

Fall Prevention, Using Root Cause Analysis to Eliminate Alarms & Restraints



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Objectives

- Utilize root cause analysis in the investigation and prevention of resident falls
- Analyze the internal, external and systemic conditions and operations that may be the causes of resident falls
- Explain how noise and sleep disturbance contributes to the resident s' falls
- Discuss the stages and mechanisms of sleep and its effects on health and illness

Background & Process

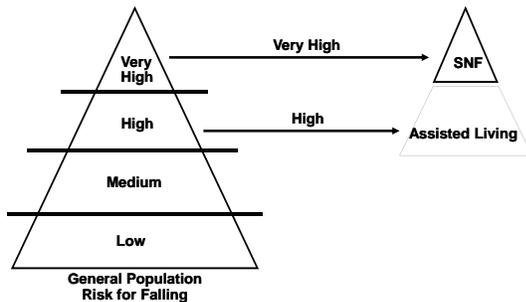
- Empira awarded 3-year MN DHS PIPP grant, began 10/1/08
 - A project implementing best practices from evidence based studies
 - Goal: Reduce CMS QI/QMs; Falls, Depression & Anxiety, Decline in LL ADL, Decline in movement
 - Reduction Goal: 5% first year, 15% second year, 20% third year
- 16 SNFs, 4 companies participate in PIPP Fall Prevent project
- Fall Risk Coordinator in each SNF reports to administrator who oversees the program – it's not a nursing program!
- Project completion date: 10/1/11

Results after 2½ years

- Prevalence of Falls (number of residents who have fallen) – decreased by 31% (QI 1.2)
- Incidence of Depression – decreased 20% (QI 2.1)
- Incidence Worsened ADLs – decreased 17% (QI 9.1)
- Incidence Worsened Room Move – decreased 12% (QI 9.3)
- Falls per 1000 resident days (number of falls that occurred) – decreased by 14%
- Recurrent Falls – double digits to single digit

* Compared to a baseline from July 1, 2006 to June 30, 2007

Who is at Risk for Falling . . . When Everyone Is?



Two Tiered Approach

- Proactive (fall prevention)
 - Speculate on risk factors of falls
 - Actions based on conjecture
 - Actions based on predictions
- Reactive (post falls action)
 - Investigate current falls as they occur
 - Collect factual evidence from the fall event
 - Collate, aggregate and study the causes of falls

Person Centered "at risk" for falls on admission

- Mr. SP, 74 y.o., lives alone, recently widowed, alcohol dependent, slightly confused, easily agitated, has multiple hematomas from many falls
- Mrs. MW, 69 y.o., 295 lbs., newly diagnosed brittle diabetic, admitted post hip pinning following a fall in her apartment
- Mrs. AT, 76 y.o., active, alert, visually impaired due to macular degeneration, slipped and fell on ice getting out of her son's car, fx elbow & shoulder
- Mr. BL, 88 y.o., early stage Lewy Body Dementia, symptoms increasing, can no longer be cared for in her AL setting

Falls Admission Risk Assessment

1. Identify the individual's specific risk factors for falling e.g. limited vision, dyskinesia, non-adherence to diet & meds
2. If the person has a history of falls, determine the predisposing causes
3. Consider psychological / emotional factors: grief, depression, fear of falling, self imposed restriction of activity
4. Focus on lower-extremity balance and strengthening status, encourage activity

What is root cause analysis?

- RCA is a process to find out what happened, why it happened, and to determine what can be done to prevent it from happening again.



Root Cause Analysis:

- Root cause analysis (RCA) transforms an old culture that reacts to problems, into a new culture that solves problems before they escalate.
- Aiming performance improvement operations at root causes is more effective than merely treating the symptoms of problems.
- Problems are best solved by eliminating and correcting the root causes, as opposed to merely addressing the obvious symptoms with "scatter-gun approaches" to solutions.

3 Areas to Investigate for Root Cause Analysis

- 1. Internal / Intrinsic conditions
- 2. Environmental / Extrinsic conditions
- * 3. Operational / Systemic conditions

The Application of Root Cause Analysis to:

- Incontinence
- Pain
- Falls



Why Do RCA After a Fall?

- Q: "It's a single event and won't happen that way again?"
- Q: "No one, including that resident, will ever fall that way again?"
- A: If the brakes failed in your car on an icy road, don't figure out "why" or tell the manufacturer because that accident will never happen that way to you or anyone else again. WRONG!! NOT!

