**Computer and information**

**G130** LIVER DIRECT—A JOINED UP WAY TO MANAGE LONG TERM CARE?

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Since the 1980s, this hospital has provided tertiary care for children with acute and chronic liver disease. To date there are 282 survivors of liver transplantation, 81 children with autoimmune liver disease, 10 children who are intestinal transplant recipients, in total 2580 children are being followed up. These patients have benefitted from advances in treatment of liver disease especially in immune suppression. However, this led to a steep rise in phone calls to the unit from patients, parents and primary care workers. The time taken to deal with phone calls and the lack of continuity of middle grade medical staff led to dissatisfaction expressed informally and two clinical incidents in 2000. Liver Direct was therefore developed and a nurse led telephone consultation service was piloted for 1.5 hours per day and advertised to parents, adolescents and referring share teams.

**Aim:** to report the first 8 months experience.

**Methods:** retrospective analysis of calls logged by the Access database on computer which was linked in house to laboratory results and the patient administration system. An analysis of the on call specialist registrars (SpR) diary of phone calls recorded one month before the start of the study and 1 month later was made.

**Results:** A total of 824 calls were made in 8 months: 484 were made directly to the service, 319 by voicemail and 24 by email. 558 calls were from parents, 99 from shared care team, 55 from primary care workers and 28 were from within our hospital. The number of calls per month has remained constant. The subject of the calls can be categorised as follows: biochemistry results especially cyclosporin and tacrolimus levels (35%), medication advice (18.5%), vaccination advice (10%), logistics especially outpatient appointments and admissions (17%), miscellaneous (19.5%). In the month preceding Liver Direct the SpR received an average of 15 telephone enquiries per day, which reduced by 5 per day after the start of the pilot study.

**Conclusion:** The service is popular with the patients and their families, including the SpRs and liaison nurses to work more efficiently. An audit of efficacy in reducing clinical incidents is in progress.

**G131** USERS’ PERSPECTIVE OF COMPUTERISED CLINICAL INFORMATION SYSTEM IN NEONATAL INTENSIVE CARE UNIT

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**Background:** The hospital was relocated to its new site in 1999. Electronic clinical information system was implemented in NICU.

**Methods:** All the staff in NICU were trained prior to implementation on clinical information system for 2 to 4 hours. Staff spent more time practising on the training module. Questionnaire was sent analysing their prior computer experience, formal computer training, typing skills, computer related professional activities and their opinion after implementation.

**Results:** There were 42 respondents and 6 (14.2%) were male. 3 (7.1%) had no experience with computers. 12 (28.3%) spent <1hr/week, 22 (52.3%) spent 1–6 hrs/week, 1 (2.3%) spent 6-12 hrs/week, 7 (16.6%) spent>12 hrs/wk on the computer. 32 (76.2%) used internet, 26 (62%) used e-mail, 26 (60.9%) used literature search. 9 (21.4%) had formal computer training. 3 (7.1%) were able to type fluently. Their worries for the system were workload 10 (23.8%), errors 14 (33.3%), computer use 13 (30.9%), new system 25 (59.5%) and safety 1 (2.3%). 13 (30.9%) were excited regarding the change. After implementation, the staff felt that the transition to computerised clinical information system was easy 17 (40.4%) and 20 (47.6%) moderately difficult. The difficulties were mostly attributable to double charting.

**Conclusions:** The computer experience of neonatal health care providers varies and they use computers frequently at work for professional activities. Training the staff prior to implementation reduced the initial apprehension. The amount of work needed during the implementation should not be underestimated.

**G132** DEVELOPMENT OF A RESEARCH GOVERNANCE DATABASE

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**Introduction:** Following the publication of the “Research Governance Framework for Health and Social Care”2, it has become apparent that Care Organisations and Education/Research establishments need to work more closely together to establish effective methods of managing research. The ultimate aim is to develop a quality research culture and to promote and verify good practice.

**Methodology:** The information needs for Research Governance, NHS research and development programs and university publications/ Research Assessment Exercise requirements were obtained. A database was designed in Access to link all the information together so that all requirements are met in terms of both data collection and reports.

**Results:** The database will be demonstrated and the dataset made available to interested viewers. The practicalities of implementing such a system will be discussed.

**Conclusion:** Effective Research Governance will require access to a wide range of information, which is best, collected by a number of different partner organisations.

**Aims:** The objective of this paper is to demonstrate the application of a new system of "store and forward" telemedicine link.

**Methods:** 6 hospitals, linked to Guy’s and St Thomas’ took part in this prospective study. A software platform was established using a combination of commercial systems (Medarchive) and specially written programmes for referral of patients. The hardware connection was made with provision of computers in the local hospitals, the NHS net connection and a server at the tertiary centre. The referring paediatrician (trained in echocardiography) recorded echocardiograms as video clips on optical disc. This, along with patient details, clinical findings, and interpretation, were transferred in digital format using SSL encryption across the NHS Net, this system only being accessed after a dual authentication process, with smartcard and user password. All information was stored in electronic patient records on the server. The cardiologist was alerted via an automatic paging system upon the information was stored in electronic patient records on the server. The cardiologist was not able to view the paediatrician’s opinion until his opinion was submitted. Each patient was seen by the cardiologist urgently, electively or in the joint outreach clinic, to compare the accuracy of the data and electronic records of these were stored on the database.

**Results:** We report our initial experience with this new technology, and demonstrate its use, both for a NHS network, in this country and overseas. In addition, the system can be used in reverse to provide education and support for the district hospital paediatrician.

**Methods:** Palm IIIxe units were issued to all eight senior house officers. Other doctors who owned their own Palm computer were welcomed to participate in the project. This included one research fellow and three consultants.

All the Palm computers were pre-loaded with an author-defined combination of commercial and ‘shareware’ medical software. In addition, a purpose-written patient-tracking program was installed. The use of the Palm as a medical reference text, drug formulary, patient tracker, medical calculator (e.g. drug corrections and infusions), a protocol database, and personal information manager was assessed via serial questionnaires for three groups of doctors that rotated through the PICU.

**Results:** Doctors found the Palm handheld computer easy to use in day-to-day patient management. They found the medical calculator the most useful program. Using this program resulted in fewer infusion calculation errors. It was faster to find pertinent drug information using an electronic formulary. New senior house officers found the hospital address book and the on-call calendar very useful as it was given to them at induction. However, they found the patient tracker impractical to use. The most common problem encountered was total data loss due to delays in replacing batteries.

**Conclusions:** The Palm handheld computer is an excellent adjunct to the practice of clinical medicine. It enables medical staff to be more time efficient. The calculation of drug infusions is more accurate and has the potential to eliminate serious medical errors.