Clinical Safety & Effectiveness
Cohort 16 | Team 4

DECREASE PATIENT LENGTH OF STAY (LOS) THROUGH USE OF “ANTICIPATE DISCHARGE” ORDERS ON 5ACU
The Team

• **CS&E Participant**
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  – Ronald Estrella, RN  Executive Director, Medicine Service Line
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• **Ad Hoc Team Members**
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  – Medical and Nursing team  5ACU

• **Sponsor**
  – Luci Leykum, MD, MBA  Division Chief, Hospital Medicine
  – James Barker, MD, CPE  VP/Medical Director, University Hospital

• **Facilitator**
  – Edna Cruz, RN  Improvement Consultant, Clinical Safety & Effectiveness
The aim of this project is to **decrease patient length of stay (LOS)** through use of “anticipate discharge” orders on 5ACU from **6.9 days** to **6.4 days** by May 17th.

The process begins with admission to UH and ends when patient is discharge home or to a facility.

It is important to reduce patient length of stay to increase capacity for the Health System, resulting in bed availability, reduction in wait times, and improved patient experience.
Project Milestones

- Team created
- Aim statement created
- Background data, brainstorming sessions, workflow, and fishbone analysis
- Weekly team meetings
- Intervention
- Data analysis
- CS&E presentation and graduation
Background

- **Problem** – Patients, nurses, physicians and care coordinators do not communicate effectively about discharge dates, times, and needs resulting in delays in the discharge process
  - Issues with midday discharge bottleneck and geographic localization
  - Discharge planning begins upon admission; much of work waits until patient is nearly ready to leave. **National Benchmark for Medical Surgical Unit Length of Stay (LOS) is 5.2 days**
  - Recommendations: revisit morning rounds; use of **anticipate discharge orders**

- **Literature** – Anticipated discharge orders written 1 – 2 days prior to actual discharge date allow care teams to support scheduled times for discharges and reduce length of stay*
  - *Emergency Department LOS independently predicts excess inpatient LOS.*
  - **Payors** (e.g., CMS) look at LOS as a measure of cost control
  - **Hospital** standpoint is shorter LOS allows for greater capacity and more efficient use of resources
  - **Patient/provider** standpoint is short LOS demonstrates a streamline process

- **Rationale** – Use of anticipated discharge orders provide for effective communication among care givers. Patients and staff expectations for the time and date of the discharge are met. This allows for effective planning which promotes patient safety and improves the finances of the facility.
5ACU Patient Flow Process: Current State

ER
OR
OUPs
PACU
ICU
External to UH

Transfer of patient → Admit to unit → MD assessment → Nurse assessment → CC assessment → Plan of care created

MD- patient ready for d/c?

Continue tx plan by team

UR
- Ins verification
- Prevent divide
- Met criteria

Clinical Doc. Improvement

Discharge planning

Patient d/c

= identified area of needed improvement

"Anticipate discharge" orders
5ACU Cause and Effect Analysis

“Anticipate discharge” orders

People
- Care Coordination
- No "anticipate discharge" order
- MD not familiar with TCC
- No awareness of "anticipate discharge" order
- DME not ready

Communication
- No UR communication
- Timely notice of Access + Family teaching
- INR
- MOT missing/confusion
- Waiting for results from procedure
- Mental status
- IV antibiotics
- Avoidable days

Policies/Procedures
- Patient placement
- Pain management

Equipment/Supplies

IT
- Pharm ID on system
- Unable to separate unit from overall LOS
- Long physical space between pt and team

Plant

High Length of Stay for UH Medicine patients
Avoidable Hospital Days, 5ACU
October 2014 - February 2015
(n = 21)

- **5 SW planning**
  - 4 renal patients
    - 2 w/ dialysis needs
    - 2 ESRD, no dx
  - 1 no med. bft