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Four situations that can hinder, divert, or prevent, successful root cause analysis:

1. Blame Game
2. Human Nature
3. Tunnel Vision
4. Perfect Storm or Swiss Cheese Effect

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The Blame Game

- Blame/shame: Whose fault is this?
- Just find that one person who messed up and we find the cause. NO!
- Moving from who did it to → why did this happen? Ask why again, and again, and again, and again.



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Human Factors

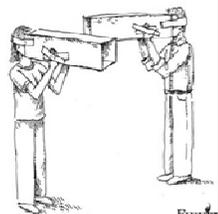
- Humans forget
 - They succumb to a busy lifestyle and avoid being diligent
- Humans make mistakes
 - They inadvertently do things they shouldn't do
- Humans don't learn or remember all that they are taught or told



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Tunnel vision

- At the time the accident occurred, people usually behave seeing only one way to perform. They didn't see all the other things they could have done or the outcomes from what they would do.
- In reconstructing the event, we most often view the event from outside of their tunnel vision. We now have hind-sight knowledge.
- We look at the event seeing all the options the person should have done.



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Steps to Root Cause Analysis: Step One → Step Two → Step Three

1. What happened: Gather the clues and evidence by observation, examination, interviews and assessment
2. Why did this happen? What conditions allowed this problem to exist? Investigate, assess and deduce. Determine the primary root causes or reasons for the fall based upon the aggregate data tracked.
3. Implement corrective actions and interventions to eliminate the root cause(s) of the problem. What can be done to prevent the problem from happening again? How will it be implemented? Who will be responsible to do what? How will it be audited and evaluated?

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Step 1: Gather clues, evidence, data

- **Observation skills are critical!**
 - It's easy to miss something you're not looking for
- **Gather the clues:**
 - Look, listen, smell, touch
 - Question, interview, re-enact, huddle – immediately
 - Note placement of resident, surrounding environment and operational conditions
- **Protect the area around the incident:**
 - Secure the room/equipment immediately
 - Observation and recording begins immediately – while things are still fresh!
- **(Awareness Test)**



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Post Fall RCA:

- **Root Cause(s) Analysis:**
 - Why did they fall? →
 - What were they doing before they fell? →
 - But, what was different this time? →
 - Where did they fall? →
 - When did they fall? →
 - What was going on when they fell?
 - So, why did they fall? →

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Step 2: Tools to determine RCA

- "10 Questions"
 - Post Fall Huddle
 - Staff Interviews
 - Reenact
- } **Fall Scene Investigation (FSI) Report**
- FSI Report
 - MDS, QM/QI Report
 - Hourly Rounding (4Ps)
- } **Weekly Falls Committee Meeting**

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10 Questions at the time a resident falls. Stay with resident, call nurse.

1. Ask resident: Are you ok?
2. Ask resident: What were you trying to do?
3. Ask resident or determine: What was different this time?
4. Position of Resident?
 - a. Did they fall near a bed, toilet or chair? How far away?
 - b. On their back, front, L side, or R side?
 - c. Position of their arms & legs?
5. What was the surrounding area like?
 - a. Noisy? Busy? Cluttered?
 - b. If in bathroom, contents of toilet?
 - c. Poor lighting – visibility?
 - d. Position of furniture & equipment? Bed height correct?
6. What was the floor like?
 - a. Wet floor? Urine on floor? Uneven floor? Shiny floor?
 - b. Carpet or tile?
7. What was the resident's apparel?
 - a. Shoes, socks (non-skid?) slippers, bare feet?
 - b. Poorly fitting clothes?
8. Was the resident using an assistive device?
 - a. Walker, cane, wheelchair, merry walker, other
9. Did the resident have glasses and/or hearing aides on?
10. Who was in the area when the resident fell?

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Hourly Needs for the "4 Ps"

- **Position:**
 - Does the resident look comfortable?
 - Does the resident look bored, restless and/or agitated?
 - Ask the resident, "Would you like to move or be repositioned?"
 - Ask the resident, "Are you where you want to be?" Report to the nurse.
- **Personal (Potty) Needs:**
 - Ask the resident, "Do you need to use the bathroom?"
 - Ask if they'd like help to the toilet or commode. Report to the nurse.
- **Pain:**
 - Does the resident appear in to be uncomfortable or in pain?
 - Ask the resident, "Are you uncomfortable, ache or are in pain?"
 - Ask them what you can do to make them comfortable.
 - Report to the nurse.
- **Placement:**
 - Is the bed at the correct height?
 - Is the phone, call light, remote control, tissues, walker, trash can, water, urinal, all near the resident? Can they easily see them?
 - Place them all within easy reach. Are they in contrast to background?

