OPTIMIZING PATIENT FLOW IN THE ED
ABINGTON MEMORIAL HOSPITAL

Publication Year: 2014

SUMMARY:
A multidisciplinary approach to decrease the 'door to first provider" while re-evaluating a lengthy triage process

HOSPITAL: Abington Memorial Hospital

LOCATION: Abington, PA

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CATEGORY: ▪ Flow & Efficiency

HOSPITAL METRICS:
▪ Annual ED Volume: 103,642
▪ Hospital Beds: 665
▪ Ownership: Abington Health
▪ Trauma Level: 2
▪ Teaching Status: Yes

KEY WORDS:
▪ Communication
▪ Door-to-Doc
▪ ESI
▪ Left-Without-Being-Seen
▪ Patient Satisfaction
▪ Queing
▪ Rapid Intake
▪ Registration
▪ Triage
▪ Wait Times

CATEGORIE:
▪ A: Arrival

TOOLS PROVIDED:
▪ PROCESS FLOW CHART
▪ REDESIGN PLANNING DOCUMENT
▪ PLANNING TEAM RECRUITMENT FLYER

CLINICAL AREAS AFFECTED:
▪ Cardiology
▪ ED
▪ EMS
▪ Fast Track
▪ Registration
▪ Triage

STAFF INVOLVED:
▪ Administrators
▪ Clerks
▪ Communications
▪ ED Staff
▪ IT Staff
▪ Nurses
▪ Physicians
▪ Registration Staff

TOOLS PROVIDED:
▪ PROCESS FLOW CHART
▪ REDESIGN PLANNING DOCUMENT
▪ PLANNING TEAM RECRUITMENT FLYER
Innovation
This innovation used a Lean implementation of a rapid triage and treatment system in a busy Emergency Trauma Center (ETC) and a multidisciplinary approach to decrease the 'door to first provider' while re-evaluating a lengthy triage process leftover from the 1990's, stuck in the 'because this is how we have always done it' days.

Background
The triage process and location experienced a backlog of patients on a routine basis. Patients waited in single file to see one triage nurse and describe their reason for coming to the Emergency Trauma Center. It was not uncommon for the line to extend past the ER entrance doors or around the bend into the waiting room. We gathered information and happily jotted it down in the computer. Nursing prided ourselves on the fact that we had captured every piece of information possible at a triage desk, patients waited to be triaged. Our system was broken and we were stuck in the 90's at the time of, "because we have always done it that way". Patients arrived, were greeted and logged in on paper until the triage staff could obtain the necessary information that had historically been captured at triage in the past.

After the information was gathered, the patient would be transported to the patient care area and wait for registration to occur. The registration piece was necessary to obtain labels and an ID band so tests could be ordered and acted upon. While waiting for registration to occur, the nurse would examine the patient and the physician evaluation would come later in the visit after registration had been completed. Our initial goal was to decrease the "door to Doc" times however; during our 'workout' it became clear that we wanted more than that! We wanted to know who was in our building seeking medical care, their chief complaint and have an ID band and patient labels necessary to act upon orders.

Our journey began with the realization that gridlock was experienced in the triage area on a routine basis, an awareness that we were actually delaying treatment and the willingness to want to streamline our triage process. Every job classification participated in a 'workout' identifying the barriers associated with joining the patient to the ETC Physician. Staff reviewed our current state and then worked together to create a future state that would eliminate some of the barriers that existed in the triage process. Our future state then dictated the work to be done, identified components that required additional support, equipment, and staffing changes. Informatics technology was implored to enable edits to our current ED documentation system which would allow for patient labels and ID Bands to be printed immediately upon arrival. Our tracking board was utilized to capture every patient arriving, identify their chief complaint and time stamps their entry into our facility. Minimal information was gathered up front, enabling the hourglass effect to dissipate for the majority of the day. Patient history was gathered by the ETC Staff at the bedside in the treatment area, the physician was able to see the patient on the tracking board thereby expediting their evaluation and treatment. Registration was not as rushed to gather information, which led to a decrease in errors being made thereby allowing for a more efficient billing process to occur.

Innovation Implementation
Our journey began with the realization that gridlock had become a routine occurrence in our triage area, an awareness that we were actually delaying treatment and the willingness to want to streamline our outdated triage process. Our first stop was with key stakeholders to gain their buy-in, defined the scope of the project a bit further and trotted off to rally other participants by promising lunch and a few snacks. The initial encounter with our Process Redesign Engineer left him twitching like a little kid in a candy store; we had him at ‘hello’!

