2012 ANA Nursing Quality Conference

Centralized Video Monitoring: Its Impact on Fall Prevention, Staffing and Labor Expense

Carol Herring, RN, MA
Acute Care Units
Denver Health Medical Center
Denver, CO

NDNQI
NATIONAL DATABASE OF NURSING QUALITY INDICATORS

DENVER HEALTH
Level One Care for ALL

Denver Health Medical Center

- Safety Net Urban Hospital
- 525 bed Level 1 Trauma Center
- Denver's EMS Paramedic Division
- Largest provider of care for the uninsured and Medicaid populations
- Largest provider to indigent population in Colorado (42%)

DENVER HEALTH
Level One Care for ALL

Target State

- Decrease 1:1 sitter observation by a minimum of 50% per day
- Reduce personnel expenses associated with 1:1 sitter utilization
- Decrease hospital fall rates to under NDNQI National Benchmarks
- Provide monitoring capabilities in all Acute Care nursing units

DENVER HEALTH
Level One Care for ALL

Reason for Action

- Falls – greatest number of non-fatal injuries
- Extend Length of Stay (LOS)
- Projected cost for falls in 2020 more than $43.8 billion nationally (Quigley)
- Increase pain and suffering
- 1:1 sitters were commonly used for fall prevention
- Labor expenses escalating
- Range of 20-30 sitter patients daily – 50% require 1:1 of CNAs (FTE) and agency CNAs

DENVER HEALTH
Level One Care for ALL

Discovery

- Literature search of camera surveillance technology
- Off site visit
- Telephone conversations with other hospitals
- Costs of equipment, installation and video monitoring technicians
- Staff concerns

DENVER HEALTH
Level One Care for ALL

Behind the Scenes

- Construction of Centralized Video Monitoring (CVM) room
- Ergonomics –chairs, placement of monitors
- Installations of cameras
- Information Technology, Environmental Services and Engineering
- Call system communication with patients and nursing staff
- Interdisciplinary committee meetings
- CVM signage
- Staff education
- Patient education

DENVER HEALTH
Level One Care for ALL

Centralized Video Monitoring

- 168 cameras placed above acute care beds 9/2010
- Central monitoring room with two video monitoring techs- (VMT) 24/7
- No need for a physician order or separate consent
  - Patient's Nurse and Charge Nurse make decision

DENVER HEALTH
Level One Care for ALL

Patients' Rights and Ethical Issues

- Real time video does not record
- Legal Department
- Administrative Procedure
- Patient/Family must be informed
- Patient has right to refuse

Implementation

- Increase program awareness throughout the organization
  - Develop escalation criteria and improved communications between VMT's and clinical staff
  - Complete staff competencies
  - House-wide education
  - Open house (monitor room)
  - Huddle sheet, Resource Guide
  - VMT Log
  - Electronic Documentation

DENVER HEALTH
Level One Care for ALL

Patient / Staff Education

- Hospital staff must be informed of the centralized video monitoring system and be able to identify the patients who are on camera- signage
- Hospital staff must be informed their performance is not being evaluated
- Patients must be informed of camera surveillance and provided with education sheet

DENVER HEALTH
Level One Care for ALL

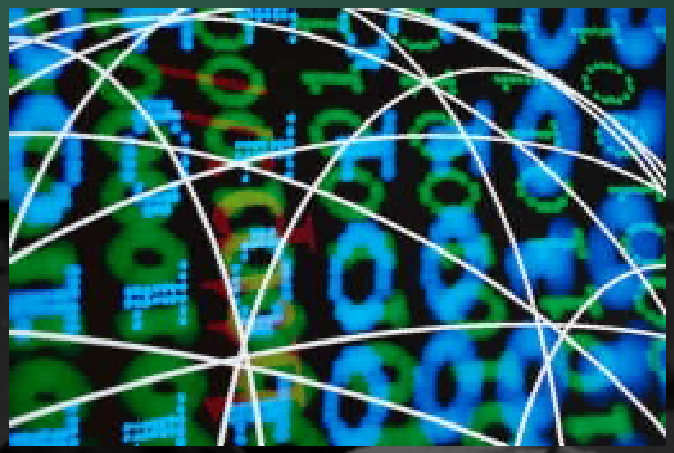
Standard Work

- Nursing:
  - Calls report to CVM room techs twice daily
    - Indicates the reason for CVM
    - Confirms patient is being monitored
  - CVM techs are informed when patient is leaving the room and when patient returns
  - Reports monitoring status during hand-offs
  - Documents and include in PSN if patient fell
- CVM Techs:
  - Report to oncoming shift
  - Use log to record near misses and interventions
  - Contacts patient at risk
  - Notifies nursing staff with “Monitor alert” or “Room xxx needs assistance” if patient is not re-directable
  - Documents in the electronic record, general interventions and if an incidence occurs