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Internal Evidence & Clues:

- Vital Signs
- Neuro checks
- Lab results
- Diagnoses
- Vision and hearing conditions
- Cognitive, confusion, mood status
- Recent changes in conditions



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Internal Evidence & Clues:

- What was the resident doing or trying to do just before they fell?
 - Ask them
 - All residents, all the time
- Place of fall:

At bedside,	5 feet away,	> 15 feet
↓	↓	↓
Orthostatic,	Balance/gait,	Strength/Endurance

 - In bathroom/at commode: ✓ contents of toilet
 - Urine or feces in toilet/commode? Urine on floor?

Internal Evidence & Clues:

- Medications
 - Side effects, adverse drug reactions, Black Box Warnings
 - Cascading medications
- Wandering vs. Pacing
 - Wandering: without a goal, usually provides comfort
 - Pacing: a need not met, rhythmic or repetitive
- Grabbing vs. Pushing
 - Grabbing: due to dizziness to stop from spinning – don't move, hold on to resident.
 - Pushing: to get away from being startled/attacked – slowly back away from resident.
- Cognitive Abilities & Mood Status

Case Study #1:

Mrs. CC, a slightly confused, 84 y.o., SNF resident, is in the early stages of Alzheimer's disease. She wanders into the room of another resident. She believes this is her room and begins straightening the bedspread on "her" bed. The resident who actually does live in this room begins to shout at Mrs. CC to get out of his room. A nurse comes in to redirect Mrs. CC out of the room; she coaxes her by taking her arm and leading her out. Mrs. CC resists by pulling away and falls.

Why did she fall?
What would be appropriate interventions?



Internal Evidence & Clues:

➤ Mood status & cognitive changes + frequent napping, ↑ falls, ↑ agitation

=

sleep deprivation #1



Fall Huddle



- Performed immediately after resident is stabilized
- Charge nurse has all staff, working in the area of the fall, meet together to determine RCA
- Review "10 Questions" with staff
- Also ask staff:
 - "Who has seen or has had contact with this resident within the last few hours?"
 - "What was the resident doing?"
 - "How did they appear? How did they behave?"

Re-enact or "Show & Tell"

- The persons involved in the fall or incident are asked to re-create what happened – "do exactly what you did when the fall happened the first time."
- Use the same people, same equipment, same room, same time of day

Activity: Let's re-enact a fall scene



External Evidence & Clues:

- Noise levels (staff, alarms, tv)
- Busy activity
- Visual conditions – contrast, poor illumination
- Personal items not seen or within reach
- Assistive devices not seen or within reach
- Bed height incorrect
- Clutter, mats on floor
- Incorrect footwear



Systemic Evidence & Clues:

- Time of day
- Shift change
- Break times
- Day of week
- Location of fall
- Type of fall (transfer, walking, reaching)
- Staff times, staff assignments, # of staff
- Routines of services



* Data tool to identify systemic causes

Patterns & Trends of Falls

Here's where and when they most often fall:

- Shift Change
- Mealtimes
- Naps/Night Sleep
- TCU
- Memory Loss
- Next to the transfer surface

1. Group exercise:
2. WHY do they fall at these times and in these places?
3. What could we do to stop these falls?

Fall Scene Investigation (FSI) Report

- Data collection tool used to investigate and determine RCA
- Completed soon after the fall occurs and/or during the fall huddle
- Completed by nurse in charge on duty at time of the fall



Let's look at the FSI report

Fall Committee Meeting

- Meets weekly at same time and day
- All appropriate departments represented
- Charge nurse & nurse aide from fall site are "ad hoc"
- Have all relevant information available; FSI report, MAR, resident's chart, fall huddle findings, hourly roundings
- Agenda:
 - New falls;
 - Review FSI report, huddle findings, review RCA
 - Review interventions – Do they match the RCA? Are they weak, intermediate, or strong interventions? Suggestions?
 - Status of residents from previous falls and interventions?
 - Are systems and operational changes needed?
- Status reports and audits; alarm reduction, med reduction, wake at will, Fall Summary, QI/QM reports, falls per 1000

Interventions

- Definition: is any action undertaken to affect a result (e.g. to prevent a fall.)
- Medical Intervention: patients receive treatments or actions that have the effect of preventing injury and/or prolonging life.



