Clinical Safety & Effectiveness
Cohort # 7

Fall Reduction in the Christus Santa Rosa ACE Unit

CENTER FOR PATIENT SAFETY & HEALTH POLICY
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Educating for Quality Improvement & Patient Safety

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Project Milestones

Milestone	Date
Team created	January 2011
Aim statement created	February 2011
Monthly team meetings	1/21/11 – present
Background data, brainstorm sessions, workflow and fishbone analysis	1/21/11 – present
Interventions implemented	3/1/11
Data analysis	3/28/11 – present
CS&E presentation	6/24/11

The Team

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

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GERIATRICS

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Aim Statement

http://liko.biz for Hill-Rom

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

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

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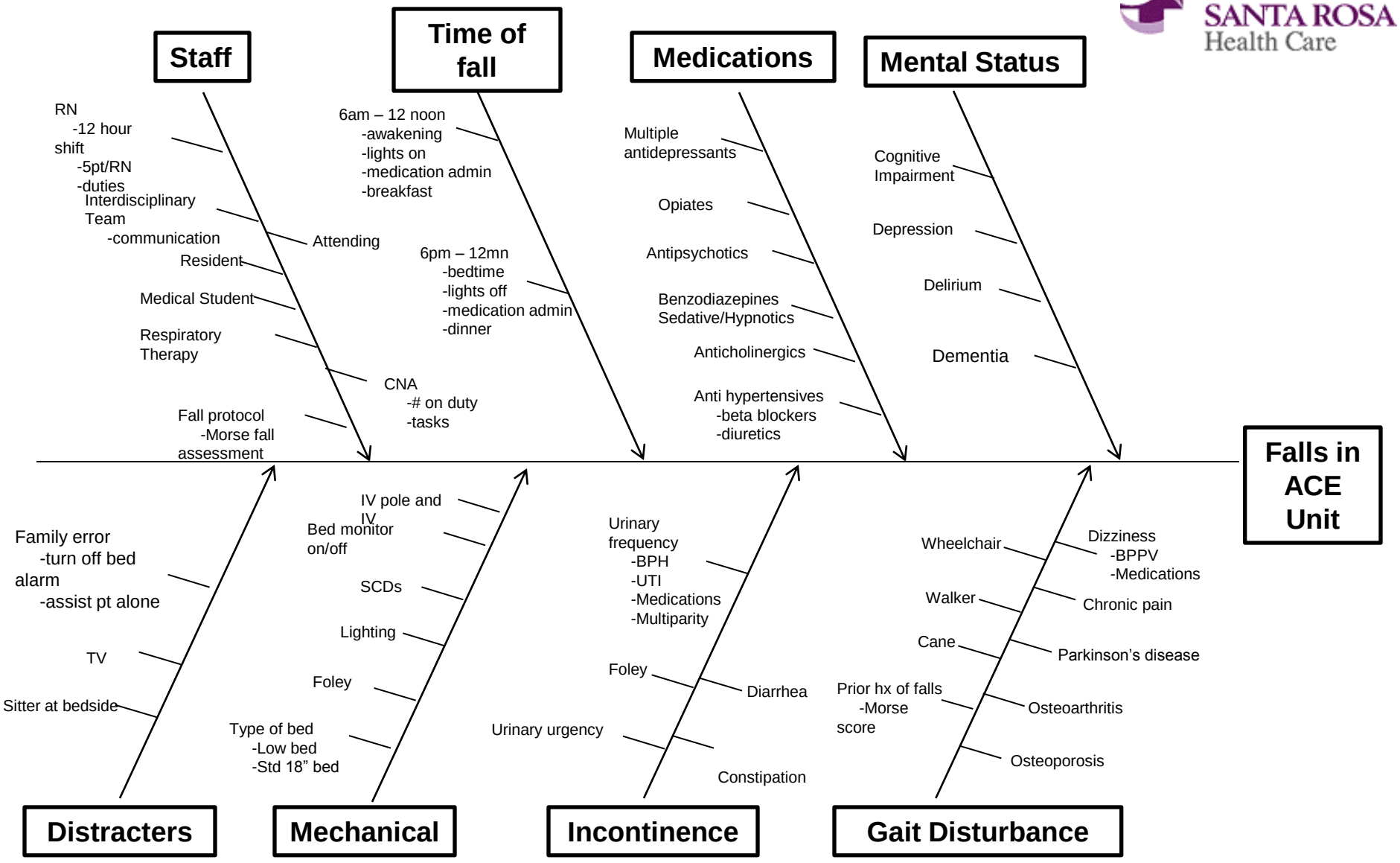
Background

