

## **The future of IT in nephrology**

Almost all of the work undertaken to provide care of renal patients can be considered as information management. This work involves the collection of information from the patients (e.g. history, examination, investigation), its interpretation, patient education, and communication of the management plan. Even the treatment itself, consisting of medication, dialysis, transplant etc. is applied mostly as information for pharmacy, patients, general practitioners, equipment or surgical team who will actually provide the treatment. Information technology is the set of tools we need to manage information effectively.

Information technology has displaced traditional paper records and charts in GP surgeries but not yet in hospitals. This is because the information technology has developed in office, business or commercial environments which are quite different to hospital care.

For full implementation in secondary care and in nephrology, information systems will need to evolve so that they can handle the complicated and rapidly changing processes undertaken in secondary care. This means that the functions will be defined by clinical staff, rather than developers. As the clinical staff have limited technical expertise, the system should be able to translate the clinical requirements into technical features automatically.

The architecture of information technology will evolve to be more suitable for information sharing and easier access to the clinical information by the patient at home and clinical staff at the bedside. This requires that the information flows easily between systems and the information is accessible over the internet and from wireless mobile devices. Information which will be used to support judgments on the validity of the patient information will also be stored. This validating information will include a record of who entered the information, when it was entered and any outside sources used.

Due to the sensitive nature of some of this information, security technology will need to evolve to ensure that the information is not misused. Ultimately the patient will control who has access to his or her information. The patient will be able to see who had accessed his or her information and for what reason.