DENVER HEALTH
Level One Care for ALL

Standard Work

- Information Technology
- Help Desk Scripts
- Escalations for resolution of hardware and software issues
- Operational issues ex. Camera failure



DENVER HEALTH
Level One Care for ALL

CVM Monitor Technician Work Log

DATE_____

ROOM NO.

PATIENT LABEL

☐ Meets Sitter Criteria
☐ Pt with Sitter

___

☐ Report Time:	RN CNA Dx	___ ___ Fall ___ Forgetful ___ Flight ___ Pulling Lines ___ Seizures	SMT Initials

DENVER HEALTH
Level One Care for ALL

Nursing Documentation: Patient Care Actions

DENVER HEALTH
Level One Care for ALL

Fall De-brief Form

Nurse: _____ Date of Fall: _____ Time: _____

Who is the patient?

Name: _____ Time of last round: _____

Room: _____

Diagnosis: _____

Does the patient have impaired mobility? Yes □ No□

Is the patient in ETOH withdrawal? Yes □ No□

Does the patient have a cognitive impairment? Yes □ No□

Is the patient non-compliant with safety instructions? Yes □ No□

Is the patient a diabetic on insulin? Yes □ No□ Last blood sugar before the fall _____

Describe what happened: _____

Were there assignment issues that may have contributed to the patients fall (increased pt acuity, pt ratio, etc.)?

_____

What was the patient's injury level?

□ None □ Moderate □ Severe

□ Minor □ Major

Did the patient have any interventions / strategies in place at the time of the fall?

□ Bed alarm □ Patient Education □ Fall alerts in place (signage, yellow arm band)

□ Camera □ Sitter

□ Chair alarm □ Bed in the lowest position

□ Restraints

□ Wrists □ Vest □ Siderails x 1-3

□ Legs □ Siderails x4

Where did the patient fall?

□ Room □ Unknown □ Other, please describe:

□ Bathroom _____

□ Hall _____

Where was patient going when they fell?

□ Bathroom □ Other, please describe:

□ Commode _____

□ Hall _____

How can we prevent future falls similar to this one?

□ Bed alarm Hourly rounding □ Restraints

□ Bedside commode □ Personal (pro-active toileting) □ Side rails

□ Camera □ Placement of items close to the patient □ Sitter

□ Chair alarm □ Other, please describe:

□ Patient education □ Positioning _____

□ Pain assessment

Additional interventions put in Place after the fall:

□ Ambulating aid □ Remove obstacles □ PT/OT referral*

□ Bed alarm □ Sitter □ Other, please describe:

□ Camera □ None _____

Additional Comments: _____

**PT/OT Referral Guidelines following a fall: New mobility deficit; new visual difficulties associated with a fall; has sufficient*

