

Computers and hospital medicine

There are probably more computers per child or adult in the UK than anywhere else in the world, yet British physicians have generally shown little interest in applying computer technologies to their everyday practice of medicine. British GPs, on the other hand, have the incentive of administrative control and are more actively interested in applying computer methods in their practices.

But how does the British doctor find out what clinical support programs are available? The DHSS has not recently encouraged the use of computers in hospitals for other than administrative purposes and the widely read British medical journals which devote considerable space to book reviews rarely, if ever, review computer software or the content of medical databases. American journals, like *Annals of Internal Medicine*, do regularly review computer software. 'MD Computing' listed about 275 American programs in its annual review last year. About half of these programs are for practice management and teaching and of the remaining specialty programs, only a few would be of interest to hospital physicians. Potentially useful programs include an evaluation of drugs for possible interactions ('Drug Interactions' \$89), the relation of hazardous and biological agents to occupations and the likely clinical manifestations ('Occupational Risk Analysis' \$159) and a menu driven interactive program for the design of parenteral feeding regimes ('Parenteral Hyperalimentation', \$250).

A number of clinical management programs are being developed in various centres in the UK and there are a few commercially available British programs. Three were demonstrated at the College's recent conference on 'Computers for Physicians' — one, widely used in renal units for the management of renal failure, another for the management of diabetic clinics and one for keeping endoscopy records and writing reports.

Apart from the availability of such programs which come on floppy discs, microcomputers can be linked via a modem to the telephone lines and then, for a fee, access can be gained to medical databases held on large commercial computers such as 'Database', 'BRS/Saunders Colleague' or 'Prestel'.

Most physicians will have commissioned their medical librarians to conduct a literature search of one of the reference bibliographic databases such as 'Medline' (Index Medicus) or 'Embase' (Excerpta Medica). These allow the identification of relevant publications sometimes with abstracts but, if the full text of a publication is required, reference must be made to one of the source databases such as the 'Comprehensive Core Medical Library' of the BRS/Saunders Colleague system which holds the content of 25 medical textbooks and five important journals, or the 'IRCS Medical Science System' which carries the full text of 32 journals.

Physicians can access these databases themselves provided they know the necessary passwords and operating instructions, obtained by registering with the organisation managing the database. Of course, there is a fee to be paid for getting the information and this is probably the main factor which discourages doctors. This prejudice against electronic information is bound to decline and what individuals will want for personal access will probably be regularly updated, selected practical information. Some such sources already exist; examples are 'Scottish Poisons Bureau' which provides information about the treatment of poisoning; 'Martindale on Line' giving comprehensive evaluated information on drugs; 'Birth Defects Information Service' giving diagnostic assistance for expert geneticists and 'Deltabank' giving the effects of drugs on laboratory tests.

What is missing and might be appreciated by physicians is an edited and frequently updated comprehensive and referenced review of the practical aspects of the various medical specialties with the facility to access the full text of the selected references. Such a service could be on line but would probably be better provided on the new compact discs (CD-ROM) each with a storage capacity of 500 Mb. to 600 Mb. (about 15,000 typed A4 pages), which would be sent to subscribers who would then access the interactive programs on their own microcomputers. When enough physicians become interested in acquiring such information electronically, the College should be in a good position to provide it.

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