

**A “Computerized” Patient in the Intensive Care Unit at Rabin Medical Center**  
(Rabin Medical Center website, July 2002)

For the first time in Israel, a computerized system for patient monitoring has begun operating in the general Intensive Care Unit (ICU) at the Rabin Medical Center (RMC).

The system enables accurate on-line monitoring and control of the critical patient’s medical treatment. In addition, it enables swift decision-making by the clinical staff, based on a broad database linking many clinical parameters to each patient.

The innovative system has put an end to the use of awkward manual charting methods generally used in ICUs. Its clear advantages are the accuracy and reliability of information and its availability in real time, as well as its significant time saving properties for the clinical staff.

During the past month, a computerized system for monitoring the condition of patients has been implemented in the general ICU at RMC. The system is the first of its kind in Israel. It is connected by computer network to all medical devices utilized in the critical patient care routine, as well as to all hospital labs that provide information to the ICU.

RMC, being a national center for trauma, decided to implement this advanced system, which is also installed in several medical centers around the world. Especially at times like this, when terror attacks are so frequent, the system improves care for all trauma-related injuries suffered by victims brought to the RMC ICU.

In addition, the computers in the ICU are connected by network to the databases of the Clalit Health Services’ clinics and hospitals. In this way, it is possible to retrieve all existing information regarding the patients in the unit at any point in time, and view the medical history of an injured individual who arrives at the hospital unconscious.

The new system collects the data entered into it, processes it, and extracts different clinical indicators. The results of different tests that a patient had undergone are entered into the system from the labs as well. Each patient’s data is presented as a computerized patient file on a screen located at their bedside, and each physician, nurse, or other clinical staff member of the ICU may enter or retrieve care-related data from it. Authorized staff members can create their own layout of a certain patient’s data, according to their special needs and the type of treatment given by them, and insert into this layout the clinical parameters relevant for their needs. Staff members may also view, with immediate availability, the relevant data for their field of care.

Staff members in the ICU enter data into the system regarding any treatment or medication given to a patient, and any test a patient has undergone. Staff members must enter their personal password in order to enter data into the system, and any report is thus accompanied by an electronic signature. In this way, it is possible to monitor all clinical orders given and all clinical actions performed, and to know who did what and when.

The computerized system, "MetaVision", which was developed by the Israeli company **MDsoft**, is found to be very user-friendly by the clinical staff. The system enables the graphical processing of data within seconds and saves time previously spent in the manual drawing of figures and graphs, enabling the staff to follow lab test results and monitor signals, to immediately view any changes in the condition of a patient, and to decide upon necessary medical treatment accordingly. At the conclusion of each day of care, a report describing the various treatments given to the patient and the tests carried out that day is printed. All data is also stored in the patient's file in the database.

Prof. Pierre Singer, head of the general ICU in RMC, states that "The new system enables us to establish a computerized medical file, which provides many advantages. The system enables the automatic and accurate calculation of drug doses simply by entering the appropriate parameters into the system, and in this way prevents human errors in the calculation of correct drug doses.

"The system also functions as a quality assurance and clinical management tool of the highest quality for critical patient care, as well as an important research tool for years to come. In addition, the system prevents errors which might occur due to unclear handwriting or the erroneous copying of data – errors which might be significant in the treatment of critical patients in a unit of this kind".

Dr. Itschak Peterbourg, CEO of General Health Services, stated today that he sees as very important the implementation of this advanced technology in the ICU, one of the most sophisticated and advanced units in the Clalit Health Services. "This is a step up in the treatment of the most severely ill patients, while creating a comprehensive audit and control mechanism of patient care, by centralizing all data in one system which can be viewed by every staff member from every workstation in the unit", stated Dr. Peterbourg.