- 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**

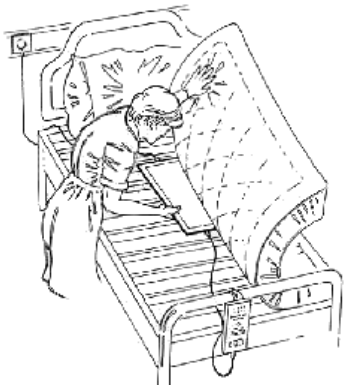
Background Data

- Fall reduction in all care settings is a 2011 National Patient Safety Goal.
- **Hospital National Patient Safety Goal 9-2008.**
- 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 $54.9 billion (adjusted to 2007$).**

www.cdc.gov


Staff
Time of fall
Medications
Mental Status
RN
-12 hour shift
-5pt/RN
-duties
Interdisciplinary Team
-communication
Attending
Resident
Medical Student
Respiratory Therapy
CNA
-# on duty
-tasks
Fall protocol
-Morse fall assessment
6am – 12 noon
-awakening
-lights on
-medication admin
-breakfast
6pm – 12mn
-bedtime
-lights off
-medication admin
-dinner
Multiple antidepressants
Opiates
Antipsychotics
Benzodiazepines
Sedative/Hypnotics
Anticholinergics
Anti hypertensives
-beta blockers
-diuretics
Cognitive Impairment
Depression
Delirium
Dementia
Falls in ACE Unit
Family error
-turn off bed alarm
-assist pt alone
TV
Sitter at bedside
IV pole and IV
Bed monitor on/off
SCDs
Lighting
Foley
Type of bed
-Low bed
-Std 18” bed
Urinary frequency
-BPH
-UTI
-Medications
-Multiparity
Foley
Diarrhea
Urinary urgency
Constipation
Wheelchair
Dizziness
-BPPV
-Medications
Walker
Chronic pain
Cane
Parkinson’s disease
Prior hx of falls
-Morse score
Osteoarthritis
Osteoporosis
Distracters
Mechanical
Incontinence
Gait Disturbance

