Clinical Safety & Effectiveness
Cohort # 7

Fall Reduction in the
Christus Santa Rosa ACE Unit

Educating for Quality Improvement & Patient Safety
## Project Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
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<tbody>
<tr>
<td>Team created</td>
<td>January 2011</td>
</tr>
<tr>
<td>Aim statement created</td>
<td>February 2011</td>
</tr>
<tr>
<td>Monthly team meetings</td>
<td>1/21/11 – present</td>
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<tr>
<td>Background data, brainstorm sessions, workflow and fishbone analysis</td>
<td>1/21/11 – present</td>
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<tr>
<td>Interventions implemented</td>
<td>3/1/11</td>
</tr>
<tr>
<td>Data analysis</td>
<td>3/28/11 – present</td>
</tr>
<tr>
<td>CS&amp;E presentation</td>
<td>6/24/11</td>
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</tbody>
</table>
Geriatric Division
Family & Community Medicine Department, UTHSCSA

CSE Participants
- Theodore Suh  MD, PhD, MHS
- Colleen Stephens-Kelly  MSN, GNP
- Sheetal, Kanjee  MD

Geriatric Team
- Ughanmwan Efeovbokham PhD, GNP
- Imelda Rohrer BSN, RN
- Alison Davis LVN

Facilitator:  Amruta Parekh MD, MPH

Sponsor Departments
- Family & Community Medicine Dept., UTHSCSA, SOM
- ACE Unit, Christus Santa Rosa  Hospital
Aim Statement

Reduce the Fall Rate in the Christus Santa Rosa ACE Unit to 7/1000 bed days by June 1, 2011 and to 3/1000 bed days or less by December 1, 2011

http://liko.biz for Hill-Rom
Plan

• Collect Background Data
• Develop Cause & Effect Diagram
• Discuss falls with Team
• Develop Flow Maps of Fall Assessment Process & assignment of fall risk
• Develop Flow Map after fall occurrence
• Assess Fall Rates since ACE Unit opened
Background of the ACE Unit
Christus Santa Rosa Hospital

Acute Care for the Elderly Unit – ACE Unit
Opened June 14, 2010

• Provides acute care for geriatric patients with multiple complex medical problems

• 10 bed unit with nursing staff trained to provide care for gerontological needs.

• ALOS is about 3.7 days

• Average Daily Census is 6.36 patients

• Average daily cost $3200.00
Background

• The ACE Unit has the highest fall rate for a unit at Christus Santa Rosa City Centre Hospital

• Fall rate is a metric that the hospital administration is using to measure the quality of care provided.

• Current fall rate: ~10 / 1000 bed days

• Target Goal: 3.4 / 1000 bed days
Background Data

- Fall reduction in all care settings is a 2011 National Patient Safety Goal.
- In 2000, total direct cost of all fall injuries for people 65 and older exceeded $19 billion.
- By 2020, total direct cost from falls may reach $54.9 billion (adjusted to 2007$).
Flow Map of Fall Prevention

Admit to ACE Unit

Assessment of fall risk (Morse Score)

> 25 implement protocol

Bed Alarm (check hourly in day and Q 2 hours at night)

Tag door with picture of falling star

Yellow wrist band
# Morse Falls Assessment

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. History of falling; immediate or within 3 months</td>
<td>No 0</td>
<td>______</td>
</tr>
<tr>
<td></td>
<td>Yes 25</td>
<td>______</td>
</tr>
<tr>
<td>2. Secondary diagnosis</td>
<td>No 0</td>
<td>______</td>
</tr>
<tr>
<td></td>
<td>Yes 15</td>
<td>______</td>
</tr>
<tr>
<td>3. Ambulatory aid</td>
<td></td>
<td>______</td>
</tr>
<tr>
<td>Bed rest/nurse assist</td>
<td>0</td>
<td>______</td>
</tr>
<tr>
<td>Crutches/cane/walker</td>
<td>15</td>
<td>______</td>
</tr>
<tr>
<td>Furniture</td>
<td>30</td>
<td>______</td>
</tr>
<tr>
<td>4. IV/Heparin Lock</td>
<td>No 0</td>
<td>______</td>
</tr>
<tr>
<td></td>
<td>Yes 20</td>
<td>______</td>
</tr>
<tr>
<td>5. Gait/Transferring</td>
<td></td>
<td>______</td>
</tr>
<tr>
<td>Normal/bedrest/immobile</td>
<td>0</td>
<td>______</td>
</tr>
<tr>
<td>Weak</td>
<td>10</td>
<td>______</td>
</tr>
<tr>
<td>Impaired</td>
<td>20</td>
<td>______</td>
</tr>
<tr>
<td>6. Mental status</td>
<td></td>
<td>______</td>
</tr>
<tr>
<td>Oriented to own ability</td>
<td>0</td>
<td>______</td>
</tr>
<tr>
<td>Forgets limitations</td>
<td>15</td>
<td>______</td>
</tr>
</tbody>
</table>
Morse Falls Scoring Interpretation