Hierarchy of Actions and Interventions

- National Center for Patient Safety's "Hierarchy of Actions", a classification of corrective actions and interventions:
 - **Weak** – actions that depend on staff to remember their: training, policies, assignments, regulations, e.g. "remind staff to . . ." or "remind resident to . . ."
 - **Intermediate** – actions are somewhat dependent on staff remembering to do the right thing, but tools are provided to help the staff remember or to help promote better communication, e.g. lists, pictures, icons, color bands
 - **Strong** – does not depend on staff to remember to do the right thing. The tools or actions provide very strong controls, e.g. timed light switch, auto lock brakes
- * To be most effective: interventions need to move to stronger actions rather than education or memory alone.

Implement Interventions / Solutions

- What will you do to prevent this problem from happening again?
- Do the interventions / solutions match the causes of the problem?
- How will it be implemented? Who will be responsible for what?
- How will the solutions impact or effect other operations / people in your facility?
- What are risks to implementing the solutions?
- Move from weak to strong interventions.

Correct Bed Height – marked

- Resident sits on the edge of the bed with their feet flat on the floor, hips are slightly higher than knees.
- Mark wall with tape to indicate top of mattress or top of headboard at this position
- Who does this?
 - Bed heights are checked and maintained by all staff every time they enter or leave a resident's room.



Mats on Floor Reduction



United States Department of Veterans Affairs, Falls Tool Kit, Floor Mats: Applegarth, S.P. [Tips and Tricks for Selecting a Bedside Floor Mat](http://www.patientsafety.gov/SafetyTopics/fallstoolkit/resources/other/Tips_and_Tricks_for_Selecting_a_Bedside_Floor_Mat.doc).
Website: http://www.patientsafety.gov/SafetyTopics/fallstoolkit/resources/other/Tips_and_Tricks_for_Selecting_a_Bedside_Floor_Mat.doc

Mats on Floor Reduction



- Mat creates an uneven floor surface
- Mat does not go full length of bed
- Mat is confusing to dementia residents
- Efficacy of mats has not been proven: VA study
- Presence of floor mat creates a fall hazard
- Staff, families and residents trip over mat

Don't get tripped up by thicker pads:
One Three

Hip Protectors

- Used by all residents with diagnosis of osteoporosis, hip/pelvis fractures, osteoarthritis
- Check Veterans Administration website – “Hip Protector Implementation Tool Kit”
- VA tested efficacy of hip protectors – some found to be significantly less effective than others



Visual conditions: contrast, illumination, placement?

How do they see?
What do they see?



Limiting Visual Conditions:

- Cataracts:
- Glaucoma:
- Macular Degeneration:
- Diabetic Retinopathy:

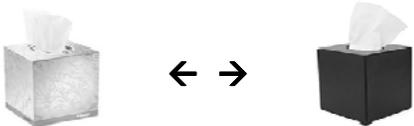
Contrast the Environment



Most Important Environmental Element to Prevent Falls: BUT . . . No contrast to background



Contrast the Environment



Personal items: Which is easier to see?



Balance in Therapeutic Recreation

- Resident assessed by PT for their ability to stand and balance (static & dynamic) then evaluation sent to TR
- Resident identified as:
 - Hands free
 - 1 hand support
 - 2 hand support
 - Assist by staff
- Opportunities to balance incorporated into current TR programs
- New TR programs specifically designed to offer opportunities to balance

Standing, Reaching and Turning with ADL's

- Reach for towel at sink
- Turn to get toilet paper and do self hygiene
- Turn and reach for clothing items once set up
- Lift arms and lift head to assist with dressing
- When offering something to resident have them reach — meds, toothbrush, tissues, snack
- Encourage self propel wheelchair (works lots of muscles, posture, balance and independence)



Restlessness, Agitation: a need to be calm, relaxed

- Identify causes of restlessness and agitation: the 4Ps and/or sleep deprivation
- Then consider calming interventions:
 - weighted baby doll
 - fluffy purring kitten
 - heated and/or weighted blanket
 - self locking brakes
 - anti-roll back devices
 - interest boxes;
 - jewelry, tackle, puzzles, reading materials