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

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Morse Falls Assessment

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

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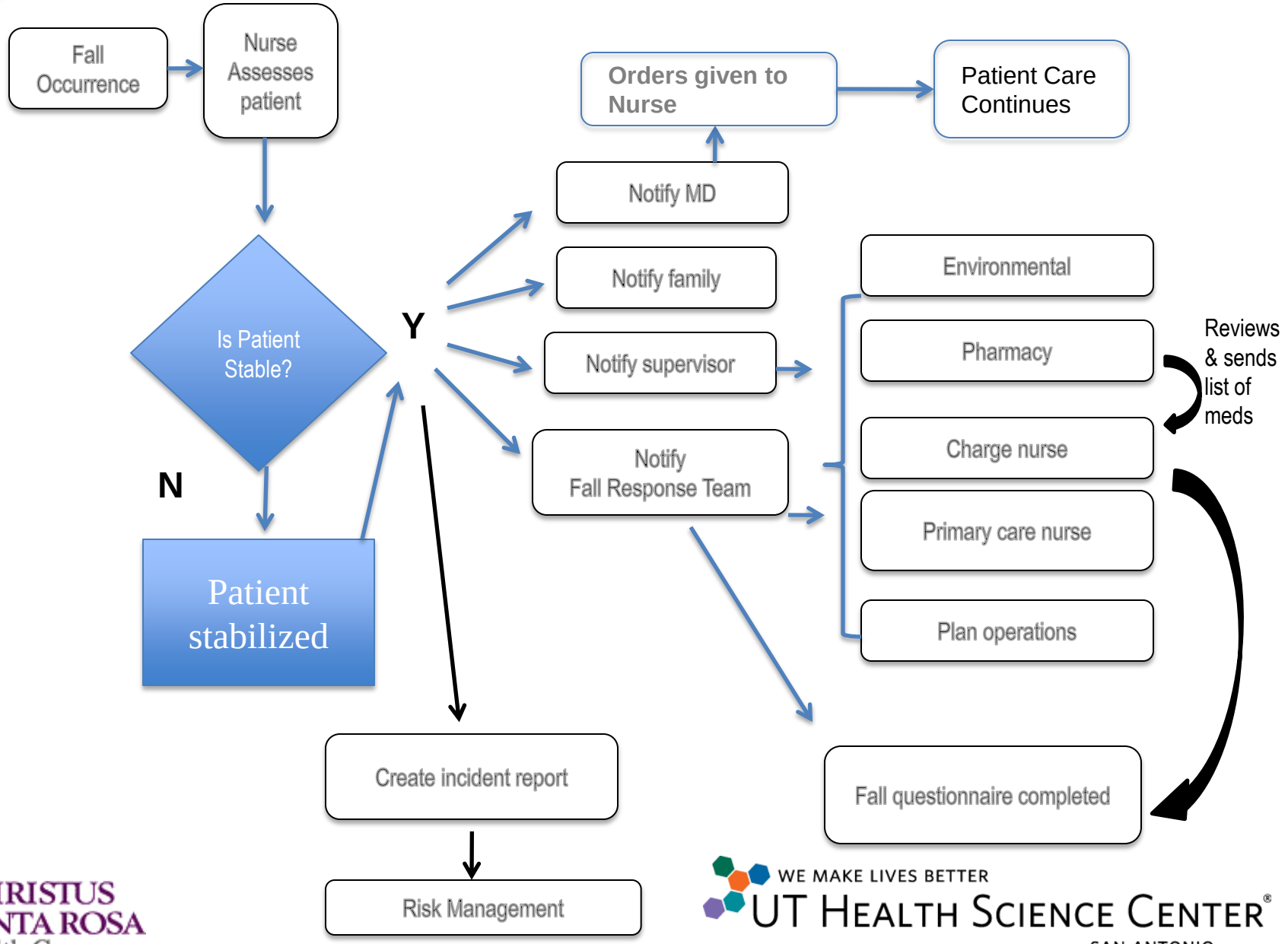
Morse Falls Scoring Interpretation

Risk Level	MFS Score	Action
No Risk	0 - 24	Good Basic Nursing Care
Low Risk	25 - 50	Implement Standard Fall Prevention Interventions
High Risk	≥ 51	Implement High Risk Fall Prevention Interventions

Flow Map after Fall Occurrence



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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

