MEDINFO 95 - A REPORT

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I attended the triennial World Conference on Medical Informatics, organised by the International Medical Informatics Association (IMIA), in Vancouver, Canada, this month. I represented Ireland at the IMIA General Assembly on July 20th and 21st, and attended the conference proper from the 23rd to the 27th. On the 22nd I attended a workshop on Computer-Aided Learning Development in Health Sciences Education.

The contents pages of the Proceedings - about 500 presentations - are appended to this report. All these papers will be cited in MEDLINE. The following is a summary of my conclusions:

1. The Mater service systems are well advanced. Many of the papers presented were on projects similar to those we have already undertaken.

2. Medical Informatics Education is taking off all over the world, with most Medical Faculties now having a Department of Medical Informatics.

3. Computer Aided Learning is expanding rapidly in medical schools. There are packages available for creation of CAL systems, but such systems are not generally available off-the-shelf.

4. Expert Systems for use in diagnostic decision support have proved very successful in improving consistency in diagnosis and in treatment protocols, as well as in making specialist expertise more widely available. However, their value depends on the relevance of the database used to local conditions. A number of these are available commercially in a format which allows the use of local data. These systems are also widely used in medical education. One widely-used example is ILIAD, which I was informed has been installed in one of the Dublin medical schools.

5. More and more medical information is becoming available on the World-Wide Web. Access to WWW by hospitals and medical schools will become vital over the next few years, as this source becomes as important as the medical literature; but discrimination will be necessary, to ensure the validity of the information accessed. The World Health Organisation is now using the term "Information Society", rather than "Information Superhighway", to stress the impact of this technology on all aspects of life.

6. Telemedicine is now a practical reality, but specialists are becoming resistant to ad-hoc consultations as demand increases.

7. Voice Recognition is coming of age. Within two or three years IBM expect to have continuous-speech systems available for most hospital applications. Voice signatures may replace passwords. Systems currently available fall into two categories, the very reliable (98-99%) discrete-speech systems and the less reliable but more generally applicable continuous-speech systems. IBM supply the former for use on PC systems for less than $1000, with pre-structured vocabularies for specific areas, e.g. Radiology, or General Office. They do not yet have a system specifically for Histopathology. These systems need to be "trained" to recognise the voice of each user, a procedure which takes about two hours; and the user must pause momentarily (at least one-tenth of a second) between words. They use context to distinguish between like-sounding words.

8. Hand-held radio-frequency terminals are available which offer great advantages to medical staff, and allow handwritten signatures which might solve the dilemma of Order Communications in Transfusion.

9. Disaster Recovery Plans need to be tested and practised. Disasters happen, have happened, and are happening. The hospital must know that its recovery plan will work, and that staff know how to work it.

10. Data Security is another area which tends to be skimped. Analysis of the potential cost of a serious breach of security makes a persuasive argument for adopting comprehensive security measures. Some of the worst and most publicised breaches of patient privacy in British Columbia in recent years have had to do with disposal of old records.

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