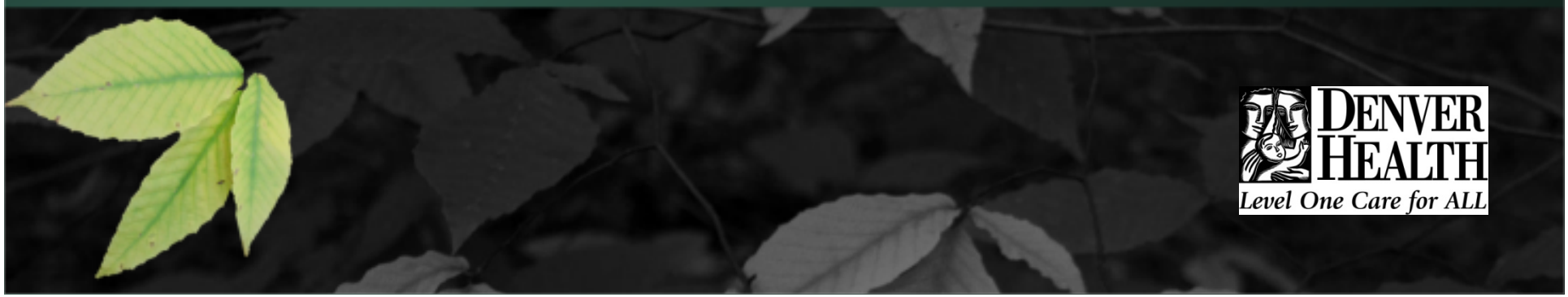
Insights During Pilot

- Observation of unanticipated patient needs
- Patient with inability to feed self
- Patient with decreased mobility
- Patient redirection when oxygen in use
- ETOH withdrawal
- Seizures
- Staff safety

DENVER HEALTH
Level One Care for ALL

Outcomes

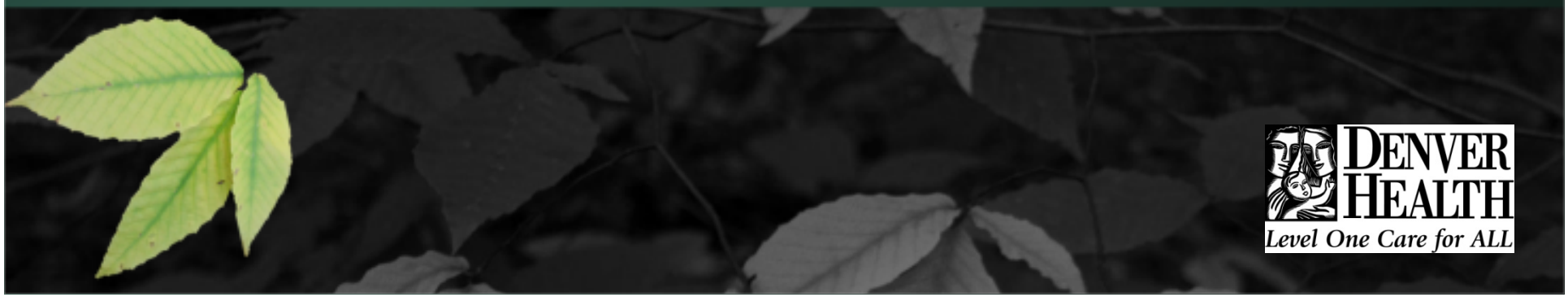
- Prior to implementing program – estimate of 1:1 sitter use ranged to 30 sitter patients per day average of 11-1:1 sitter rooms /day
- The number of sitters decreased to approximately 7- 1:1 sitter rooms /day
- Within first quarter of operation the $392,000 cumulative video monitoring technician deferred staff savings exceeded the original estimate of $305,000 passing the breakeven point.