Resources for Restlessness

- Weighted 19" Baby Doll:
<http://www.toysrus.com/product/index.jsp?productId=12076777&CAWELAID=1097046507>
- Fluffy purring cat doll:
<http://www.amazon.com/FurReal-Friends-Lulu-Cuddlin-Kitty/dp/B001TMA03U>
- Heated blanket warmers: medical supplier

Correct Footwear

- No gripper socks, no crepe soles
- Fully enclosed, slip resistant
- Correctly fitting – easy on, easy off!
- Footwear color contrasted to floor color
- Provide informational brochure



**External lesson learned:
if we can stop the noise,
then we can reduce the falls.**



**Internal lesson learned:
if we can stop disturbing sleep
then we can reduce the falls.**



Personal Alarms: definition

Personal alarms are alerting devices designed to emit a loud warning signal when a person moves.

- The most common types of personal alarms are:
 - Pressure sensitive pads placed under the resident while they are sitting on chairs, in wheelchairs or when sleeping in bed
 - A cord attached directly on the person's clothing with a pull-pin or magnet adhered to the alerting device
 - Pressure sensitive mats on the floor
 - Devices that emit light beams across a bed, chair, doorway
 - Architectural alarms are not an issue

Alarm Reduction & Elimination

- Evidence based studies for the reduction and elimination of alarms to reduce:
 - Falls, depression, skin breakdown, confusion, incontinence, inappropriate behaviors
- Results from alarm elimination




**Determine RCA: Why did the alarm go off?
"Because the person was moving." – No!**

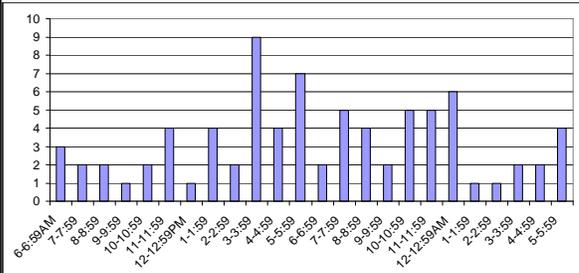
- RCA: What does the resident need, that set the alarm off?
- RCA: What was the resident doing just before the alarm went off?





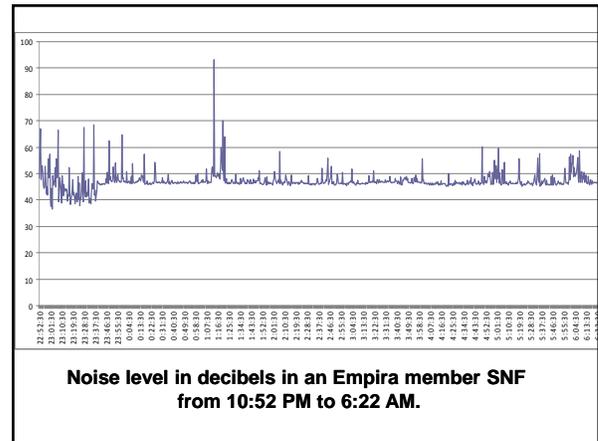
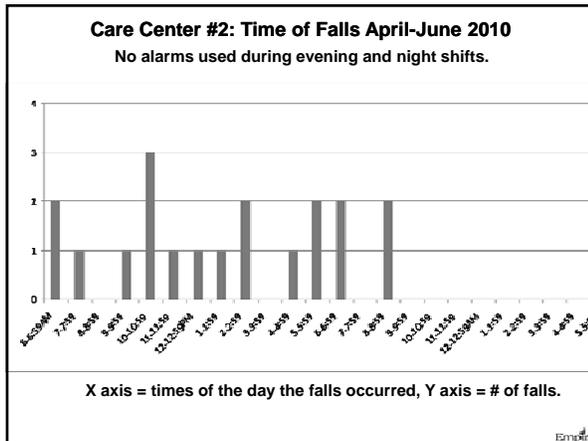
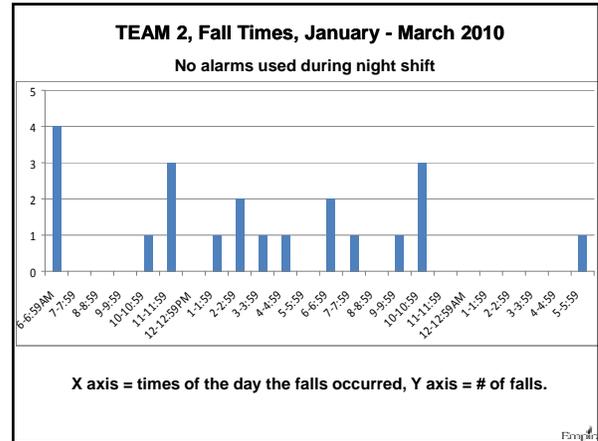
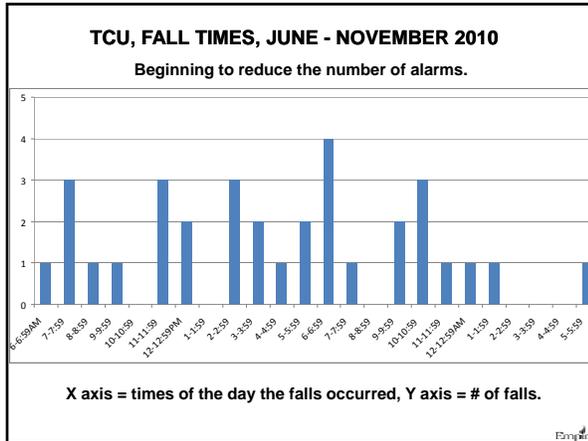
**Alarm sound should be:
"Hello, I have a need that you missed."**

