

Transporting Telemetry Patients

An algorithm enables safe patient transport without an RN or monitoring.

By Nancy J. Mayer, MBA, BSN, RN

One reason for the hectic pace on step-down, telemetry, and progressive care units is the large number of diagnostic and interventional procedures the patients undergo, particularly on units serving patients with multisystem problems. Because telemetry monitoring must continue when patients are transported, a telemetry-trained nurse typically accompanies an acutely ill patient who has to go off the unit for a procedure. The nurses remaining on the unit then have to monitor that nurse's other patients during the trip.

Unit 3B Stepdown at the University of Pittsburgh Medical Center (UPMC) St. Margaret hospital is a 34-bed telemetry unit with a cardiac and respiratory focus. The unit also serves patients requiring continuous cardiac monitoring, close observation, or specialized nursing care, such as continuous infusion of antiarrhythmic, inotropic, or vasoactive agents. Some patients, however, have a noncardiopulmonary admission diagnosis or are low risk. Larson and Brady suggest that telemetry monitoring is of limited usefulness for this patient population.¹

It was the policy on 3B Stepdown that a nurse with Advanced Cardiac Life Support certification transport patients to and from other areas of the hospital. The 3B nurses were concerned about the time they spent away from their other assigned patients when they had to transport a patient, particularly when going to a department, such as radiology, that lacked nurse coverage. In these cases the 3B nurse had to remain with the patient during the entire procedure, which might take as long as two hours. Meanwhile other, often less stable patients remained on the unit. This practice jeopardized the safety of patients and made more work for the nurses remaining on the telemetry unit.

When a patient seemed to be stable, particularly if the patient would soon be ready for transfer to a lower level of care or discharge, nurses on 3B Stepdown would seek an order for the patient to go "off monitor for testing." It was sometimes difficult to find a physician or NP to write the order, resulting in lost time and often a delayed start for the test or procedure.

The 3B Stepdown nurses, particularly those with many years of experience as telemetry nurses, felt they had sufficient knowledge and judgment to make appropriate decisions about whether they needed to accompany the patient during transport. But without a formal mechanism for change, the autonomous exercise of transport decisions remained nothing more than a wish—until Transforming Care at the Bedside (TCAB) came to 3B.

TCAB COMES TO THE UNIT

The UPMC health system had long been involved in the TCAB initiative; UPMC Shadyside was one of



Rita Cook, BSN, RN, CMSRN, RDCS, PCCN (right), uses the Off-Monitor Algorithm to validate the decision of 3B staff nurse Karen Doult, RN.

the three original hospitals that launched the national TCAB venture in 2003. As UPMC Shadyside's many successes in the program gained attention across the health system, other UPMC hospital executives wanted the program to spread to their facilities. Susan Hoolahan, MSN, RN, NEA-BC, chief nursing officer (CNO) at UPMC St. Margaret, selected 3B Stepdown as the hospital's first unit to participate in the TCAB initiative. The TCAB work began in November 2006.

The plan was for a select, core group of the unit's staff nurses to institute future tests of change, but all staff members could participate in TCAB by attending one of the five "deep dive" sessions designed to solicit ideas for innovations. At each of these sessions the participants were asked, "If you could create the perfect patient, family, staff experience, how would you do it?" The topic of patient transport off the unit came up at three of the five sessions. Nurses clearly saw their transporting low-risk patients to tests and treatments as a non-value-added activity that placed their high-risk patients in jeopardy. As Storfiell and colleagues note, time spent in non-value-added activities affects patient outcomes, cost of care, nurse satisfaction, and staff turnover.²

Shortly after the deep-dive sessions, the staff of 3B voted on what issues were of immediate importance for transforming care on the unit. They chose improving the process for transporting low-risk patients as a top priority.