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>MFS Score</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Risk</td>
<td>0 - 24</td>
<td>Good Basic Nursing Care</td>
</tr>
<tr>
<td>Low Risk</td>
<td>25 - 50</td>
<td>Implement Standard Fall Prevention Interventions</td>
</tr>
<tr>
<td>High Risk</td>
<td>≥ 51</td>
<td>Implement High Risk Fall Prevention Interventions</td>
</tr>
</tbody>
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CHRISTUS SANTA ROSA Health Care
Flow Map after Fall Occurrence

1. Fall Occurrence → Nurse Assesses patient
2. Is Patient Stable?
   - Y: Patient stabilized → Create incident report → Risk Management
   - N: Patient stabilized → Notify Fall Response Team → Notify MD
3. Notify family → Notify supervisor → Pharmacy → Charge nurse → Primary care nurse
4. Environmental
5. Fall questionnaire completed
6. Orders given to Nurse → Patient Care Continues
   - Reviews & sends list of meds
Implementing Change

Do

Intervention: March 1, 2011

- **Red hanging star** by door if MORSE score > 60
- **Hourly rounds** for evening/night nurses
- **Staff incentive:**
  - party for nursing staff for every fall free calendar month
- **Bed alarms:**
  - “On”
  - Working condition
  - Including low beds
How Will We Know That a Change is an Improvement?

• **Measures:**
  - Decrease in the number of falls monthly and over a calendar year.
  - Measure based on reported falls in the ACE unit.

• **Targets for change:**
  - Bed alarms
  - Very high risk fall patients
Red Star Identifying Highest Fall Risk Patients
Return on Investment

- Cost to implement change is approximately $850.00

- Monthly cost to maintain intervention: ~ $100.
  ~ $2,000.00 annually max

Includes: Red stars ($30); training staff of 29 associates for 1 hr training ($725); Incentive party for decreasing falls ($75); possible cost use of portable bed alarm pad ($200).
Return on Investment

• Savings to prevent a hip fracture ~ $18,000.00
• Saving to prevent a vertebral fx ~ $9,000.00
• Average cost per day 3200.00
• If a fall constitutes ~ 4 days in hospital ~ savings is $12,800.00.
• If we decrease falls per month

Avg fall/month is 2 x 12,800.00 = $25,600.00 /mo
25,600.00 x 12 mo = $307,200.00 annually

(CDC 2003, NIH 2002 data)
Return on Investment
Future Profit

- To be determined by the new CMS Value Based Purchasing and Inpatient Quality Indicators Performance Incentives.

- CMS will tie a portion of their Medicare payment to the hospitals performance on quality measures.

- CMS will decrease DRG payments initially by 1% and begin value based incentive payments depending on baseline to achievement or improvement scores.

Expansion of Our Implementation Act

- The Christus Santa Rosa Hospital Quality Improvement Team would like to apply it to other hospital units with high fall rates.

- Improve transparency of falls institution wide.
- Improve on capturing type of falls and targeting interventions to decrease those falls specifically.

- This presentation was accepted for Poster Presentation at the 1st Annual Conference on “Building Partnerships for Geriatric Care:” An Interprofessional Continuing Education Conference San Antonio, Texas in April 2011.
Conclusion & Next Steps

• Intervention of *rounding hourly* has decreased the number of falls, improving patient outcomes and decreasing injury to older people.

• Identifying high risk fallers has increased awareness of the *potential fall risk*.

• *Monthly feedback* to staff and rewarding for their efforts has been *positive*.

• Continuing to monitor the process over time

• Presenting savings and financial reward to hospital is necessary
Questions?
Gracias

Merci

THANK YOU

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