‘No hidden patient’

Designing a new hospital for today's high-intensity inpatients

BY JEFF HARDY AND RON LUSTIG, AIA
ILLUSTRATIONS BY EARL SWENSSON ASSOCIATES, INC.

Three major patient care trends have crept up on general acute care hospitals and influenced their operations, which serve patients and caregivers in an ever-more-restricted-payment environment: (1) today's hospitalized patients are sicker, (2) patient care is more labor-intensive, and (3) care management has become fragmented to the point of jeopardizing patient safety. Coping with these trends requires planners to integrate new patient-care, clinical nursing-support, and care-management concepts into today's facility design.

To assist Jeff Dunn, CEO and administrator of the North Georgia Medical Center's new facility in Ellijay, Georgia, in coping with these trends, Harry R. Alvis, Chief Operating Officer of SunLink Health Systems, Inc., pulled together an integrated operations and facility planning team that had worked with him on several other new facility projects since 1989. SunLink owns seven community hospitals and related businesses in four states in the Southeast and Midwest; the North Georgia Medical Center is its first replacement hospital.

The Planning Team's Wake-up Call

While a picture may be worth a thousand words, a story can draw a vivid and inspiring picture. Such was the case after the North Georgia Medical Center planning team read a news report about an apparently preventable patient death in coauthor Jeff Hardy's hometown hospital in Novato, California.

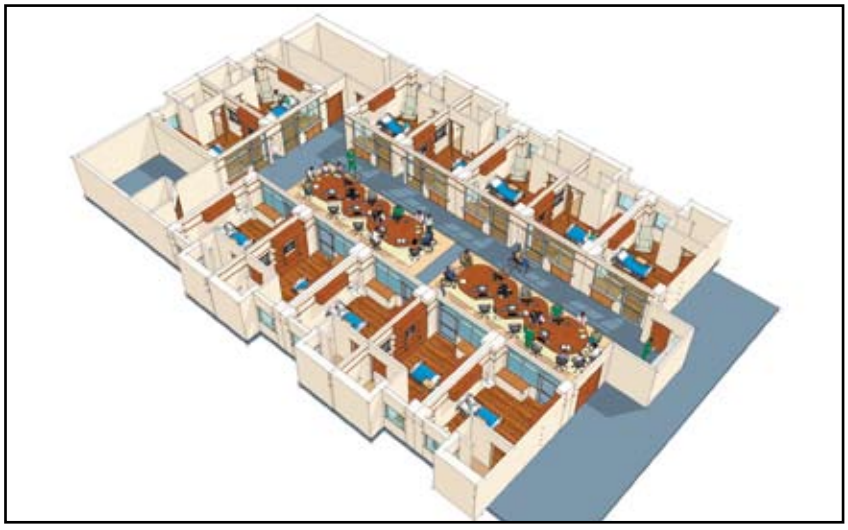
It was reported that a staff nurse on a medical/surgical unit had been notified by the monitor tech in the intensive care unit of a disturbance shown on a patient's monitor. The nurse walked down the long corridor to the patient's room,

turned into the room around the inboard bathroom, and noticed that the patient was not in the bed. The nurse assumed that the patient was in the bathroom and left. Seven minutes later, the patient was discovered lying on the floor on the other side of his bed, too late to save his life.

The news report led the North Georgia planning team to the outside-the-box approach outlined in this article. They opted to follow three maxims to guide them in designing their new patient-focused hospital for treating "sicker" patients while also reenergizing nurses in a comfortable and communicative environment:

- No hidden patient.
- Provide a nursing-focused environment.
- It takes a whole team.

Alvis was determined to ensure that the aforementioned three major patient care trends were addressed in the design of the new facility.



Figures 1 and 2. The plan for all patient care units in the North Georgia Medical Center features no corridors; the patient rooms wrap around a single clinical nursing worktable.

Trend 1: Today's Hospitalized Patients Are Sicker

Actually, patients are not sicker. We just say they are because they are admitted to the hospital only when they absolutely need direct medical attention. It's not like the old days, when a patient was admitted a few days before surgery and then stayed several days afterwards to fully recover. Today, patients stay only as long as clinically necessary and are then discharged as soon as they are stabilized. This is a direct result of today's tight "gatekeeping" and financial controls on admission, length-of-stay, and reimbursement per patient stay, as dictated by government and other third-party payers.

In general, this means there is no longer a "balanced mix" of healthy, sick, and recovering patients on a patient care unit at any given time. Today it's all about sick patients who need high-intensity care. In other words, there is not much difference today between intensive care patients and any other inpatient in the hospital.