CREATING AN ALGORITHM

Many nurses were eager to participate in TCAB activities, and even those who weren't on the core TCAB team found ways to become involved. The unit's professional practice council, the formal shared governance structure in the department, was one such conduit. The council has been meeting monthly for about six years and includes the unit nurses who are on any hospital committee. Its purposes are to share information and generate ideas and nurse-driven solutions to problems.

Transporting stable patients was discussed at the first council meeting after the deep-dive sessions. Council members felt strongly that nurses could use critical thinking (that is, a thought-oriented, knowledge-based approach to patient care rather than a task-oriented focus) to determine who could be transported off the unit without a monitor. But the unit leadership urged that an algorithm be developed to determine patient suitability.

Literature supports this approach. Larson and Brady suggest using risk stratification to promote appropriate use of telemetry monitoring and to improve quality of care.¹ Berke and Ecklund describe

creating unit standards, including protocols and algorithms, to support efficient patient care.³ Given the range of nursing experience on the unit—from novice to expert—having such a tool was warranted.

All emergency events are tracked retrospectively by UPMC St. Margaret's quality management department. A two-year retrospective review confirmed that no untoward clinical events had occurred during patient transport to or from 3B Stepdown. The goal of developing a transportation formula or algorithm was to ensure that this safety record continued. Patient emergency event data gathered by the quality management department would be reviewed monthly to monitor for problems.

Rita Cook, BSN, RN, CMSRN, RDCS, PCCN, a level 4 clinician on the unit, volunteered to spearhead the algorithm's development. Rita had a thorough understanding of monitored patients, their nursing care, and potential risks related to dysrhythmia. She drafted an algorithm and shared it with key constituents, including the unit-based certified registered NP and members of the professional practice council. Once she had their feedback, she put the algorithm decision points into a flow chart that uses the colors of a traffic light to signify critical thinking directions.

The CNO, Susan Hoolahan, and two physicians, a cardiologist and a pulmonologist, reviewed the algorithm for appropriateness and applicability. Each physician made a minor change or correction, but overall they were enthusiastic and supportive. The flow chart was then presented to the hospital's critical care committee, a group including physicians, nurse leaders and educators, a pharmacist, and the director of respiratory therapy. The committee's response to the algorithm was positive and included only one suggestion for change. Creating the algorithm took seven months. Figure 1 depicts the final algorithm.

The critical care committee approved the algorithm for implementation on 3B Stepdown, pending staff education. The unit nurse educator and level 4 clinicians met individually with each nurse to review the algorithm. They reinforced that an essential step had to be taken: the nurse's decision had to be verified by the resource (or charge) nurse. The 3B nurses then began using the algorithm to determine what patients could be transported off monitor for testing.

OUTCOMES

The 3B Off-Monitor Algorithm was an immediate success with the staff nurses. They found it easy to implement. They apply it 10 to 15 times in every 24-hour period. Every use of the algorithm is a celebration of autonomous nursing practice.