DENVER HEALTH
Level One Care for ALL

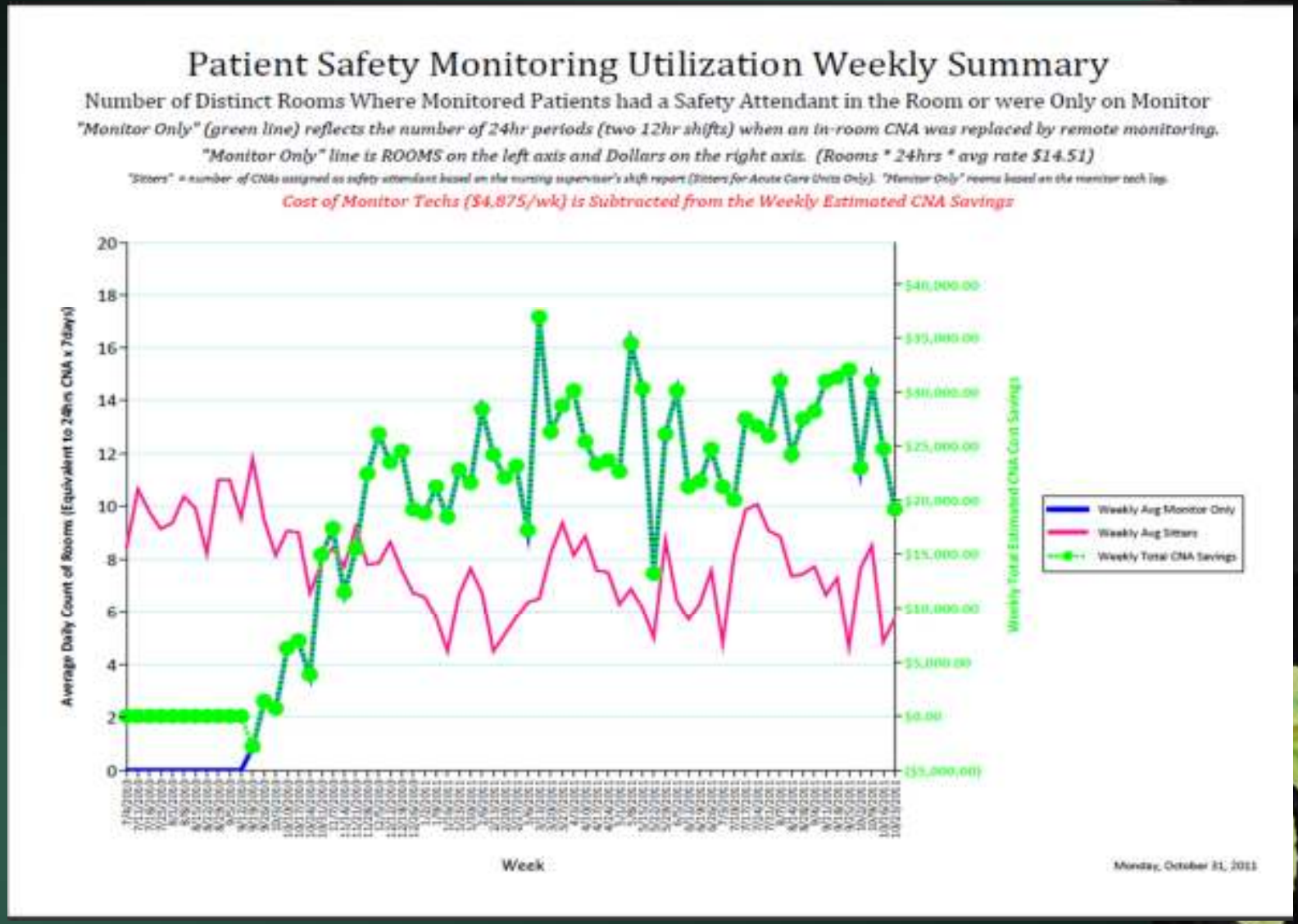
Outcomes continued…

- As of September 2011the CVM program has affected more than $1.15 million in deferred cost saving
- Within first 3 months, 57 falls were prevented with a potential minimum savings of $24, 225
- 75% of the acute care units met or exceeded the NDNQI benchmark mean in the second quarter of 2011- the best performance in two years