In light of today's "sicker" patients, therefore, the North Georgia Medical Center planning team recognized several problems inherent in the traditional patient care unit. First, the corridor-based layout in most hospitals falsely assumes that sicker patients will be located closer to the nursing station, as is medically appropriate, and that everything the nurse needs for the patient is either in the room or very close by. This puts patients at the far ends of corridors at risk of getting less care than they need. Also, when clinical nursing staff are isolated from other clinical nursing, professional, and medical staff—as is the case in the typical unit layout—care-planning opportunities do not readily occur. Most important, whenever a corridor-based nurse turns her eye away from the patient even for an instant, a "risk opening" is created that threatens patient safety and stabilization.

Another problem with traditional room design is the location of inboard bathrooms on the inside wall of the corridor-based unit. Inboard bathrooms are designed for patient privacy and convenient accessibility to housekeeping, but nurses can't see patients except when walking directly into the patient room.

Finally, the North Georgia team also determined that if a patient's condition worsened in the traditional unit, even with remote telemetry monitoring, the process of monitor-to-floor nurse communication and the time needed for a clinical nurse to reach the patient were unacceptably long.

The design solution, therefore, is to configure space, layout, equipment, and supplies of all medical, surgical, and specialty patient care units and patient rooms to be exactly like intensive care units. The units differ from intensive care units in name only. On this higher-acuity unit, depending on each patient's intensity of care needs, the telemetry and clinical care-delivery equipment can be augmented at a moment's notice without having to transfer patients from one level of room to another.

In the design of North Georgia Medical Center, there are no corridors throughout the units; the

patient rooms wrap around a single clinical nursing worktable (figures 1 and 2), an idea Hardy had discovered while performing an operations assessment at a California hospital and had shared with the facility operations and planning team (see sidebar). All patient rooms and patient beds are clearly visible from the central worktable (figures 3 and 4). Bathrooms are on the exterior walls of patient rooms, also for more convenient visibility. As in intensive care unit, the interior glass walls and doors of the room allow two-way visibility between caregiver and patient.

Although similar to intensive care rooms in size, the patient rooms are customized for the applicable general or specialty service unit in which they are housed. They are not universal patient rooms, equipped to meet the needs of all staff, but they are more easily accessible by all staff.

Figures 3 and 4. All patient rooms and patient beds are clearly visible from the central worktable in the North Georgia Medical Center's design.

Trend 2: Patient Care Is More Labor-Intensive

At the same time that patients have been getting "sicker," new testing and treatment technologies, pharmacologies, and clinical modalities are altering the way care is being delivered. Clinical nursing staff have been hard-pressed to keep up with all the changes in care delivery and documentation. They must be better trained, retrained to perform new procedures more often and, generally, fast on their feet.

Among factors affecting nursing staffing are the physical issues that many nurses throughout the country are experiencing. At the top of the list: The average clinical nurse is in her 40s, and many are now presenting with foot, knee, and hip ailments from all the walking necessary during a single shift on a traditional medical/surgical, single- or double-corridor, racetrack-style patient care unit. Moreover, clinical nursing staff are challenged to deal with all the intra- and interunit transfers that crop up while they are attempting to meet the critical needs of the patients already in place—a problem that would be mitigated by more intensity-oriented room design.

In general, the design solution is to respect both the professional and personal needs of the clinical nursing staff by combining "patient-focused" with a "nursing-focused" layout for each patient care unit. With outside-service nursing staff and the multitude of specialty nurses now working in the units, the "no hidden caregiver" model allows for more direct observation and supervision than would normally be provided in the traditional layout. A tight cluster of patient rooms ensures that clinical supervisory staff can monitor all staff nurses without having to walk down corridors and peer into rooms. Skilled clinical nurses won't have to walk as far to get to their patients—nurses should not be physically exhausted at the end of their shifts.

The clinical nursing worktable is designed for maximum comfort and convenience for medical, professional, and clinical nursing staff, allowing them to "klatch" for patient-specific meetings. The traditional workstation, a side-by-side or back-to-back arrangement, is not conducive to the type of communication required for today's more complex clinical assessments. The nursing station worktable layout allows the entire medical and hospital caregiving staff to face each other for the many planned and impromptu care-planning meetings in a barrier-free environment, rather than feeling isolated or having to stand with a high counter between them.

Trend 3: Care Management Has Become Fragmented to the Point of Jeopardizing Patient Safety

In most acute care hospitals, a patient is admitted before all the various clinical nursing and professional staff have read the physician's history, physical exam notes, and orders or visited the patient, and made their assessments about what needs to be done. Even case management staff customarily begin their assessments only after the patient has been admitted. At best, medical staff and hospital staff spend precious time reading what other professionals have written in a patient's medical record before making their own plans and decisions. At worst, the disjointed and retrospective nature of care planning creates opportunities for avoidable patient safety and clinical treatment/testing errors. Inadequate documentation puts hospitals at financial risk for being audited and for nonreimbursement, as well as at legal risk for regulatory sanction or malpractice claims.

