THE STRAIGHT BACK METHOD IN THE E.D. IMPROVES PATIENT SAFETY, AND SATISFACTION

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Abstract

We attempt to answer the question: for our Emergency Department (E.D.) and our population of patients, what process changes might correlate with improved service quality? Two important measurements of service quality delivered by E.D.s are patient satisfaction, and the frequency with which E.D. patients leave the department without being seen (LWOBS). The straight back method came to fruition since the patients' conditions are easily identified and addressed in the triage area instead of them being unattended in a waiting area. We found that this model provides an improved patient safety, and satisfaction.

Introduction

Safety and patient satisfaction within Emergency Departments (E.D.) nationwide continue to deteriorate due to overcrowding situations that result in increased wait times. Frustrations with long wait times can also result in the patient leaving the department without being seen (LWOBS), which further increases the physical risks for the patient that must now seek care at another organization. Along with this concern, patients that decide to remain in the waiting room may risk deterioration of their physical condition prior to being seen by a physician. Lack of attention to these issues may also breach compliance standards such as the Emergency Medical Treatment and Labor Act (EMTALA) resulting in a loss of government reimbursement. Patient satisfaction with E.D. care as measured by standardized surveys, and the frequency with which E.D. patients LWOBS are two important measurements of service quality delivered by E.D.s. We attempted to answer the question: for our E.D. and our population of patients, what process changes might correlate with improved patient satisfaction and decreased LWOBS?

Problem Statement

Our organization is a suburban community university affiliated E.D. with an Emergency Medicine residency which treated 113,106 visits in 2002. During the study period of 1999 to 2002, we utilized Press, Ganey Associates, Inc. as our satisfaction surveyor. LWOBS rates rose to 5% in 2000, the average waiting time at triage was approaching three hours during the busy hours of the day, and patient satisfaction scores plummeted to a low of 76 in January 2001. Also, there were increases in the number of patients experiencing physical changes in the waiting room along with a threatened EMTALA violation. This precipitated a true desire on the part of leadership to improve processes and the quality of care from the presentation of the patient to the first encounter with the physician.

Methods

E.D. leadership, nursing, physician staff, and all related departments assembled a process improvement team to review the associated issues and begin the exploration of the current versus desired processes. The team concluded from past operations and measurements that there was a desire to decrease the interval from the time the patient presented to the first encounter with the physician. Review of the care of the patient in the treatment area also showed a lack of urgency on the part of the staff and a somewhat of a “out of sight, out of mind” culture. Several methods were tried with varying degrees of success in 1999 through 2002. One of the new improvements was an E.D. renovation process with increased capacity in July 2001. This did assist the organization to keep up with the increased demand and caused a LWOBS reduction to 2%. The most innovative idea and largest impact came in January 2002 when the team implemented a process of transporting the patients
straight back to the department even when available treatment capacity was unavailable.

Patients under this new straight back process are met by a hospital greeter for initial sorting into one of three areas: prompt care, pediatrics, or main triage. Following the initial screening, the patients are transported directly back to the triage area, and handed over to a triage nurse. After the completion of the initial assessment, a triage care coordinator assigns the patient to an E.D. care team. The care coordinator rotates which team will receive the next patient. Even if there is no available treatment space available in that team’s area, the patient is still assigned there and could be placed in a designated aisle location where the patient care team can observe their condition. This is the largest impact of the straight back process since the patients' conditions are easily identified and addressed in the triage area instead of them being unattended in a waiting area. Furthermore, the concern for a fair and balanced work environment improved staff satisfaction since it is not possible to bypass work if the choice was not to move quickly with the care of the patient or the transfer of the patient to the inpatient floors.

**Results**
### Table 1. Two-Tail 95% Confidence Interval Z-Tests

<table>
<thead>
<tr>
<th>Comparison Eras</th>
<th>Z Score</th>
<th>Significant?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test: Overall E. D. Patient Satisfaction Change?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original E. D. vs. ED Expansion Era</td>
<td>3.07</td>
<td>Yes</td>
</tr>
<tr>
<td>ED Expansion Era vs. Straight Back Era</td>
<td>5.19</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Test: Arrival E.D. Patient Satisfaction Change?</strong></td>
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### Discussion

While there were improvements with the costly E.D. expansion, we were most struck with the improvements correlated with the inexpensive straight back process. Outlined below are several reasons for the improved patient satisfaction scores during the straight back process implementation:

- Patients saw progress in the process of care in being taken promptly to a care area.
- On arriving in that care area, they gained an understanding of E.D. activity as they see the personnel demands of being fully engaged in numerous patients.
- The patients may have gained a sense of security being under the direct view of the teams.

With respect to LWOBS, we note two factors:

- Patients saw progress in promptly being taken to a care area.
- By being ensconced in a care area, they were effectively “captured” and leaving from a care area is less anonymous than departing a waiting room.

### Conclusion

For our E.D. and our population of patients, we asked what process changes might correlate with improved patient satisfaction and decreased LWOBS. We found that the straight back process was most strongly correlated with improvement in patient satisfaction as measured by Press, Ganey Associates, Inc. and with a decrease in patients who LWOBS.

