Summary:
Cape Canaveral hospital implemented a streamlined bedside registration process in order to reduce the time patients spent waiting for treatment. Patients are registered while in triage or in the treatment room.

Hospital: Cape Canaveral Hospital
Location: 701 West Cocoa Beach Causeway
Cocoa Beach, FL 32931

Category:
- A: Arrival
- B: Bed Placement

Key Words:
- Communication
- Patient Satisfaction
- Patient Volume
- Queuing
- Rapid Intake
- Registration
- Wait Times

Hospital Metrics: (Taken from the FY2005 AHA Annual Survey)
- Annual ED Volume: 32,465
- Hospital Beds: 150
- Ownership: Not-for-profit
- Trauma Level: 2
- Teaching Status: No

Tools Provided:
- **FOCUS P-D-C-A Overview**
  This tool is a nine step process guide to quality improvement that is displayed as a 23 slide presentation in HTML, and was used as a guide by the hospital to establish a staff focused problem-solving methodology.

- **Previous Triage Flow Chart**
  This tool is a one-page graphic description of the previous complex triage system in the ED, and is used as a comparative tool with the new triage system.

- **New Triage Flow Chart**
  This tool is a one-page graphic description of the new simplified triage system in the ED, and is used as a comparative tool with the former triage system and as a visual guide for ED staff.

- **Triage to Bed Time**
  This tool is a one-page graphic showing the triage to bed time by month for 2002 and 2003.
Clinical Areas Affected:

- Emergency Department
- Registration
- Triage

Staff Involved:

- ED Staff
- Nurses
- Registration Staff

Innovation

Cape Canaveral hospital implemented a streamlined bedside registration process in order to reduce the time patients spent waiting for treatment. Patients will be registered while in triage or in the treatment room. Before, the process was initial registration, triage, finish registration, and then treatment room in a sequential process. This new registration process came out of a staff-focused quality improvement process.

Cape Canaveral Hospital initiated its ED process improvement project for several reasons. One of the main reasons for initiating this ED process improvement project was because their patient satisfaction scores ranked in the 12th percentile (using Press Ganey Associates). An analysis of the issues showed that patient volume had increased dramatically between 1995 and 1999. However, the processes used to provide treatment had not changed. This resulted in bottlenecks, overcrowding and long waits for treatment, as well as patient, staff, and physician dissatisfaction. To address these issues, Susan Key, RN, MS, CEN, the Director of Emergency Services, formed a team made up of individual stakeholders who were tasked with improving patient flow through the ED. One of the targeted processes was to implement bedside registration.

Results

By November 1999, Cape Canaveral Hospital’s results showed an 85 percent decrease in average wait times from triage to treatment room (11 minutes), despite a 15 percent increase in patient volume during the same time period. Patient complaints began to decrease, and physician and staff morale started to improve. They have continued to monitor and improve the triage-to-treatment-room time (See Triage to Bed Graph).

Innovation Implementation

Working with the Department of Quality and Outcomes, Cape Canaveral Hospital decided to utilize the FOCUS P-D-C-A (stands for Find Organize Clarify Uncover Start and Plan-Do-Check-Act) approach to quality improvement (See FOCUS P-D-C-A Overview). This approach permitted the hospital to establish a staff focused problem solving methodology to facilitate a collaborative environment that identified and resolved issues and solutions. The data collected showed that the average wait time from sign-in to treatment was 90 minutes. Thus, the team streamlined the triage process and initiated bedside registration in June 1999 within five months.

The old triage process had many steps (See Previous Triage Flow Chart). The new triage process is more simplified (See New Triage Flow Chart).

Advice and Lessons Learned

One of the most important steps in implementing the new bedside registration process was establishing an environment of trust among the ED physicians, the registration staff, and the ED nurses. It was important to create a consensus based vision. The hospital’s vision was simple enough: get patients seen more quickly. Ms. Key also said it was important to have someone who championed the project and who was objective.
Tools to Download

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This tool is a one-page graphic showing the triage to bed time by month for 2002 and 2003.