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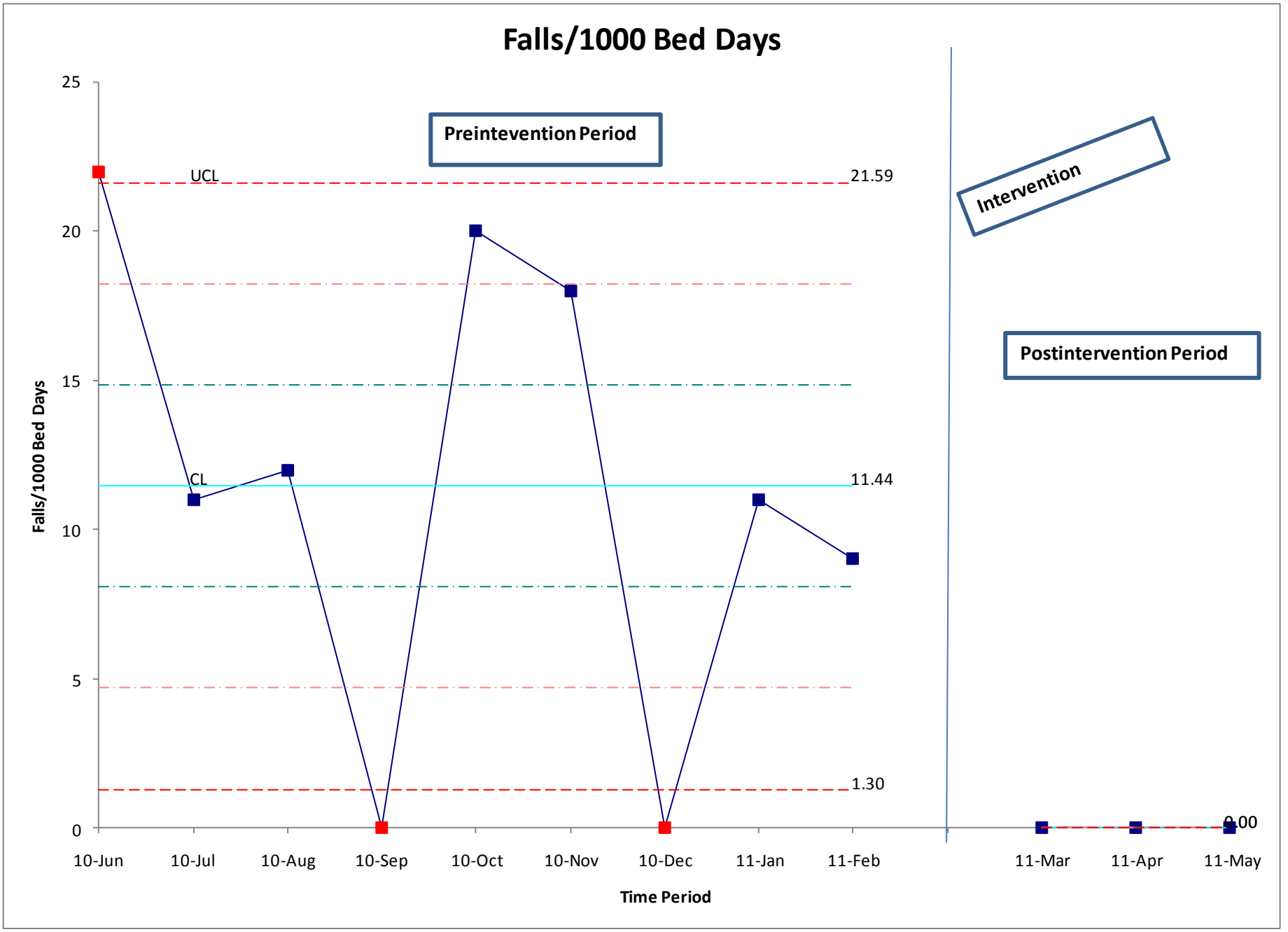
Falls/1000 Bed Days
Preintevention Period
Intervention
Postintervention Period
UCL
21.59
CL
11.44
1.30
0.00
25
20
15
10
5
0
Falls/1000 Bed Days
10-Jun
10-Jul
10-Aug
10-Sep
10-Oct
10-Nov
10-Dec
11-Jan
11-Feb
11-Mar
11-Apr
11-May
Time Period

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.

Source: OR Manager Inc.. Vol.27 No.3, March 2011. Value Based Purchasing
Federal Register/Vol.76,No.9/Thurs, Jan.13, 2011/proposed rules.
http://edocket.acess.gpo.gov/2011/pdf/2011-454.pff

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

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Questions?

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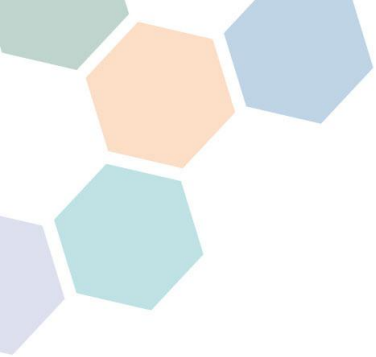

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Gracias

Merci

THANK YOU

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