Pivot Nursing: An Alternative to Traditional ED Triage

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Problem: A 7.2% increase in patient volume from 130,700 to 140,800 in 2012 prompted St Joseph's Regional Medical Center Emergency Department to review existing triage processes to decrease turnaround time. "Pivot triage" is a new, efficient intake process that entails use of 4 rather than 8 determinants to identify acuity levels. The purpose of this performance improvement project was to create alternatives to traditional triage to decrease ED length of stay and door-to-physician time.

Methods: After education, the pivot process was implemented using 4 determinants established by a multidisciplinary team. The pivot process was slowly implemented for 6 hours over a 1-week period to work out processing issues. Arrival time, door-to-physician time, and departure time from the emergency department were elements used to calculate the patient's turnaround time. Length of ED stay was collected monthly beginning in the fourth quarter of 2011. Comparisons were made after Pivot implementation in the fourth quarter of 2012.

Results: Despite the increasing volume, the mean door-to-physician time decreased from 71 to 40 minutes, a 43.7% reduction. The overall turnaround time decreased from 220 to 181 minutes, representing approximately a 17.7% reduction. The percentage of patients who left without being seen decreased from 2.5% to 1.0%. The pivot process improved patient flow in the emergency department, reducing time spent by the patient in the department.

Implications for Practice: The pivot process is a viable alternative to traditional triage. Nurses are able to accurately pivot patients with a reduced amount of information.

Key words: Emergency Department; Flow; Process; Triage

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Forty percent of ED patients wait more than 60 minutes to be examined by a physician.[1] Long wait times have been directly correlated with poor patient outcomes.[2] ED leaders continually seek to identify barriers that increase the patient's length of stay (LOS) in the emergency department. Increases in volume, traditional triage, and documentation requirements have been identified as road blocks that increase patient LOS.[3] Revamping processes to support rapid triage and minimize errors is crucial to patient satisfaction and reducing LOS in the emergency department.

Background

During the past decade, traditional triage has evolved to include a review of medications taken at home, required screenings, determination of an acuity level, determination of a full set of vital signs, and the initiation of some minor treatments. The collection of this information at this point in the ED visit delays examination of the patient by a physician. Language barriers often increase the time required to obtain the information, further delaying examination of the patient by a physician. The belief that assessments and documentation must be collected at the time of triage is a common misperception.[4] Although they

are essential elements of the patient's plan of care, this documentation does not need to be completed at triage. Because two thirds of ED volume enters through the "walk-in" entrance of the emergency department, traditional triage has the potential for contributing to delays. According to the Centers for Disease Control and Prevention, between 2003 and 2009, the mean wait time to see a provider increased from 46.5 to 58.1 minutes. The mean wait time increased as the volume of annual ED visits increased.[5]

The purpose of triage is to identify patients who require immediate intervention and those who may not require rapid treatment.[6] Emergency nurses must employ the definition of triage in practice to ensure that the sickest patients receive timely care. St Joseph's Regional Medical Center in Paterson, NJ, had begun to collect the standard documentation requirements at the time of triage, which lengthened the triage process. St Joseph's Regional Medical Center is an urban, level II trauma and stroke center where more than 159,000 patients are treated per year.

St Joseph's emergency department utilizes the Emergency Severity Index (ESI), a widely recognized 5-level triage tool that is used to assign an acuity level to ED patients.[7] Developed in 1999, ESI categorizes ED patients by evaluating both the patient's acuity and his or her resource needs. The ESI triage tool sorts patients in the emergency department as most urgent (level 1) to the least resource intensive (level 5).[6] The triage nurse identifies the acuity level, which is determined on the basis of initial presentation, vital signs, history, and potential threat to life, limb, and vital organs. ESI levels 3, 4, and 5 are categories that use resources as an acuity indicator to identify the number of diagnostic tests a patient is expected to use to determine a disposition decision of discharge, admit, or transfer.[1]

Patients categorized as ESI level 3 have the longest LOS, which is attributed to the volume of patients triaged to this category. Further splitting the flow of ESI level 3 patients into horizontal and vertical categories delivers patients to the available resources efficiently.[6] Horizontal patients are those who, upon assessment, are most likely to require admission, whereas vertical patients are those who, upon assessment, are most likely be discharged from the emergency department. The majority of ED patients are discharged, and the goal for ED providers is to keep those patients vertical and to facilitate that discharge.

The existing process at St Joseph's utilized the ESI 5-level system. During triage, the emergency nurses collected information about medications the patient uses at home, medical/surgical history, immunization status, and risk assessments. The ED culture became focused on the completion of documentation requirements in the triage area prior to the initiation of medical treatment. Language barriers and the need for translators further increased the amount of time spent in the emergency department. The time to complete the triage process increased to 15 to 20 minutes, and the overall wait time increased to 30 to 45 minutes.

In an attempt to remedy the delay, a physician was added to triage. The addition of a physician led to successful management of door-to-provider issues but had no impact on the overall LOS in the emergency department. In fact, the initial overall LOS increased slightly because of discrepancies between the triage and managing physicians' plan of care. Many diagnostic tests initiated in the triage area were revised or cancelled, creating delays and some confusion among the providers. The management team determined that the addition of a physician to triage was not a viable solution and began investigating other alternatives.

A multidisciplinary team was established to review the issue. Staff nurses and physicians were asked to identify the minimum assessment parameters required to assign acuity. The chief complaint identifies the focus of the brief assessment. Through consensus, the team determined that heart rate and oxygenation were sufficient to determine hemodynamic stability. ESI triage levels continued to drive the acuity decisions. Although medical, surgical, and medication histories are important, identifying them could wait in low-acuity cases. Nothing in the literature specifically identifies documentation requirements during triage.[8] Table 1 lists the assessment parameters documented at St Joseph's during traditional triage and the assessment parameters documented once the pivot process was initiated.

Process Review

As a part of this performance improvement (PI) process, a systematic review of literature published beginning from 2000 to 2013 was completed using peer-reviewed journals. Databases searched included CINAHL Plus, Cochrane Library, SAGE, Medline, and Wiley Interscience. None of

TABLE 1
Traditional triage versus the new pivot triage process

Traditional triage	Pivot triage
Chief complaints	Chief complaints
Full vital signs	Heart rate
Medical history	Oxygen saturation
Surgical history	Acuity level
Medication history	
Suicide screen	
Abuse screen	
Acuity level	