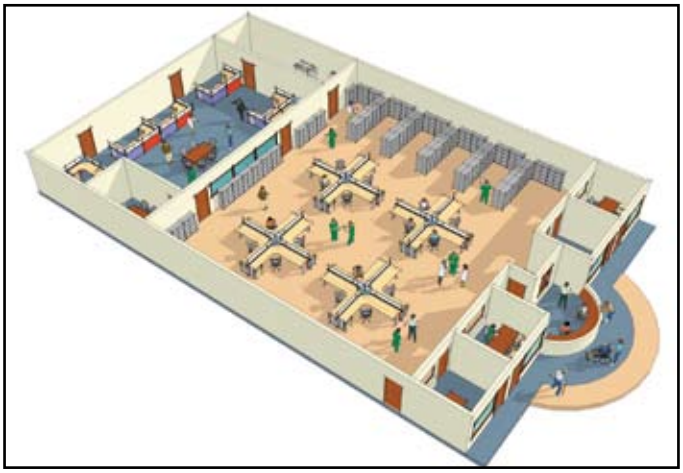


Figure 5. A central worktable is placed in the care-planning hub of the consolidated Patient Administration Center, where the team leaders share the same work space.

To solve this disjointed care management problem, care planning must begin either before or immediately at the time of admission. Care planning must include all medical, clinical nursing, and professional participants who will be involved in clinical decision making and care delivery and must continue throughout the patient's stay.

The design solution is to support "whole-team" planning by installing a clinical nursing worktable at all patient care points of service, in the emergency department and in surgical services, and elsewhere, such as in the care-planning hub of the consolidated Patient Administration Center, where the team leaders share the same work space (figure 5). In this configuration, a care planner (a nurse with case management skills), a patient accounts/customer service representative, a diagnosis/clinical procedure/billing coder, the patient's physician, and other appropriate clinical professionals can sit in a shared workroom within Patient Administration. The worktable is convenient to medical and professional staff who are functioning as a team to initiate a patient care plan aimed at positive clinical, patient safety, and financial results for every patient.

SunLink's Harry Alvis was determined to make sure that the aforementioned three major patient care trends were addressed in the design of the new North Georgia Medical Center facility. With the design solutions used in the facility's planning, those trends were addressed and their associated problems solved.

Jeff Hardy is an integrated operations and new facility planner and President of Healthcare Enterprise Development Services, Novato, California. For further information, phone 800.233.5313 or visit www.jhardy.com. Ron Lustig, AIA, is a Principal with Earl Swensson Associates, Inc., Nashville. For further information, phone 615.329.9445 or visit www.esarch.com. To send comments to the authors and editors, e-mail hardy0706@hcdmagazine.com.

Genesis of the Nursing Station Worktable

Jeff Hardy interviewed Valli Washburn, RN, Director of Emergency and Intensive Care Services at Glendale Memorial Hospital and Health Center in Glendale, California. Washburn led the planning process for designing what is now called the clinical nursing worktable (figure) installed in the intensive care unit at Glendale.

Hardy: Where did the idea for this come from?

Washburn: About 10 years ago we had the opportunity to plan and design a replacement intensive care and cardiac care unit. Our first task was to list all the problems we had been experiencing with our traditional intensive care units. For one thing, the nursing stations were enclosed—we couldn't see the patients without looking around physicians and staff who were standing at the counters blocking our view. We had to walk around the desk and out to one of two side cutaways to reach a patient.

Furthermore, the stations were too small for anyone to work. Physicians complained about not having a place to sit and review patient charts. There wasn't enough seating for all the clinical nursing and clinical professional staff, such as the respiratory therapist, the pharmacist, the social worker, dietitian, and so on, who were involved in a case. So physicians and staff took their charts wherever they could find a place to sit, which inevitably was somewhere away from the station and other clinical staff.

Hardy: What was the pivotal point that led you to decide on the worktable design?

Washburn: Our biggest concern—at the top of the list—was patient safety. In the old unit, the difficulty was not only in seeing the patients from the station, but also in not being able to talk with each other. Promoting communication is the biggest patient safety factor there is. The more we all communicate with each other, the lower the risk to patient safety. To do that, we have to be more accessible and less formal.

Once we agreed on the general idea of the worktable, we spent nearly a year brainstorming the details—the shape of the worktable and where in the station to put the computers, the chart racks, the supplies, and so on.

Hardy: What are the greatest benefits of using the worktable?

Washburn: Nurses don't have to get up and walk around a desk to get to their patients. It allows for a much more open, embracing environment. We can hear the patients in the nearby rooms, and we can see across the top of the worktable and note immediately if any of our team needs help in a patient room. We can see at a glance if a patient is struggling to get up to go to the bathroom. Most important, everyone is face-to-face, not