Bedside trauma computers

Saving lives is becoming easier at the R Adams Cowley Shock Trauma Center, which is affiliated with the University of Maryland Medical System.

An innovative computer network being installed at the Baltimore shock trauma center lets physicians refer to bedside work stations, which monitor the patient's health.

"We wanted these work stations to be 'one-stop shopping' for information," says Jacquard Guenon, director of the computer center. Next to each of the 138 beds in the center will sit a Digital VAX 3100 computer with a color monitor. The computers will keep tabs on up to 100 patient functions, such as blood pressure and respiratory rates. They'll also provide access to the hospital's lab system, radiology department, operating-room computers, and even the electronic mail system. The network has on-line storage of approximately 30 to 40 gigabytes. In fact, each work station is three to four times as powerful as the computer that used to run the Center's old system.

"The design idea was to get information, anticipate the need for it, and get it in front of the physician at the right time," Guenon says. And in shock trauma medicine—described by Guenon as "very intensive care" within hours of the medical emergency

Computer work stations installed beside each bed in a medical trauma center give doctors instant access to records, X-rays, and other information. The computers also monitor patient physiological data.
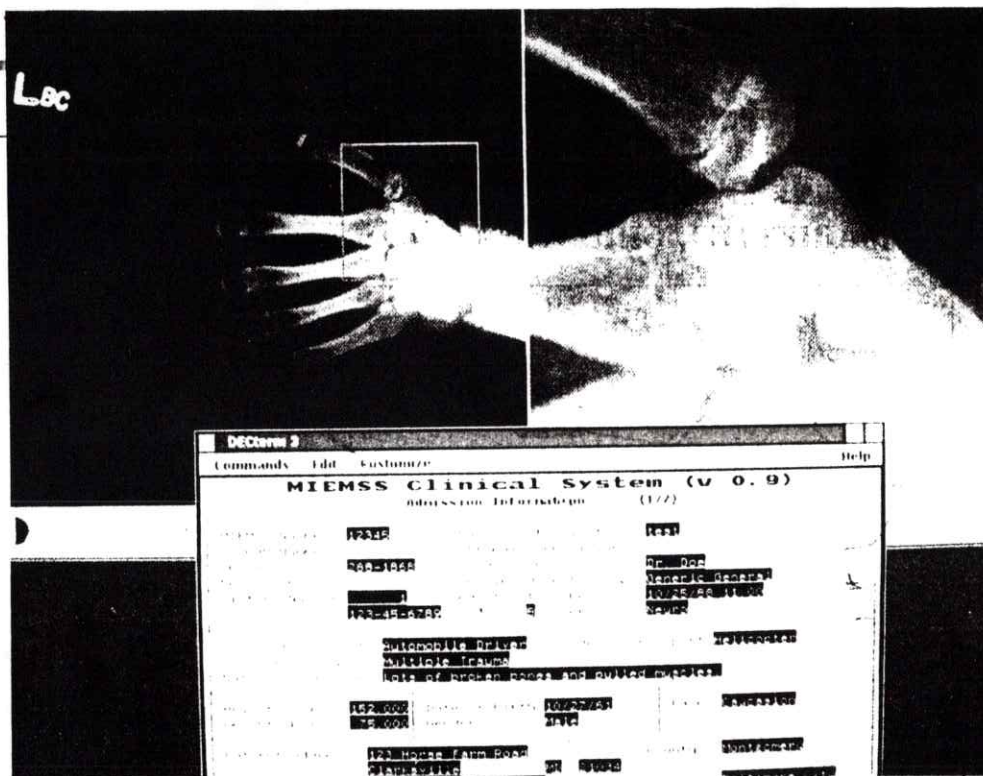
—doctors need to receive information as soon as possible. "With this system, everything can be done right there. All that computing can be done locally."

Among the system's more remarkable features is its ability to reproduce X-rays on the computer monitor. Using a mouse, a doctor can call up and examine a patient's X-ray. If he needs a closer look, the physician draws a box around the troubling area of the picture to enlarge it.

The network also includes a pager directory and an on-call directory, allowing the physicians to learn quickly who is in the building and who isn't. Guenon hopes the system will eventually include automated paging, so the computer will notify the doctor if an emergency suddenly develops.

Installation of the work stations began in December. Guenon says that software for the system is expected to be constantly evolving over the next three years to meet the needs of physicians using the network. **PS**