Results of Alarm Reduction
Alarms being used at all times of the day.
CARE CENTER #1: APR - JUNE 2010 FALL TIMES



Time of Day	Number of Falls
6-6:59AM	3
7-7:59	2
8-8:59	2
9-9:59	2
10-10:59	1
11-11:59	4
12-12:59PM	1
1-1:59	4
2-2:59	2
3-3:59	2
4-4:59	9
5-5:59	4
6-6:59	7
7-7:59	2
8-8:59	5
9-9:59	4
10-10:59	2
11-11:59	5
12-12:59PM	5
1-1:59	6
2-2:59	1
3-3:59	2
4-4:59	2
5-5:59	4

X axis = times of the day the falls occurred, Y axis = # of falls.



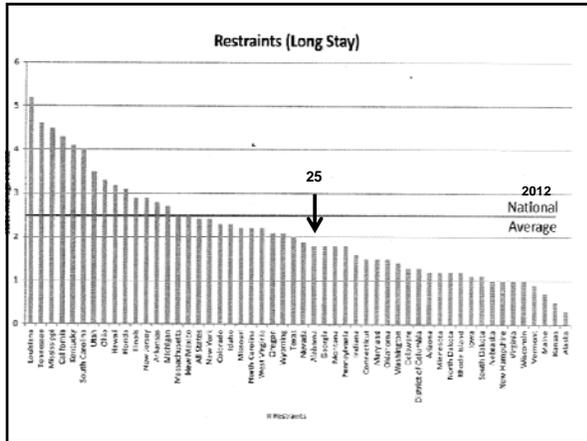
Alarms Annul Our Attention

After you put something in the oven or microwave or clothes dryer, why do you set an alarm on (or the machine has an alarm) that goes off?

“Alarms Cause Reactionary Rather than Anticipatory Nursing”

“Sit down.” versus “What do you need.”

- Theresa Laufmann, BSN
DON Oakview Terrace Nursing Home, Freeman, SD



How to Reduce Restraints & Alarms

Multiple procedures & protocols to remove alarms.
Begin by asking staff their preference:

By resident status/triage:

1. Begin rounding on residents who have fallen
2. No restraints or alarms on any new admission
3. Do not put a restraint or an alarm on any resident who does not currently have one on
4. If resident has not fallen in ____ (30) days
5. If resident has a history of removing restraint or alarm
6. If alarm or restraint appears to scare, agitate, or confuse residents
7. If resident has fallen with an alarm on, do not put it back on

By unit, shift, specific times:

1. Begin rounding on residents who have fallen
2. Start on day shift on 1 nursing /household unit
3. Then go to 2 nursing /household units on day shift
4. Then go to 2 shifts on 1 nursing/household unit
5. Then go to 2 shifts on 2 nursing/ household units, etc.

By "Cold Turkey":

1. "All restraints and/or alarms will be removed by _____ (date.)"

Four Part CMS Satellite Broadcast 2007
"From Institutional to Individualized Care"

Case Study:
Nursing Home Alarm Elimination Program – It's Possible to Reduce Falls by Eliminating Resident Alarms

www.masspro.org/NH/casestudies.php

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CMS Spotlights
Advancing Excellence in Program for State Surveyors, July 2007

➤ A focus of their Quality of Life program, "Alarms are noisy restraints and they can be more restrictive than physical restraints."

