback - Why answer is right or wrong, others intervene only for severe mistakes. *Audio-visual support (eg. videodisc). More realism (eg. ER simulation).

Furthermore, there have been several studies which evaluated the practicality of using CAI in medical education. These studies indicated usefulness, feasibility and high level of acceptance among students. It can be proposed that the use of computers in medical education can emphasize the self-directed learning and life-long learning skills. In addition medical professionals will have a strong grounding in the use of computer technology to manage information.

References


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"Seismophobia": there is no loss worse than the loss of faith in the ground under us!

Sir,

For several weeks after a major earthquake and its secondary tremors are over, many individuals remain oversensitised to the minor tremors and sounds of daily life: cat scarching itself on one's bed, the kinetic effect of one's aortic ejections, the squeeking of doors and wooden furniture, the rumblings of trucks and bulldozers and even purely imagined pendular movement.

Those affected remain constantly apprehensive (sometimes sick) and often seek comfort in the absence of objective signs of movement such as the pendular movements in hanging objects and ripples or waves on liquid surfaces that happen to be available in a room. Nevertheless it is amazing how these symptoms rapidly