Related Resources
Urgent Matters E-Newsletter Volume 1, Issue 8
Best Practices article on creating an award winning ED
FOCUS P-D-C-A Model

A Nine Step Process Guide To Quality Improvement

Source: Hospital Corporation of America

FOCUS

- Find
- Organize
- Clarify
- Uncover
- Start
FOCUS

- Find a Process Improvement Opportunity
- Organize a Team Who Understands the Process
- Clarify the Current Knowledge of the Process
- Uncover the Root Cause of Variation/Poor Outcome
- Start the “Plan-Do-Check-Act” Cycle

P-D-C-A

- Plan the Process Improvement
- Do the Improvement, Data Collection & Analysis
- Check the Results and Lessons Learned
- Act by Adopting, Adjusting, or Abandoning the Change
FIND

- Sources of Improvement
  Opportunities
  - Sentinel Event Reports
  - Closed Record Screens
  - M&M Reports
  - Plaintiff Claim Allegations
  - Congressional Inquiries
  - News Media Stories

FIND - A Process To Improve

- Is there a clear simple description of the process?
- What is the process?
- What are the major process problems?
- What are the perceived boundaries?
- What are the resource boundaries?
- What are the key issues?
FIND - Possible Tools

- Brainstorming
- Data Collection
- The 7 Management Tools
  - Affinity Diagrams
  - Interrelationship Diagrams
  - Tree Diagrams
  - Matrix Diagrams
  - Prioritization Matrices
  - Process Decision Program Chart
  - Activity Network Diagrams

ORGANIZE

- Are there people who work in this process including?
  - Internal customers
  - External customers
- A Team That Knows the PROCESS
- Is Technical Guidance and Support Available?
ORGANIZE - Possible Tools

Brainstorming

CLARIFY

- Current Knowledge of the PROCESS
  - Who are the customers?
  - What are their needs?
  - Should boundaries be defined?
  - What is the actual flow of the process?
  - Is there needless complexity/redundancy?
  - What are the outcomes/best way for the process to work?
CLARIFY - Possible Tools

- Data Collection
- Flow Charting

UNCOVER

- Causes of PROCESS Variation or poor quality
  - What are the major causes of variation or poor quality?
  - Which key characteristics are measurable?
  - What..Who..Where..When..How will data be collected?
  - Does the data reflect common or Special cause?
  - Which causes of variation can we change to improve the process?
UNCOVER - Possible Tools

- Brainstorming
- Cause and Effect Diagram
- Inverse Tree Diagram
- Multi-Voting
- Scatter Diagrams
- Run and Control Charts
- Histograms

START - The P-D-C-A Cycle

- Select a portion of the process to improve
- What is the proposed process improvement
- Write the Mission Statement
- What changes to the process are most feasible?
**P-D-C-A Cycle**

- Plan
- Do
- Check
- Act

The “Cycle”
PLAN - The Improvement

- What... Is the process improvement to be piloted?
- Who... will do the pilot?
- How... will it be piloted?
- Where... will it be tested?
- When... will it be tested?
- What data must be collected to measure the improvement?

PLAN - Possible Tools

- Brainstorming
- Process Decision Program Charts
**DO**

- Do the improvement
  - Collect data
  - Analysis
- Are there significant in the pilot change or data collection efforts?

**CHECK**

- The Results and Lessons Learned
  - Did the process improve as expected?
  - Did the process improve for the customer’s point of view?
  - Does the data support the improvement?
  - How could the team efforts be improved?
CHECK - Possible Tools

- Data Collection
- Scatter Diagrams
- Run and Control Charts
- Histograms
- Customer Surveys

ACT

- To Hold the Gain
- Adopt
- Adjust
- Abandon the Change
ACT

- What parts of the improved process needs to be standardized?
- Policies or procedures to be revised?
- Who needs to be made aware of the change?
- What can be measured to ensure gain is held?
- What are the next steps in CONTINUOUSLY improving this process?
CAPE CANAVERAL HOSPITAL
IMPROVED TRIAGE PROCESS

PATIENT WALKS IN TO WAITING ROOM

PATIENT GREETED

SIGN IN

TRIAGE RN BRINGS PATIENT TO TRIAGE AREA

VITAL SIGNS TAKEN, INITIAL HISTORY, ED CHART BY RN

TREATMENT ROOM AVAILABLE

PATIENT TO REGISTRATION CLERK

PATIENT REGISTERED

RETURN TO WAITING ROOM

CHARGE NURSE BRINGS PATIENT TO TREATMENT AREA

Yes

No

PATIENT TO TREATMENT ROOM

BEDSIDE REGISTRATION

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Cape Canaveral Hospital
Triage to Bed Time by Month for 2002 and 2003
(in minutes)

Source: Cape Canaveral Hospital
When Susan Key, RN, MS, CEN was hired as director of emergency services at Cape Canaveral Hospital in Cocoa Beach, Florida, she was only given one task: to make Cape Canaveral Hospital's emergency department (ED) one of the best in the country. Faced with soaring patient volume, significant overcrowding, low patient satisfaction, and low staff morale, this was no simple task. Left with little else, Key utilized her 18 years of experience, a patient-focused philosophy, and an extraordinary amount of drive and determination to accomplish the task.