- Steve Levenson M.D.

Quality of Life and Environment Tag Changes
CMS Division of Nursing Homes; Survey and Certification Group
3/2009

F252 Environment (Cont.)

➤ Institutional practices that homes should strive to eliminate:

- Overhead paging (this language has been there since 1990)
- Meals served on trays in dining room
- Institutional signage labeling rooms
- Medication carts
- Widespread use of audible seat and bed alarms
- Mass purchased furniture
- Nursing stations

➤ Most homes can't eliminate these quickly, this is a goal rather than a regulatory mandate

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F Tags Related to Alarm Usage

- **Quality of Life F 240:** The quality of life requirements specify the facility's responsibilities toward creating and sustaining an environment that humanizes and individualizes each resident.
- **Dignity F 241:** The facility must promote care for residents in a manner and in an environment that maintains or enhances each resident's dignity and respect in full recognition of his or her individuality.
- **Restraints F 221:** The resident has the right to be free from any physical or chemical restraints imposed for the purposes of discipline or convenience and not required to treat the resident's medical symptoms.
- **"Convenience"** is defined as any action taken by the facility to control a resident's behavior or manage a resident's behavior with a lesser amount of effort by the facility and not in the resident's best interest.
- **Noise F 258:** Comfortable sound levels do not interfere with resident's hearing and enhance privacy when privacy is desired and encourage interaction when social participation is desired. Of particular concern to comfortable sound levels is the resident's control over unwanted noise.

Case Study:

78 y.o. man is admitted in early stages of Alzheimers. He has been in the SNF for 3 weeks. He appears nervous and easily startled. One evening he gets a new roommate who has IVs infusing on a noisy pump. After being placed in bed at 8:00 PM the NAR hears his bed alarm go off at 11:00 PM and finds him sitting on the edge of his bed awake. He has been restless and sleeping for only short periods of time each night of his stay in the SNF. He appears very anxious and refuses to go back to bed. The NAR gets him up into his w/c and brings him down to the dayroom to watch tv. After about 10 minutes his w/c alarm goes off. The NAR tells him to sit back down and explains that she will be back shortly to stay and talk with him. A few minutes after leaving him, his alarm goes off again and she finds him lying on the floor.

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True Story:

An 86 y.o. woman in advanced stages of Alzheimer's was found on the floor of her room in front of her night stand. When asked what she was trying to do just before she fell, she explained that the "rug" in front of her bed makes a loud noise when you step on it and that makes her roommate "get mad" at her. So she crawled to the edge of her bed, climbed up onto her nightstand, and fell off the nightstand. She was trying to avoid stepping on the pressure sensitive alarm floor mat when getting out of bed.

True Story:

At a recent educational workshop with nearly 80 nursing assistants attending, I asked for a volunteer from the audience to share what it was like to be working in a SNF that had become "alarm free" (because some of the NARs were from facilities that had not as yet started to reduce alarms.)

One young man stood up and told the others, "When we used to use alarms on residents I told people, 'it was like working in a prison' and now that we don't use alarms any more, I tell people, 'it's like working in a country club'."

Interventions: The Family

Please refer to:

- Fall Prevention brochure
- Alarm Elimination brochure



**External lesson learned:
if we can stop the noise,
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**Internal lesson learned:
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Systemic Lessons Learned:

- The operations and management of systems, processes and procedures has the greatest impact and effect on fall reduction
- Rarely is the root cause of a fall only a clinical or environmental condition, it is usually the result of an underlying systemic breakdown



Causation Findings Identified from Fall Prevention Program

- **External causes:** Noise, busy activity, lack of environment contrasts, placement of furniture, equipment & personal items
- **Internal causes:** Poor balance, sleep deprivation, medications (type & amt), orthostatic B/P, endurance/strength
- **Systemic causes:** Time of day, shift change/times break times, day of week, location of fall, type of fall, routine assignments, staffing levels

Case Study:

82 y.o. woman is in early renal failure and goes out of the SNF to dialysis each week. She is alert and oriented and requires an assist of 1 person with her transfers. Her granddaughter is in a soccer tournament and she wants to go out of the facility to attend the game. Her son will take her to the game. After the game, when transferring his mother from her wheelchair back into his pickup truck, she "slips" during the transfer and falls to the ground (after hitting the running board on the side of the pickup truck.) 911 is called, she is taken to the hospital. She has sustained multiple bone fractures in both legs.

