The preadmission packet: a strategy that benefits patients and nurses during the admission process

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At Baylor Jack and Jane Hamilton Heart and Vascular Hospital, we developed a preadmission packet that is given to patients before their procedure date, enabling them to complete much of their paperwork in advance. The results of our subsequent study revealed that nurses save time during the assessment interview when patients arrive at the hospital with their admission database forms completed. In a busy facility with a large number of patients admitted daily, the nursing time saved can translate into a substantial economic benefit. Even more important, however, is the benefit to patients, who feel less rushed and provide a more thorough and accurate medical history when they can fill out the admission database form at home.

In the hospital, the nurse-patient relationship usually begins with the assessment interview, a process that requires nurses to communicate and interact effectively with patients. Nevertheless, this initial assessment, which is a recurring and constant feature of a nurse's work, competes for the nurse's time with other demands such as patients' needs, doctors' orders, and a nursing philosophy that emphasizes individualized patient care (1).

In a busy facility with a large number of admissions each day, the pressure on nurses to complete the required paperwork—while still being thorough and accurate—can be tremendous. In our “increasingly litigious culture of hyper-regulation, health care providers feel pressured to focus on documentation rather than the administration of care” (2). There has been a dramatic increase in paperwork, which is often repetitive and duplicated (3). In fact, acute care nurses spend approximately 25% of their time completing paperwork (4), a task that has been cited as the most unsatisfying part of nursing because it takes time away from patient care. With increasing emphasis on efficiency and effectiveness in today's health care systems, management of a nurse's time is a very important consideration (5). Although the implementation of electronic medical records (and related devices intended to improve information access) is changing the amount and duration of nursing activities, the impact of this new technology on nursing care delivery is open to question (6). Regardless of whether paper-based or computer-based documentation is used, finding ways to enhance nurses' efficiency so they can spend quality time with their patients remains a priority.

At Baylor Jack and Jane Hamilton Heart and Vascular Hospital, we are planning to implement an electronic medical record system. Our current admission process, however, requires nurses to manually fill out three pages of admission database (ADB) information about the patient's history and health assessment. We have a high volume of patients to safely prepare for procedures, so it is crucial that the database is thorough and complete. Nurses frequently spend time waiting for patients to think through their surgical and medical histories, and they often find that the patients have forgotten important elements. Time is lost during this process and, more importantly, information is missed because patients cannot recall their history during the interview. To make the admission process less stressful for patients and to help improve efficiency and accuracy, we have developed a preadmission packet that is given to patients before their procedure date.

In an ongoing collaboration to improve patient care, our hospital staff and administration worked with our partner physicians and their office staff to develop the preadmission packet. To make the packet an attention-getting item that is hard to overlook, we chose a large, bright pink envelope to house the following items: instructions; the ADB and related admission forms (10 pages total); a “Safety First” sheet for documenting diabetes, anticoagulant use, implantable devices, and allergies to latex or shellfish; a patient checklist for the day of the procedure; a map to the facility; a booklet about the facility; two letters from hospital administration; and information from the patient's physician. The packet helps patients in two ways: it preemptively addresses their questions and concerns, and it allows them to complete the ADB form at home.

The preadmission packets are assembled every 3 months by patient transport staff (during their downtime) and are distributed to physicians' offices. Patients who are scheduled for surgery or a procedure receive a packet in person at their physician's office or by mail from the hospital's scheduling office. Hospital staff members call patients the day before their procedure to

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confirm their arrival time, give them further instructions, and inquire about any special needs or concerns. This information is shared and discussed that afternoon at an interdepartmental staff meeting.

Upon arrival, patients are asked if they have brought their packet and their medications with them; access services (admissions) staff members record the responses. Each patient is given a room assignment and is directed to the admission floor, where the nurse asks for the packet. When the ADB form has already been completed, the nurse can quickly review the information, act on it as needed, and ask clarifying questions instead of spending time on irrelevant or repetitive questions. If the patient reports a chronic condition (diabetes, for example), the nurse can explore this history more thoroughly by asking about compliance with medications and diet and about any symptoms that may be related to the condition. This interaction can allow a more in-depth discussion, with subsequent teaching. After reviewing ADB forms and completing any missing information, the nurse puts the pages in the chart for reference throughout the patient's stay.

To evaluate the effectiveness of the preadmission packet, we performed a study to answer two questions: 1) Do nurses spend less time on the assessment interview when patients complete their ADB forms in advance? 2) If time is saved, what is the potential economic benefit to the hospital from this reduction in nursing labor?

METHODS

After learning about the admission process from nurses on the study team, the statistician based the sample size calculation on the hypothesis that it takes a nurse, on average, 8 minutes less to review a complete ADB form than to fill out an incomplete form. A small pilot study suggested that the ratio of complete to incomplete forms would be 11:8. Consequently, for the study to have a power of 0.8, we needed at least 22 subjects in the complete group and 16 subjects in the incomplete group.