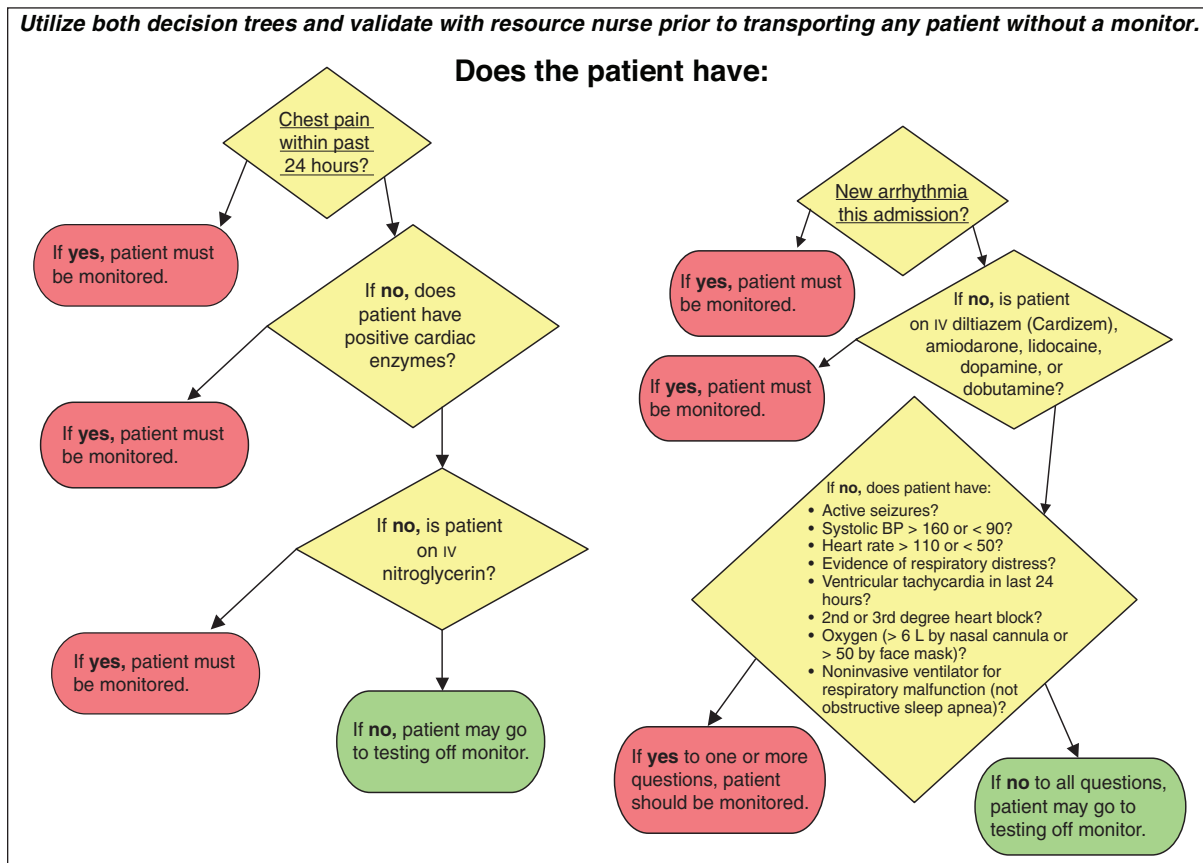


Figure 1. The 3B Stepdown Unit's Off-Monitor Algorithm

In the nearly two years that the algorithm has been in use, there have been no clinical events or arrests in patients sent off the unit without a monitor. In only one instance, shortly after the algorithm was introduced, was a patient incorrectly sent off the unit without a monitor after the 3B nurse failed to use the algorithm or have her decision verified. Fortunately, the patient didn't experience any problems while off the monitor. This became a lesson for other less-experienced nurses and is discussed with new nurses. Since then, each newly hired nurse is taught about the algorithm during the first day of clinical orientation on the unit and given a copy of it for quick access.

The nursing time saved by the algorithm hasn't been quantified because the time spent transporting low-acuity telemetry patients and seeking an order to send the patient to testing without a monitor wasn't measured before the unit began using the algorithm.

Several other UPMC telemetry units, in the spirit of TCAB, have decided to "steal shamelessly" from 3B Stepdown. Copies of the Off-Monitor Algorithm have been shared across the system, and other units have adapted it or are using it without change.

This test of change was highly successful. The expertise of a seasoned nurse and key physicians helped to develop the algorithm. The CNO empowered the staff to move a major clinical change forward, resulting in the rapid implementation of a carefully thought-out initiative that gives staff nurses autonomy. Listening to the voices of nurses resulted in a change that accomplished three of the four TCAB goals: improving the safety and reliability of care, enhancing nurse vitality and teamwork, and improving value-added care processes. ▼

Nancy J. Mayer is the unit director of 3B Stepdown at the University of Pittsburgh Medical Center St. Margaret in Pennsylvania. Contact author: mayernj@upmc.edu.

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