### Biographical Sketch

Kyle Bukowski, Senior Management Engineer; Valentina Gokenbach, Administrative Director/Chief Nurse Executive; and Andrew Wilson MD, Chief of Emergency Center are the lead personnel involved in management operations within the Emergency Center at William Beaumont Hospital in Royal Oak, MI. The Emergency Center is a Level 1 Trauma Center, and the largest E.D. in the state of Michigan with 113,106 visitors in 2002. These E.D. visits supply this 997-bed hospital that leads the nation with 57,371 inpatient admissions in 2002. In 2003, William Beaumont Hospital was one of four hospitals in the country to receive the "Quest for Quality" award for leadership and innovation in quality and patient safety.
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- 967 Bed hospital: #1 nation for outpatient surgeries (425,454), and inpatient admissions (58,348)
- Level 1 Trauma Center with 115,908 Emergency Visits. #1 in Michigan
- #6 by AARP for America’s Top Hospitals (2002)
- Honored with “Quest for Quality” award for leadership and innovation in quality and patient safety. (2003)
E.D. Overcrowding

- National E.D. Overcrowding is occurring:
  - Use of the E.D. by those with no other alternative to medical care, i.e. uninsured
  - Limited capacity in physician offices
  - Convenience for unscheduled care
  - Closures from other hospital institutions decreases overall bed supply
  - Higher acuity patients
  - Severe nursing shortage

- LWOBS is a symptom of the national E.D. overcrowding effect.
Definition

Left without being seen (LWOBS):
- Patient arrives to the E.D. and leaves prior to being seen by a physician.
- Differs from AMA (Against Medical Advice) where the patient leaves after seeing the physician.
Why Concern for LWOBS?

- Sentinel events
- Community not receiving proper care
- Lost revenue
- Patient satisfaction
- Threatens an E.D.’s public relations
- EMTALA (Emergency Medical Treatment and Active Labor Act) violations:
  - statute which governs when and how a patient may be (1) refused treatment or (2) transferred from one hospital to another when he is in an unstable medical condition
What Is Next For LWOBS Patient?


- 46% needed immediate medical attention
- 29% needed care within 24 to 48 hours
- 8.2% were hospitalized within 1 week
### Reason for leaving

<table>
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<th>Reason</th>
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<td>Waited too long</td>
<td>47.4%</td>
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<tr>
<td>Wait looked like it was going to be too long</td>
<td>38.1%</td>
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<tr>
<td>Symptoms improved or did not worsen</td>
<td>24.7%</td>
</tr>
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<td>Treated poorly by ED workers</td>
<td>18.6%</td>
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<tr>
<td>Could not wait due to family, transportation, or work</td>
<td>14.4%</td>
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<tr>
<td>Felt too sick, scared, tired, or in too much pain to wait in waiting room</td>
<td>14.4%</td>
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<td>Financial reasons</td>
<td>8.2%</td>
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<tr>
<td>Redirected by personal physician (by phone) to seek care elsewhere</td>
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What could help?
- 85% said “more frequent updates on wait time”
- 70% said “the availability of immediate temporary treatments”

Solutions?
- Communicate estimated waiting time and immediate treatments for minor injuries
Other Solutions

  - Announcements can backfire if trauma cases arrive
  - Use a Fast Track
  - Provide Ice Packs

- Fernanes et al “Does reduced length of stay decrease the number of emergency department patients who leave without seeing a physician?”
  - Reduce Length of Stay to improve throughput
Our Solution: Straight Back

- Process of transporting the patients straight back to the acute care areas even when there are no bed walls available.
- Straight back also occurs for our “fast tracks” of Pediatric, and Prompt Care areas.
Straight Back Benefits

- All patient conditions are at least observed even if in a aisle location
- All patients seen quickly and able to provide any immediate patient care needs
- Care Coordinator rotates which team will receive next patient for fair and balanced work environment
  - Improved employee satisfaction
  - Imperative for care team to move patients. Thus, pressure to reduce length of stay
E.D. Patients That Left Without Being Seen

Volume of LWOBS Patients

Percentage LWOBS

ED Expansion

Straight-Back Implemented
E.D. Overall Patient Satisfaction

Raw Score

Jan-00  Apr-00  Jul-00  Oct-00  Jan-01  Apr-01  Jul-01  Oct-01  Jan-02  Apr-02  Jul-02  Oct-02  Jan-03  Apr-03

ED Expansion

Straight-Back Implemented
Two-Tail 95% C.I. Z-Tests

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Reasons For Improved Satisfaction

- Patients saw progress in promptly being taken to a care area
- Gained a perspective of E.D. activity as they see the staff demands of being fully engaged in numerous patients
- The patients may have gained a sense of security being under the direct view of the teams
Straight Back vs. Expansion?

- Can be done now
- Much less expensive
- Exposes patient flow issues in E.D.
- Pressure on staff to reduce their own team’s LOS
Questions?

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kbukowski@beaumonthospitals.com