IMPROVING INPATIENT DISCHARGE PROCESS TO REDUCE READMISSION

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Presentation Overview

- Problem statement
- Industrial engineering methodology
- Data analysis
- Process improvements
- Project results
- Conclusions & recommendations
Crittenton Hospital Medical Center (CHMC) is a 290-bed acute care health care facility serving communities in Oakland, Macomb and Lapeer Counties.
Problem Statement

Identify a complete and efficient patient discharge process while meeting CMS core measure requirements in order to reduce preventable readmissions and improve patient outcomes.
Project Structure & Methodology

- Project timeline: January 2010 – April 2010
- Interdisciplinary project team
- Process improvement training

“What’s Six Sigma? A Rock Band?” – 30 Rock
A hospital readmission is defined as a part of consecutive hospital admissions to the same hospital where the time between discharge from the first hospitalization and admission for the second hospitalization was less than 30 days.
CHMC Readmission Rate 2009-2010
Motivation – Patient Outcomes

Crittenton Hospital Medical Center
Discharge Process Winter 2010

Patient To Be Discharged

Discharge Order is Entered

Nurse Education Begins

Nurse Arranges Transportation

Unit Discharge Log-Out Book

Discharge Complete by Transporter

Nurse Calls Transporter for Pick-Up

No Transporter Needed

Discharged Patient

Wait for Transportation

Check Med. Rec. Form

Di/C Order is Written on Patient’s Chart

Di/C Order Entered Electronically

Verbal Discharge Order

Unit Secretary Completes Paperwork

SW/CM Discharge Documentation

Arrange Transportation for Patient

Unit Secretary Begins Paperwork
Unplanned hospital readmissions between 2003 and 2004 cost Medicare $17.4 Billion.

New England Journal of Science

Medicare paid an average of $7,200 dollars per readmission deemed potentially preventable.

Medicare Payment Advisory Committee (MedPAC)
CHMC Medicare Readmission Rate
Q1 FY 2007 – Q4 FY 2009

30-Day Readmissions to Same Hospital or Elsewhere

Target Area Percent

Black Line = CHMC

- Hospital
- Jurisdiction : 80th Percentile
- State : 80th Percentile
- National: 80th Percentile
Current State: Discharge Process Barriers

**PEOPLE**
- Family not in agreement with plan of care
- Patient does not feel ready
- Illegible Writing
- No family available
- Tests not ordered in a timely manner
- Med. Reconciliation not completed
- Delayed Consultations
- Education not documented
- Diet or specific education not noted
- Incorrect Anticipated Discharge
- Necessary supplies/medications not available

**COMMUNICATION**
- Lack of communication between attending and consulting physician
- Language Barrier
- PT/OT not notified
- Lack of feedback from doctor (meds/release/extra information)
- Shift Report Update
- Clerk not aware of D/C order
- Social Workers and Case Managers do not receive discharge notification
- Anticipated Discharge entry not mandatory
- Not all Discharge orders are entered through computer order

**TECHNOLOGY**

“Why is there an incomplete and inefficient discharge process?”
**What makes a complete discharge?**

1. Activity level
2. Diet level
3. Follow-up appointment information
4. When to call doctor or go to emergency
5. Patient medication list
6. Disease specific education
“64% of November 2009 readmitted patients did not have a complete discharge.”

*Starred items – Part of improvement plan
Other Findings from Chart Audit

- **Follow-up appointments**
  - 66% only contained general follow-up time frame such as “follow-up in two weeks”

- **Bed rest orders**
  - 48% of patients had an automatic bed rest order entered upon admission to medical unit from ER

- **Disease specific education**
  - Lack of disease specific education documentation throughout patient stay
Discharge Efficiency

- Current cycle time metrics:
  - Average: 3 ½ hour
  - Standard deviation: 2 ½ hour

- Physician discharge order was manual or electronic or verbalized

- Clerks and Social Workers not able to see electronic discharge order

- No notification of consultant completion “Discharge if okay…”
Implemented Improvements - Discharge Completeness

- **Patient activity & diet level**: Provided option for electronic submission of patient’s activity and diet level.

- **Medication reconciliation form**: Completed using electronic form in EMR System.

- **Disease specific education**: 24 hour continuous reminder on nurses task list to provide disease specific education.

- **Follow-up appointments**: Schedule follow-up appointments for all patients using EMR System.
Follow-Up Appointments

- RIE to implement follow-up appointments
- Follow-Up appointment steps

1. Identify Patient Needs
2. Electronic Physician Input
3. Clerk Appointment Scheduling
4. Appointment Card to Patient
Implemented Improvements
Discharge Efficiency

- **Discharge order notification**: Route electronic discharge notification to clerks and case managers/social workers
- **Consult completion**: Electronic sign-off by consult to indicate completion
- **Bed rest order evaluation**: 24-Hour bed rest order evaluation upon patient arrival in inpatient floor
Impact of Results

- Patient safety
- Cost savings
  - If cost of a preventable readmissions is $7200 and a hospital decreases yearly readmission by 20 patients – potential cost savings - $144,000
- Improved communication
- Increased inpatient capacity
- Improved utilization of EMR
Conclusions

- Leverage information systems to aid process improvement

- An efficient and complete discharge impacts hospital capacity and utilization
Future Recommendations

- EMR discharge departure process
- Use of anticipated discharge
- Interdisciplinary rounds – improve “Discharge Readiness”
- Use of LEAN to improve discharge cycle time
- Partnership with community (home-health) to ease transition from hospital and improve discharge instructions compliance
- MI STA*AR readmission project involvement
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