Why did she fall?

What would be the appropriate interventions?

Summary: Root Cause Analysis (RCA)

- Figuring out why something happened
- In order to prevent it from happening again



Interventions

- **Definition:** is any action undertaken in an effort to affect a result.
- **Medical Intervention:** is a medical term in which patients receive external treatments or actions that have the effect of preventing injury or prolonging life.



Implement Interventions / Solutions

- What will you do to prevent this problem from happening again?
- Do the interventions / solutions match the causes of the problem?
- How will it be implemented? Who will be responsible for what? Who will monitor it?
- How will the solutions impact or effect other operations / people in YOUR facility?
- What are risks to implementing the solutions?
- Move from weak to strong interventions.

Hierarchy of Actions and Interventions

➤ National Center for Patient Safety's "Hierarchy of Actions", a classification of corrective actions and interventions:

- **Weak** – actions that depend on staff to remember their: training, policies, assignments, regulations, e.g. "remind staff to . . ." or "remind resident to . . ."
- **Intermediate** – actions are somewhat dependent on staff remembering to do the right thing, but tools are provided to help the staff remember or to help promote better communication, e.g. lists, pictures, icons, color bands
- **Strong** – does not depend on staff to remember to do the right thing. The tools or actions provide very strong controls, e.g. timed light switch, auto lock brakes

* To be most effective: interventions need to move to stronger actions rather than education or memory alone.

Contrast black toilet seat Contrast thresholds
Personal items against background Heat Shrink Tubing

Contrast Tubing

- "Heat Shrink Tubing" is made by 3M
- Du-bro 441, "Heat Shrink Tube Assorted"
- Both can be purchased on amazon.com

Strong Interventions to Prevent Falls

- Root Cause Analysis
- Hourly Rounding – 4Ps
- Reduce Noise:
 - Alarm/Restraint Elimination, Staff talking, TVs
- Correct Beds Heights
- Reduce Floor Mats
- Fall Huddle
- Reduce Medications
- Contrast Environment
- Provide Opportunities to Balance
- Consistent Staffing: Know The Resident

Interventions: The Family

Please refer to:

- Fall Prevention brochure
- Alarm Elimination brochure

Responsibilities to Prevent Falls:

1. All staff
2. Nursing
3. Social Services
4. Recreational Therapy
5. PT & OT
6. Admit/Reception/Office staff
7. Physicians
8. Residents, Families, Visitors

Hurdles & Challenges



- RCA skill set competency:
 - Root Cause Analysis vs. “Just Tell Me What To Do”
- Staff and families’ resistant to change (e.g. alarms, balance, staffing times)
- Scatter gun approach to interventions vs. matching interventions to root cause of fall
- It’s not just a nursing program any more
- Sustainability: building redundancies
- OSHA’s “Safe Patient Handling” vs. reduction in resident independence

What’s in the future to preventing falls?



- Medication reduction
- Non-pharmacological interventions
- Sleep hygiene; fragmentation, consolidation
- Equipment:
 - Actigraphy, motion meters, hip protectors, improvement in environmental contrast and design
- Shift times/staffing to better match resident needs
- “Bone cocktail”: Vitamin D & calcium, magnesium
- Education:
 - Family – outings, transfers, walks, sleep
 - Medical directors, MDs, NPs, Hospitals
 - MDH, Case Mix, CMS surveyors

Restorative Sleep Vitality Program: Goals

- Undisturbed sleep at night



Restorative Sleep Vitality Program: Goals

- Fully engaged, awake during the day



Empira’s Restorative Sleep Vitality Program

- This program is a combination of nationally recognized evidence-based, sleep hygiene studies and the application of cutting edge practices to enhance residents’ sleep
- Empira is challenging some of the standards of practice and operational procedures for providing cares and services in skilled nursing facilities

RSVP: Sleep challenges & interventions

- CMS and LTC providers have never considered sleep as an integral part of the plan of care and services for the resident
- MDS 3.0: D0200, PHQ-9 1C, “In the last 2 weeks, have you been bothered by any of the following problems? Trouble falling asleep and staying asleep, or sleeping too much.”

**“I did then what I knew then,
when I knew better, I did better.”**

~ Maya Angelou



**“First they ignore you,
Then they laugh at you,
Then they attack you,
Then you win.”**

~ Mahatma Gandhi

“How to initiate change.”



Emold