Identifying Barriers to ED Efficiency

Taking a step-wise approach to this challenge, Key first worked with ED management and physicians to identify some of the barriers that were keeping the ED from running at an optimal level and then implemented some changes.

"Creating a common vision really motivated the team - we all worked together to be the best ED in the country."

"Some barriers were quite obvious. For example, our hospital is on a small patch of land that protrudes out into the river -- we weren't building additional space any time soon," said Key. "There was also a lengthy and inconsistent triage process that was really a primary barrier to being more efficient in the ED."

Other barriers identified by Key and her team included fluctuations in patient volume; inflexible staffing mechanisms to compensate for volume increases, and delays in discharging and admitting ED patients.
"ED patients could be waiting up to 6 hours, which may be ok with some ED nurses, but it wasn't ok with me," said Key.

Key and her team developed and implemented several strategies that would have a direct impact on improving ED efficiency. For example, the triage and registration process was simplified so the patient is immediately received upon entering the ED, triaged, and then taken to a treatment room for bedside registration. Once these strategies were implemented, average patient wait times fell from 90 to 15 minutes in just six months.

See a flow chart of improved triage process.

Addressing Patient Flow

Key also established a Nursing Process Council (NPC) to look at patient flow through the facility. The NPC was charged with establishing collaborative methods to identify and resolve issues related to patient flow and to empower staff to make decisions about worksite issues that impact patient care. Membership in this council included representatives of nursing; radiology; respiratory therapy; registration; environmental services, and other departments on an ad-hoc basis depending on the problem or issue encountered by the team.

By taking a "let's look at what is best for the patient" point-of-view, the NPC identified several issues and problems in the acute care setting that could be addressed to improve ED patient flow. Together, they selected the Admission, Discharge and Transfer (ADT) process as a priority project because of its significant impact on patient care.

See a sample of the improvement process.

"What we found with the ADT process was that there were nine different ways physicians could get their patient admitted to the hospital. This was causing two major problems: first, physicians were often sending their non-urgent patients to the hospital for admission. And second, physicians weren't using a consistent system in admitting patients to hospital floors, so there was no way to determine and prioritize which patients should get beds. Therefore, there was often little bed space left for urgent patients from the ED," explained Key. "Our goal was to streamline the admission process to improve productivity, efficiency, and patient and staff satisfaction."

By streamlining the ADT process, the multiple points of entry physicians were using to admit patients were eliminated. This decreased ED holding time since there was a global patient admission system to prioritize patient beds. It also allowed appropriate resource allocation on weekends and holidays in all areas that affect patient care, insuring no beds are left empty due to staffing shortages. It also improved the housekeeping process, which facilitated bed turnover.
See a flow chart of the streamlined Direct Admit Process.

Earning Staff Buy-In

Key said having the support and buy-in from senior hospital leadership and staff was essential to making the new ADT process work. "Communication and education is the key to getting staff and administration buy-in," she said. "You need to encourage staff participation in solving problems and making decisions and solicit feedback from staff and administration as you go."

Once the new ADT process was developed, Key and her staff worked hard to educate medical staff to secure their full support. "We did a lot of teaching right in physicians’ offices to educate them on the new process and to garner their support," she said. "It took about six weeks of office visits. Then once we were done educating them, we gave them a drop-dead date for feedback and then initiated the new process."

Award-Winning Results


According to a recent Gallup poll, staff satisfaction is in the 97th percentile with a 0 percent vacancy rate for registered nurses.

Average triage-to-bed times decreased by 85 percent and ED holding hours decreased by 87 percent.

For their innovations and hard work, Key and her team were awarded the Modern Healthcare/Sodexho Spirit of Excellence Award for Service in 2003, proving that it was possible to take an inefficient ED and make it among the best in the country.

Lessons Learned

Key says that one of the factors for their success was creating a positive environment that was conducive to team work. "Establishing an environment of trust is critical," she said. "While having a strong leader is important, the leader must embrace different thoughts and always try to collaborate if everyone is going to share responsibility for fixing the problems and determining the solutions."

Key also recommends listening to those who are in the trenches and says, "those who are at the bed side really know what's going on. Be sure to work with them and assure them that they are being
listened to." She adds that, "creating a common vision really motivated the team - we all worked together to be the best ED in the country."

For more information about Cape Canaveral's approach, Click Here to download Susan Key's full presentation, "How to Create an Award-Winning ED When You Are Overcrowded, Overworked and Overwhelmed". (3.3 MB)

To listen to an audio recording of Susan Key's presentation from the November 11-12, 2004 conference titled "Perfecting Patient Flow: Proven Solutions to ED Crowding," Click here for more information.

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