“Anticipate discharge” orders

Source: Allscripts, Avoidable Days Report
<table>
<thead>
<tr>
<th>Action Strength</th>
<th>Action</th>
<th>Who</th>
<th>When</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak – additional study</td>
<td>Pre-survey</td>
<td>Kana/Mario</td>
<td>3/6</td>
<td>Complete</td>
</tr>
<tr>
<td>Weak → Strong – standardization of process through training</td>
<td>Education and Training</td>
<td>Kana/Mario</td>
<td>3/2-3/15</td>
<td>Complete</td>
</tr>
<tr>
<td>Intermediate – software enhancement</td>
<td>Concurrent coding/UR</td>
<td>Mario</td>
<td>3/2-3/15</td>
<td>Complete</td>
</tr>
<tr>
<td>Strong – standardization</td>
<td>Anticipate Discharge orders-daily list</td>
<td>5ACU Charge Nurses</td>
<td>3/16</td>
<td>In progress</td>
</tr>
<tr>
<td>Strong – standardization</td>
<td>JBI</td>
<td>Kana/Mario</td>
<td>3/6-3/15</td>
<td>Complete</td>
</tr>
<tr>
<td>Strong – tangible involvement and actions</td>
<td>Discharge planning mtg- 2pm daily for pts for d/c in AM</td>
<td>5ACU Charge Nurses</td>
<td>3/16</td>
<td>In progress</td>
</tr>
</tbody>
</table>
CONTINUOUS QUALITY IMPROVEMENT

A. Plan
- Create team and project aim
- Develop timeline
- Select target population and improvement targets
- Review baseline data
- Develop action plans
- Provide education/training on ADOs
- Define JBIs
- Implement interdisciplinary d/c meetings
- Collect data

B. Do
- Data review and analysis

C. Study
- Review results; consider areas of quality improvement
- Create and adjust workplans
- Staff in-services reflective of results (training/rotations)

D. Act
- Measurement Areas
  - Length of Stay
  - ADO Compliance
  - D/C w/i 2 hr of Order
  - Time between D/C orders and D/C
  - Readmissions
- Create ADOs for all units
- Track findings of QI efforts
- Implement workplans to test quality improvement efforts
- Report findings to key stakeholders and project owners
5ACU Anticipate Discharge Order Compliance
(Intervention: 3/16/15 - 5/17/15)

% Completion of Anticipate Discharge Orders

UCL = 100%
CL = 60%
LCL

Pre-intervention

5ACU Anticipate Discharge Order to Discharge
(Interval: 3/16/15 - 5/17/15)

Average ADO to DC Cycle Time (hh:mm:ss)

Pre-intervention

Discharge Date
5ACU Average Length of Stay:
(Intervention: 3/16/15 - 5/17/15)

Average Length of Stay (Days)

Pre - intervention

Statistical Process Control Chart – XmR – Clinical Outcome
5ACU Total Discharges Histogram, 1/2 hr intervals
(Intervention: 3/16/15 - 5/17/15)
Sustaining the Results

- Continued data analysis for periodic presentation to leadership and staff
- Staff training integrating results into continued rotations and training
- Advocate for all units to use ADOs
Soft Return on Investment

**Pre-Capability Histogram ADO to DC**
Order Cycle Time
3/2/15 -- 3/15/15

n = 90

**Post-Capability Histogram ADO to DC**
Order Cycle Time
3/16/15 -- 5/17/15

n = 420

**Hard Return on Investment:** net return through revenue enhancement via increased number of cases & payment per insurers and increased revenue from additional payer sources, & net return through cost savings via decrease LOS.
Conclusion: A Systems Approach to LOS

- **Funding Barrier**
  - SNF
    - New Contract Signed
  - Haven for Hope
  - LTAC
    - Negotiating NEW Contract
  - Home Health
  - Methodist ministries

- **UHS Inpatient**
- **Outpatient**
- **Community Resources**
  - Ambulatory Clinics
Team Pictures
References

• http://www.ncbi.nlm.nih.gov/pubmed/14609414

• http://ajcc.aacnjournals.org/content/15/5/502.short

• http://www.mc.vanderbilt.edu:8080/reporter/index.html?ID=3030

• http://dx.doi.org/10.7182/pit2013226

• The effects of anticipatory discharge orders on length of hospital stay in staff pediatric patients Sumer T, Taylor DK, Mcdonald M, Mckinney V, Gillard M, Grassel K, Kpaln W, Kherehllah N. AJM QUAL 1997 Spring:121 (1) 48-50

• 2015 Vanderbilt University Medical Center, VUH to Improve patient discharge; Paul McGovern 2015