

NURSING THE SYSTEM

Get Patient Information Anytime, Anywhere

BY RHONDA SHAW MURCHISON, RN, RRT, CNA, MSHA

ABSTRACT:

In a hospital faced with rapidly changing community needs, system integration will unite data from bedside monitors and ancillary equipment with the hospital's information system. The technology enables faster, easier, and fewer patient transfers, flexible monitor use, continuous monitoring, and remote access of patient information.

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System integration enables hospitals to communicate and share patient data from multiple locations in and out of the facility. Nurses and physicians can access data from just about anywhere—multiple units in the facility, other network hospitals, laptop computers, and even handheld devices off-site.

At Methodist Healthcare-North Hospital, Memphis, Tenn., a 208-bed acute care community hospital, system integration has helped us work in a rapidly changing clinical environment. The addition of cardiac services and increased community need mean we are faced with daily overcrowding in the emergency department (ED) and a high volume of patients needing monitored beds. We frequently hold patients in the ED because no beds are available.

Last fall we opened an ED admission holding area, and will open a new intermediate care unit (IMU) (post-PTCA), cardiovascular (CV) intensive care unit (ICU), and ED this fall. A patient's condition can change rapidly and our system must meet these changing requirements. The key is monitoring flexibility. Through system integration patients can continuously be monitored regardless of location. The portability of the bedside monitors enable caregivers to convert a nonmonitored bed to a monitored

bed when needed, which helps to avoid short-term transfers and unnecessary ICU admissions.

Fewer transfers

A patient may enter the ED, go to the catheterization lab, then to the CV operating room, postanesthesia care unit, CVICU, IMU and transfer to a step-down unit before discharge from the hospital. Previously, a nurse needed to transfer the patient by disconnecting the patient from the ED monitor and connecting him to a transport monitor, then reversing the process at the destination. The process wasn't nurse- or patient-friendly.

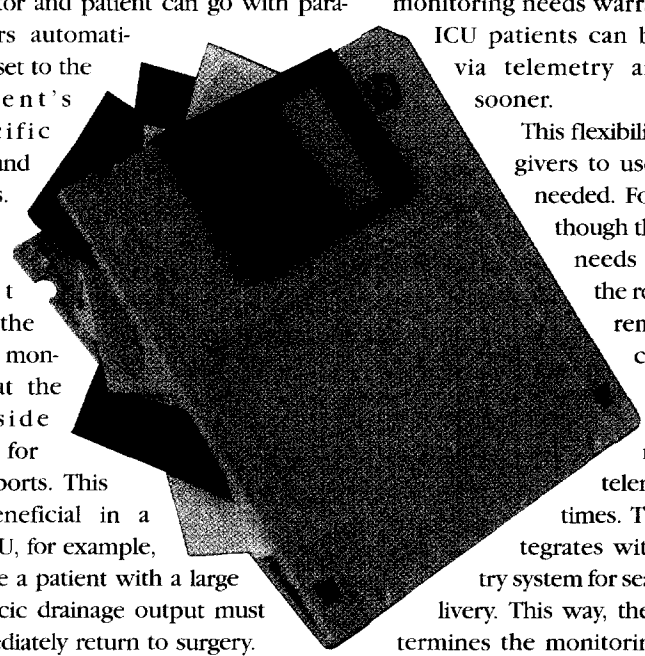
Now, a monitor connected to a patient at admission can remain connected until discharge. New cardiac monitors are lightweight, compact, and portable, enabling faster, easier, and fewer transfers. They save transportation preparation time, enhance nursing productivity, and cover the patient's monitoring needs throughout the continuum of care. After only a single disconnect, the monitor and patient can go with parameters automatically set to the patient's specific unit and needs. The patient uses the same monitor at the bedside and for transports. This is beneficial in a CVICU, for example, where a patient with a large thoracic drainage output must immediately return to surgery.

Centralized data

Through system integration, multiple monitors and ancillary equipment can share data. Fiber-optic and network cabling technology allow facilities to share data through a single hub. All patient information comes into one location. The cardiac monitors can interface via a medical information bus to the oxygenation and continuous cardiac output monitors, ventilators, point-of-care instruments, and other devices. These devices can interface with the hospital information systems, documenting patients' vital data along with other facts such as admission, discharge, and transfer information, medical history, and caregivers' notes.

System integration also enables caregivers to monitor patients on hardwired monitors as well as those on telemetry monitors from the same workstation. Patients can be switched from a hardwired monitor to telemetry and stay on the same unit, enabling them to step down as monitoring needs warrant. This way, ICU patients can be monitored via telemetry and ambulate sooner.

This flexibility allows caregivers to use monitors as needed. For example, although the IMU patient needs a monitor in the room for sheath removal or special medication administration, she may need only telemetry at other times. The monitor integrates with the telemetry system for seamless care delivery. This way, the care unit determines the monitoring parameters



required and every patient room becomes a monitor-ready care site.

Widespread data access

In the past, the only way a nurse could review a patient's rhythm before arrival in the unit was to view the few strips on the chart. Now caregivers can review up to 72 hours of data including trended information in table or graph formats and beat-to-beat reviews with full disclosure. They can recognize subtle changes and begin interventions sooner. Nurses can print reports and specific data on demand no matter how often the patient is moved.

Multiple monitoring units have network connectivity, allowing physicians, nurses, and other caregivers such as respiratory therapists to view, for example, the ECG, blood pressure, oxygenation, respirations, and temperature from numerous locations. This

can enable continuous monitoring when a patient goes to an ancillary department for testing.

Remote access devices such as handheld nurse call systems give nurses real-time access to patient data. Unit staff can use the devices with monitoring systems to notify the nurse of the patient's latest waveforms and vital signs even when caring for another patient and, thus, speeding her response time.

System integration technology also enables physicians to view the information from different locations such as at home, in a cath lab, at the office, or by cell phone. They can check on a patient by reviewing the ECG and other patient data from a workstation or network gateway and begin care interventions earlier.

Positive results

We can connect different wings or

buildings and share patient information across multiple locations. Our flagship tertiary care hospital, Methodist Central, uses one monitor tech room to monitor up to 96 medical-surgical patients on eight floors, with remote beeper access to each caregiver. This means patients who would have moved to monitored units or the ICU in the past can stay in their medical-surgical beds.

Although still in its early stages, we expect our system integration program to enhance patient outcomes, patient and family satisfaction, and nursing productivity. ▲

ABOUT THE AUTHOR

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