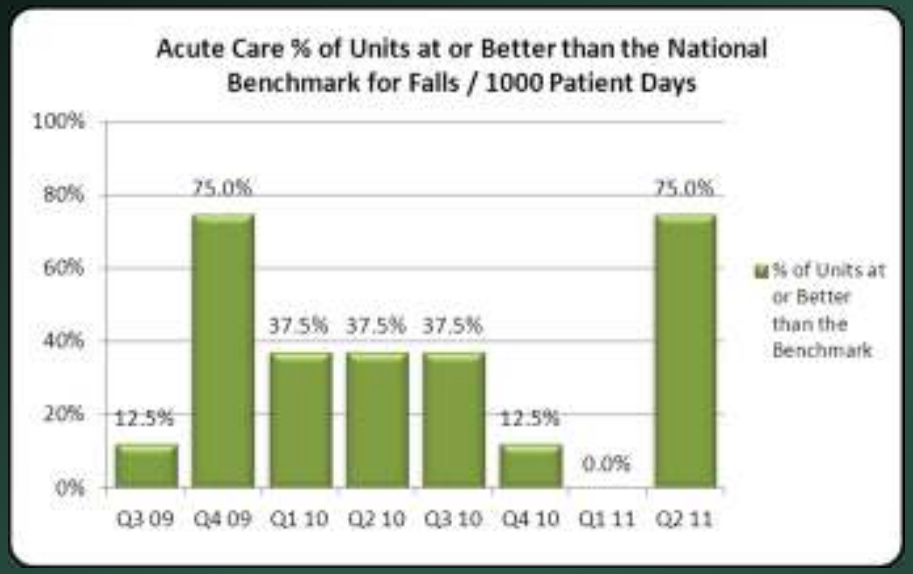
DENVER HEALTH
Level One Care for ALL

Utilization Sitter Weekly Summary

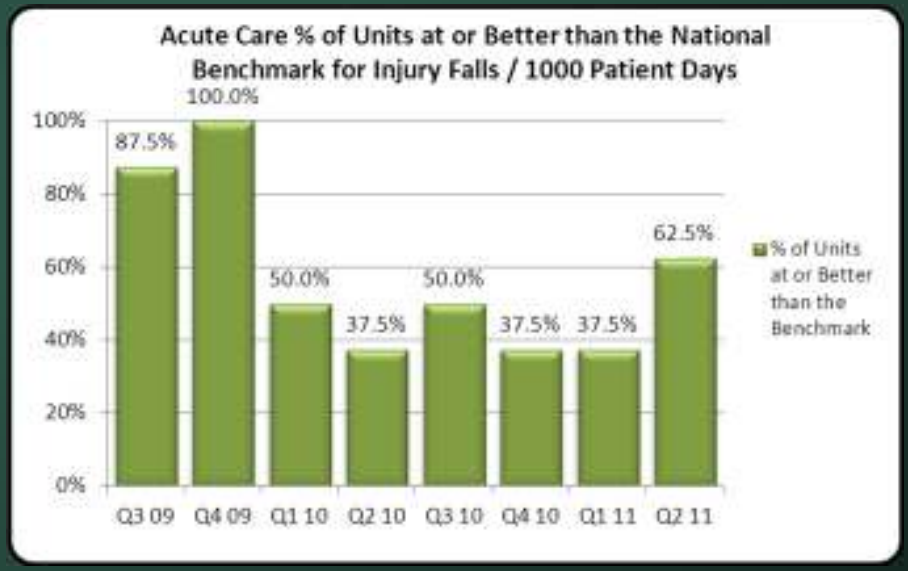


Fall Data:

Falls / 1000 Patient Days: % of units that meet or exceed the benchmark



Injury Falls / 1000 Patient Days: % of units that meet or exceed the benchmark



DENVER HEALTH
Level One Care for ALL

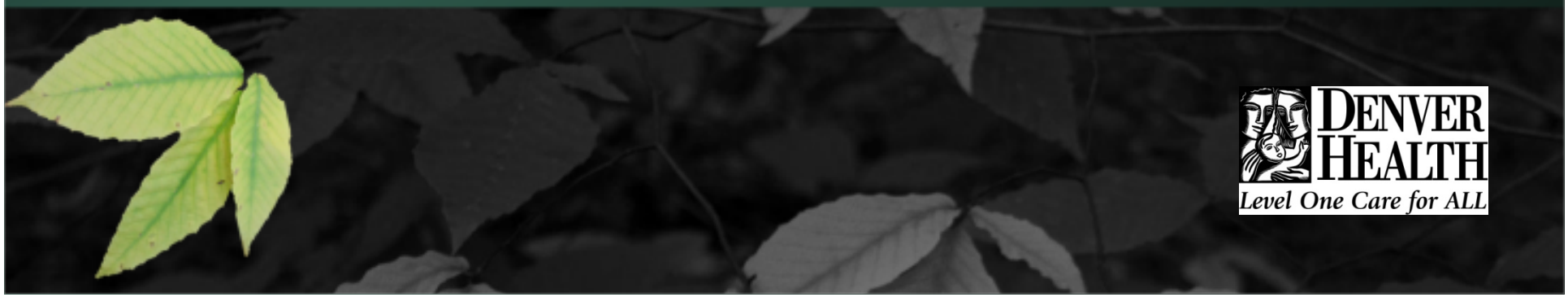
Fall Data

Reasons for Requesting Camera Surveillance	
Elopement, Fall & Patient Pulling at Lines	1.0%
Fall Prevention	50.5%
Fall and Safety	2.0%
Fall / OOB / Forgetful	2.0%
Falls and Patient Pulling Tubes / Drains	1.0%
Patient Safety	1.0%
Prevention of Elopment	1.9%
Staff Safety	2.9%
All of the Above	7.8%

