



Pittsburgh Regional Healthcare Initiative

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UPMC Shadyside and VA Pittsburgh Healthcare System

Efficient shift change benefits staff and patients

It's coming up on 3 pm and, as usual, the unit has been very busy today. But each nurse simply must take the time to report on what's gone on with each patient, so the nurse assuming the next shift will be informed. Often, what's reported are the subtle things—things that may not even make it into the patient's chart. And it's important to impart the information as close as possible to the actual shift change, when the information is the most up-to-date.

The problem is that, just because the nurses need about an a half hour to convey this information to one another doesn't mean that the patients stop having needs for that hour. In fact, one hospital tracked a distinct spike in the number of patient falls during the period surrounding shift change.

And what was the typical shift change like for nurses? "Everybody hurried and scrambled," said Susan Christie Martin, R.N. "Staff looked for recorders, what their assignment was. Tape recorders helped, but sometimes you couldn't find one, or the battery was dead or the cord was missing. You could never find your place if you rewound."

Clearly, the system of conveying information at shift change presented opportunities to improve both employee satisfaction and patient safety.

Two area hospitals have tackled and streamlined shift change: one using an advanced voicemail system; one using an all-encompassing form that has since become

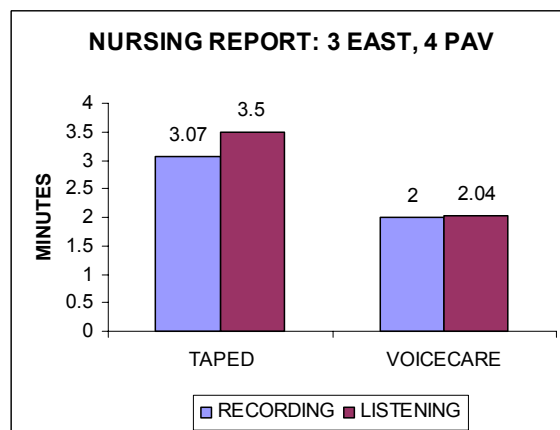
computerized. Both report measurable improvements in time saved and information exchanged at shift change.

UPMC Shadyside

Nurses report their satisfaction with the Voiceware system, a telephonic answer to the use of tape recorders. UPMC Shadyside piloted the system on two units, and based on satisfaction, expanded its use.

The system offers several advantages: the nurse can report on patients one by one, as soon as they have been seen. Using a desktop or pocket phone in a secure, confidential area, the nurse signs in with a firewall-protected user code and dictates the report for that shift into that patient's secure mailbox.

Information is standardized for patients. For example, the system prompts the user to enter the patient's history, which is then saved. (In the days of tape recorders, patient histories had to be re-recorded at the end of every shift.) The second prompt is for what is happening with the patient today. Then there is the third area, where nurses can enter addenda about the myriad other things that might be useful for the next nurse to know. These addenda can be made at any time, any



A minute here, a minute there. The Voiceware system at UPMC Shadyside adds up to hours of saved nursing time..

time the nurse visits the patient.

Currently, nurses use Voiceware for shift report, but the system is now being rolled out to document as patients come to and from procedural labs, and from post-op to surgical post-op. It's catching on in other areas, too. An authorized physician in an outlying office can call and get a report on a hospitalized patient, and can dictate a report into the phone to let nurses know about their patient. Emergency Department physicians call reports into patients'

Information transferred at shift change has everything to do with quality of care—and with employee satisfaction.



Voiceware phones when a patient is transferred to the floor, to convey details of the patient's initial encounter.

Certain long-term care facilities, to which UPMC Shadyside patients most often transfer, also receive passwords so that they can hear the Voiceware hospitalization reports when the patient arrives from the hospital. Voiceware reports can be recalled for up to 20 hours after the patient is discharged.

The hospital has experimented with allowing family members to dial into the system to hear the Voiceware reports. While many families appreciate the access to this information, it does not reduce the family's need to talk with a member of the healthcare team.

Results

Ultimately the two units reported a net decrease of 2.5 minutes per report. The extrapolated time savings over one year is estimated at 10,768 hours per year.

Veterans Administration Pittsburgh Healthcare System

From a decidedly low-tech start, the VAPHS' shift change procedure has proven a revelation for caregivers and a benefit for patients. Conveying information during a typical shift change on the 4 West pilot unit at the VAPHS, as at most other hospitals, took between 45 and 60 minutes.

The first step toward streamlining the process was a stopgap measure that immediately cut the required time. They divided the tape-recorded reports into two segments, so that nurses only listened to the half pertaining to their patients. Yet, the team discovered that even after listening to 30-45 minutes of information, the nurses were still checking for information on the computer, in the charts and in the Kardex system. Could the information from all sources be combined and streamlined?

The group decided to apply the quick changeover methods used routinely in industry. This process concentrates on getting the right information in the right order to the right people at the right time. After examining the current condition, the group asked a few penetrating questions:

- o Does all of this work have to be done for the changeover? (For example, must nurses listen to reports on patients that they will not be caring for?)
- o What information do nurses actually need?
- o Does all the information need to be exchanged in the shift report, or at the time of need in a different way?

Two categories of necessary information are: general assessment (vitals, history) and diagnosis-

specific (best-practice care for each condition). In keeping with the principle of standardized work, nurses decided to create a form that would convey necessary information in the same order every time. Doing so creates a logical way to give and receive information, and makes it obvious if information is missing. This form evolved into a laminated card for each patient and served as a checklist for care.

Despite computerization, nurses still relied on the Kardex system for certain information. They reconfigured the Kardex form in an efficient layout with all and only pertinent information. (This revised Kardex form spread quickly to other units.)

Regarding diagnosis-specific information, nurses determined that most patients on their floor were covered by about 36 common diagnoses. In teams of two, the nurses volunteered to review all information on best practices and create checklists for each condition. Over time, comprehensive checklists were created for all 36 conditions.

“Pilots use checklists for the most common, everyday procedures to ensure safety. With complex medical care, nobody can remember every report item for every condition—nor should they,” says Peter Perreiah, PRHI Managing Director, who has worked on improvement in the unit for three years.

“Creating these checklists helps ensure that every patient will receive best-practice care,” says Ellesha McCray, RN, 4 West Team Leader. “Furthermore, the time required to convey information at shift change is dramatically reduced.”

A computerized version of the RN shift report uses pop-up menus to efficiently capture patient reports and support shift changeovers.

Results

Shift change times on 4 West are now shorter. The information is more complete and far more comprehensive. Patients benefit when nurses can devote more time to them: they also benefit by consistently receiving best-practice care from the checklist approach.