The potential subjects were patients who received the packet prior to their hospital admission day and who were admitted during the 10-week study period. The study nurse collected data as her workload permitted during that time frame. She examined the packets of 67 subjects upon admission to determine whether all necessary ADB information had been given; each subject's form was then categorized as complete or incomplete. (Patients routinely leave nonapplicable questions unanswered [e.g., about vaccines, elimination, coping with stress, etc.], so those particular answers could be blank and the form would still be considered complete.)

The study nurse reviewed and/or completed the ADB information with the 67 subjects in their assigned patient rooms according to usual daily procedure. To eliminate possible bias, this interaction was discreetly timed with a stopwatch, and the subjects were not informed about the timed evaluation. Staff members were told to avoid interrupting the evaluation, and a sign on the door discouraged intrusions. If any interruptions occurred, the subject's chart was eliminated from the study. Other than being timed, the assessment interview (and

Table 1. Relationship between type of procedure and group category

Procedure type	Complete form, n (%)	Incomplete form, n (%)	P value*
Catheterization	17 (65.4)	13 (52.0)	0.132
Electrophysiology/pacing	5 (19.2)	2 (8.0)	
Surgery	4 (15.4)	10 (40.0)	

*Fisher exact test.

Table 2. Time spent on assessment interviews for the two groups

Time	Complete form, mean (SD)	Incomplete form, mean (SD)	Difference	P value*
Seconds	77 (62)	487 (116)	410	<0.001
Minutes	1.3 (1.0)	8.1 (1.9)	6.8	<0.001

*Welch's *t* test.

subsequent patient care) was the same for the subjects as it was for patients who were not in the study.

The study was approved by the institutional review board. We secured all subject data in a locked office and destroyed all patient identifiers when the study ended. Of the 67 subjects whose assessment interviews were timed, 51 (76%) met our inclusion criteria and provided data, exceeding the minimum required sample size of 38.

RESULTS

Of the 51 subjects, 26 (51%) provided complete ADB forms, and 25 (49%) provided incomplete forms. There was no association between form completion and the type of procedure the subjects underwent (*Table 1*, $P = 0.132$). The null hypothesis of this study was that nurses would spend, on average, an equal amount of time on the complete and incomplete forms.

We used a two-sample *t* test (type I error rate of 0.05) to compare the average times the nurses spent on the assessment interviews for the two groups (*Table 2*). Specifically, Welch's *t* test was used because the variances between the two groups were not equal. As the small *P* values indicate ($P < 0.001$), nurses spent far less time when the subjects' forms were complete than when they were incomplete.

Our hospital admits approximately 7200 patients per year. If each patient used the preadmission packet to provide complete ADB information, a total of 820 hours of nursing work time would be saved ($410 \text{ seconds} \times 7200 \text{ patients} \div 3600 \text{ seconds per hour}$), which translates into \$24,108 saved when the median nursing salary is used in the calculation.

A more conservative estimate still yields an economic benefit. If the minimum nursing salary is factored in, use of the packet would save as much as \$17,220 per year in nursing labor.

Even if only 50% of the patients filled out the ADB information completely, \$8,610 in nursing labor would be saved (or could be redirected to quality patient care) instead of being spent on paperwork.

DISCUSSION

Successful implementation of the preadmission packet has been a coordinated effort among many individuals and departments, including transport services, access services, the scheduling office, nursing staff, administrators, physicians' office staff, and, of course, patients.

Although this study focused on the time and nursing labor saved when the packet is used, this strategy has other notable advantages:

- Patients are given useful information about what to expect at the hospital, which can lessen their anxiety and help answer their questions.
- Patients can complete the ADB form in private at home, where they are more relaxed and are able to look up their medical history more readily.
- Nurses are provided with valuable patient information that allows them to individualize care and arrange needed consultations (dietary, smoking cessation, social work, etc.).
- Staff members are able to spend more time on patient care than on forms, enhancing job satisfaction.

As Hospital President and Chief Nursing Officer Nancy Vish summarized, "We put this program in place to get better, more thorough data from patients, who oftentimes felt rushed and failed to tell us about a surgery or even diagnosed diabetes! This

process allows them to think and be comprehensive. The nurse still reviews, asks questions, and signs off, but we are asking more detailed questions rather than just completing a form."

Although we will be moving to an electronic medical record, utilizing a modified preadmission packet will be in our plans, as this tool continues to serve as a way of obtaining a more accurate and thorough patient history and physical. Over time, we will explore options for allowing patients to fill out this tool online. For now, the paper-based method works well and does not require computer skills or computer access. The preadmission packet has proved to be a win-win strategy for patients and the nurses who care for them.

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