DENVER HEALTH
Level One Care for ALL

CVM Tech Great Saves

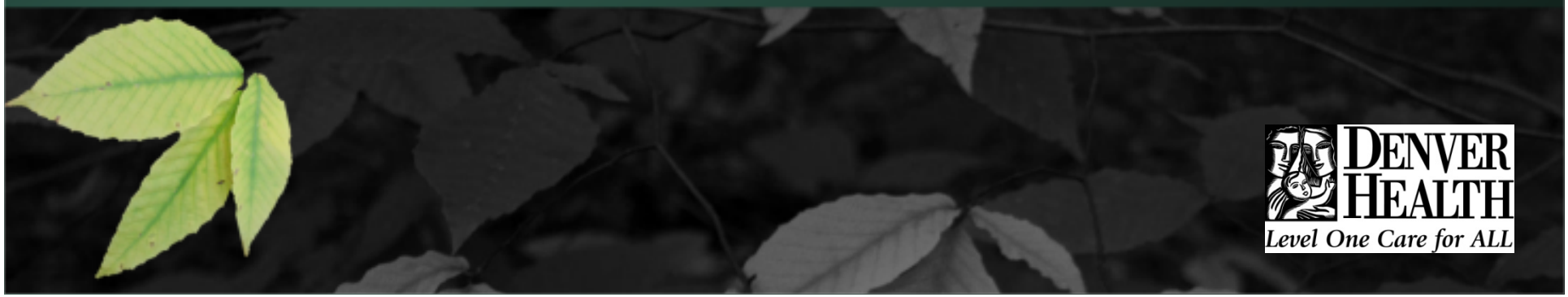
- “Patient about to get out of bed, monitor alert called and staff ran to the rescue. They were in the room within 3 seconds. Patient saved from falling.”
- “Patient was leaving out of side of bed trying to get food tray, staff called and responded in seconds stopping patient from falling out of bed”.
- “Patient took tape from rail and taped the soft wrist restraint to feet like a Greek sandal. He proceeded to start skating around room. We called nurse/front desk/ patient. Patient redirected before he could fall”.



DENVER HEALTH
Level One Care for ALL

Implications for Practice

- Legal Department must be included
- Staff must be reassured their practice is not being evaluated
- Increased need for more monitors
- Include CVM as a patient charge
- Continue to look for opportunities- falls cannot always be prevented
- Communication challenges
- Staff safety
- Secondary goal to reduce elopements- camera view is static



DENVER HEALTH
Level One Care for ALL

It Takes a Village!

DENVER HEALTH
Level One Care for ALL

A Special Thank you to:

- Kathy Boyle – Chief Nursing Officer
- Pat Tillapaugh – Manager, 8A
- Hillarie Goetz - Clinical Nurse Educator, 7A
- Joe Gerardi – ACNO – Acute Care
- Sharon Jeffers – Sr. Project Manager
- Phebe Searcy – Clinical Nurse Educator, Nursing Support Svcs.
- Polly Nelson – Program Manager, Nursing Support Svcs.
- Kim Carroll – Nurse Manager, 7A
- Susan Van Dyk – Manager, Center for Patient Flow
- Wayne Strubinger – Manager of Biomedical Technology
- Carol Herring – Quality Initiatives Coordinator
- Scott Factor, vendor representative
- LeeAnn Kane - Director, Nursing Ed and Staff Development
- Quin Davis – Nursing Support Services Coordinator
- Kathleen Lester – Clinical Nurse Educator, 8A
- Rachel Gutierrez – CNA – Monitoring Tech
- Kelly Murphy, CNA – Monitoring Tech
- Jacob Pratt, CNA – Monitoring Tech
- Mike James, CNA– Monitoring Tech
- Lauren Corray, CNA – Monitoring Tech
- Joseph Hall – Desktop Team Lead
- Chris Burnett – Cabling Team Lead

DENVER HEALTH
Level One Care for ALL

Contact information:

Carol Herring, RN, MA /Quality Initiatives Coordinator
Denver Health Medical Center
Denver, Colorado
Carol.herring@dhha.org

Thank you for your attention!

DENVER HEALTH
Level One Care for ALL