Key stakeholders and participants were invited to our fun kick off party, provided with pens papers and post it stickers. Every job classification (nurses, clinical associates, paramedics, physicians and physician assistants) participated in this 'workout' identifying the barriers associated with joining the patient to the ETC Physician. Staff reviewed our current state and then worked together to create a future state that would eliminate a majority of the barriers (no value work) that existed in our triage process. The future state then directed the work to be done, identified components that required additional support, equipment, and staffing allocations prior to implementation. Informatics technology was implored to enable customization to our current ED documentation system to provide a log reflecting those awaiting
treatment, their location within the emergency department and the length of stay. Our initial goal of decreasing the ‘door to first provider’ quickly encompassed much more as participants reached for the stars.

Recognizing that some of our delays revolved around the lack of patient labels and ID Bands to be printed, a request was made to have them print upon the first patient encounter. Our tracking board was utilized to capture every patient arriving, identify their chief complaint and time stamp their entry into our facility. Minimal information was gathered up front at our triage area, enabling the hourglass effect to dissipate for the majority of the day. Patient labels and ID bands printed at the first encounter, patient history was gathered by the ETC Staff at the bedside in the treatment area and the physician was able to see the patient on the tracking board thereby expediting their evaluation and treatment. Registration was not as rushed to gather information, which led to a decrease in errors being made thereby allowing a more efficient patient interaction and data collection process. This process also decreased denials thereby enabling a streamlined billing process to occur.

While implementing this process may sound simple and effortless, it was truly wrought with pitfalls, potholes and therapy sessions for all participants. Identifying a ‘future state’ demanded system capabilities to be determined, programs to be pushed to the brink, customization initiated and programmers to be onboard and accountable for the action plans. Physicians, physician assistants and yes, even some nurses had difficulty breaking up with the paper chart and relying on electronic tracking boards. Trystorming sessions, implementing a process, logging in problems and identifying solutions, occurred on a daily basis. Components of triage, such as vital signs, were determined to be a necessity by all staff and quickly inserted back into the pathway. Additional resources were needed at triage to transport the patient to the treatment area as this soon became a high traffic area. Occasionally tempers flared, moods swayed and fingers were pointed. Once the standard work was defined and followed, stress appeared to ease up, laughter was heard once again and patients were extremely satisfied at how efficiently they were moved thru the system.

Long and short, what was needed to implement this innovation? Hospital administration buy in, a willingness to change by all members of the multidisciplinary emergency trauma center staff, a dedicated Process redesign engineer to keep all parties on task and the nonstop necessity to evaluate and re-evaluate this process to avoid falling back into the patterns of the past. This implementation was not the end, but the beginning of looking at how and why we follow the same pathways as we did in the past. Technology has evolved, nurses have embraced spaghetti models and embarked upon research exploring better methods to care for our patients. Look out 2015, here we come!!

**Timeline**

July 2012, Pre Kaizen reading material was distributed to all participants. Lean methodology was defined and clear examples provided explaining how ‘no value’ work was identified. Weekly meetings occurred with our process redesign engineer during the month of April defining the scope of the project and the deliverables that were possible. A multidisciplinary team was organized and invitations sent out to attend the Emergency Trauma Center (ETC) triage redesign workout in the month of August. The process was developed and education rolled out in August, trystorming sessions occurred for the next eight weeks resulting in some edits to the original process. System upgrades enabled functionality that was not previously available; roles and responsibilities were defined and rolled out to the team. Weekly newsletters kept information flowing, bulletin boards announced the success and patient comments from Press Ganey were distributed.

**Results**

Our ‘greet to quick triage’ average time is now 3 minutes from an average of 11 minutes, ‘greet to room’ average is 11 minutes from 22 minutes and ‘room to first provider’ is average of 6 minutes from 12 minutes.

**Advice and Lessons Learned**

- Would have eliminated printing altogether from the beginning of the Kaizen. The electronic version is the most up to date information on each patient.
- Increased the number of ID band and Label printers in the triage area
- Redefined the triage data being collected, identified streamlined methods to eliminate duplicate work
- Over communicated with all parties in a multitude of ways to share the transitions, band-aids and outcomes.

Tools to Download
- PLANNING TEAM RECRUITMENT FLYER
- PROCESS FLOW CHART
- REDESIGN PLANNING DOCUMENT
ETC Triage & Registration Redesign

Type of Improvement Event:  Kaizen

Initial Sponsor meeting date:  May 11, 2012
Potential Event date:  July 31 through Aug 7, 2012

Champion(s):  
Sponsor(s):  

Team Members:

Problem:
Today there are two different processes to move emergent patients to a bay through Triage, one for walk up and EMS and another for when bays are full. Additionally, some steps in these processes are either non-value added for the patient (duplicate questioning, taking longer to get through process of being placed with caregiver having to wait in waiting room) or can actually contribute to a patient safety issue in this way: the patient or caregiver can think another caregiver has completely documented all information on intake and important info can actually be “left out” of the creation of the ETC medical record used for next steps in caring for the patient.

Objective:
Create a new streamlined process to include a mini registration to determine correct MRN, band the patient quickly and roll to a bay.
Examine best practices for making “Triage a process not a place” and determine if the triage “place” at AMH can be eliminated and how.
Determine new staffing requirements in the course of this process improvement project.

SMART Goal:  (Specific, Measurable, Attainable, Relevant, Time-bound)
To increase the Throughput from ____ to ____ and decrease the waiting time of “Greet” to “Start of Primary Nurse triage assessment” by _____ (month, Year).
- 100% of patients banded at first contact/MR assignment
- Patients triaged at bedside by ____% or within ______ minutes.
ETC Triage & Registration Redesign

Scope:
For AMH only, from point of contact with an emergent Pt. (window or EMS) until in a Bay and comprehensive triage process is complete, including MR assignment (patient banding). **Note:**
Full Registration process maybe out of scope.

Boundaries/Non-negotiables:
No new FTE’s
Construction limited – Develop process first

Performance Measures:
- Use existing time stamps to monitor TAT
- Reduce MR # assignment errors/duplicates
- Show improvement in Core Measures/HCAPHS

Action Items pre Event:

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<thead>
<tr>
<th>#</th>
<th>What:</th>
<th>Who: (Responsible Owner)</th>
<th>by When:</th>
<th>Status:</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Determine Team members</td>
<td></td>
<td>6/15</td>
<td>complete</td>
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<tr>
<td>2</td>
<td>Determine event schedule and dates</td>
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<td>6/25</td>
<td>in process</td>
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<tr>
<td>3</td>
<td>Secure a conf room</td>
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<td>6/19</td>
<td>in process</td>
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<tr>
<td>4</td>
<td>Observe the Triage process</td>
<td></td>
<td>6/15</td>
<td>complete</td>
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<td>5</td>
<td>Complete the goal statement</td>
<td></td>
<td>6/25</td>
<td>complete</td>
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<tr>
<td>6</td>
<td>Invite the team members to the Event</td>
<td></td>
<td>6/26</td>
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<tr>
<td>7</td>
<td>Collect and (distribute) articles / information / benchmark data on Triage process</td>
<td>Before Event</td>
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<td>8</td>
<td>Prep for Champion Meeting, discuss goal, scope metrics, event agenda,...</td>
<td>6/25</td>
<td>scheduled</td>
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<td>9</td>
<td>Setup Current State Process Map sessions for both Triage and Registration</td>
<td>6/26</td>
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<td>10</td>
<td>Identify the role of Reg/ AA/ RN when a patient arrives:</td>
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<td>o Via EMS</td>
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<td>o Ambulatory</td>
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<tr>
<td>11</td>
<td>Contact PR regarding a large window cling that tells patients to have a form of ID ready when presenting to the ETC for care</td>
<td>Before Event</td>
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<tr>
<td>12</td>
<td>Contact ..... to inquire about possibilities for Standard Reg printing</td>
<td>Before Event</td>
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<td>13</td>
<td>Organize Lunch, snacks and cake for Aug 7 (final day) and just lunch for Aug 2 Kaizen meeting</td>
<td>Before Event</td>
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<td>14</td>
<td>Coordinate a Road trip to local ER’s for Monday, July 2 slotted from 10:00am – 4:00 pm</td>
<td>6/29</td>
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# ETC Triage & Registration Redesign

## Action Items pre Event:

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<tr>
<th>#</th>
<th>What:</th>
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<th>by When:</th>
<th>Status:</th>
</tr>
</thead>
</table>
| 15 | Create an Observation sheet to evaluate their processes during the road trip. The team will identify a process that occurs:  
|    | o  when beds are available in the treatment area versus when no beds are available  
|    | o  when a patient arrives via EMS versus ambulatory  
|    | o  involves the role of the registration /AA staff                   |                          | 6/29     |         |
| 16 | Send Lean/ER information articles to ......to review to see which are applicable to send with staff weekly newsletters.   |                          | 6/27     |         |
The ETC is having a WORKOUT... We’d like you to join our team to assist!

YOU’RE INVITED!!

YOU have been identified as someone with the knowledge and expertise to help re-work our Triage process. We are interested in creating a new streamlined process which will include an emphasis on Mini-Registration. This focus will insist upon the correct MR assignment to occur the first time with an ID Band placed during the initial patient encounter.

We will examine best practices for making “Triage a process, not a place” Please join us as we create an exciting new workflow that will benefit our patients and staff!

I hope you will be able to attend and share your ideas about future processes within our department!

This group will be charged with:
Creating a new streamlined process surrounding Triage and the MR Assignment

WHEN and WHERE

2012

Tuesday, July 31 8:00am-12:30pm ~Garden Training Rm
Wednesday, August 1 12:00pm-5:00pm~ Garden Training
Thursday, August 2 10:00am-3:00pm ~ Toll Conference Rm
Tuesday, August 7 8:00am-5:00pm ~ Garden Training Rm

PLEASE RSVP to Karen Sylvester ASAP